CONSTRUCTING THE COMING PLAGUE:  
A DISCOURSE ANALYSIS OF THE BRITISH COLUMBIA  
PANDEMIC INFLUENZA PREPAREDNESS PLAN  

by  
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Abstract

This study explores how pandemic flu is constructed as a threat to public health in the British Columbia Pandemic Influenza Preparedness Plan such that planning for it makes common sense.

Despite a history of critical research on constructions of disease, social sciences literature on pandemics is primarily practical. This study takes a critical approach using discourse analysis, which focuses on how meaning is created and shared through language use. The analysis shows how rhetorical and linguistic strategies—including active language and statistics; limited adjectives, adverbs and metaphors; recalling the past as key to the future; reference to expert knowledge; and conferring moral responsibility onto the public to feel at risk—construct a pandemic flu as inevitable, significant and manageable. It seems to follow that such a potentially catastrophic outbreak demands considerable attention and resources.

The construction makes commonsense because it is based on a familiar narrative: risk avoidance and pursuit of optimal health are fundamental responsibilities of citizens, who are enabled in these efforts by expert knowledge and the progressive discoveries of medical science. However, discourse analysis challenges common sense, revealing potential implications of social constructions. In this case, implications stem from two tensions in the plan’s discourse. First, a theme of partnership and empowerment is evident, but it conflicts with a co-existing theme of authority and control. Second, although the public is addressed as an audience of the plan and exhorted to be active participants, ultimately our role is to wash our hands, receive timely information from
experts, and generally “be involved.” The implication is lack of clarity on who is responsible for what when difficult decisions need to be made and actions need to be taken around a pandemic.

Ultimately, the analysis reveals that language need not be dramatic to wield power. It also demonstrates that disease, despite its “biomedical reality,” is socially constructed, often such that the interest and values at play are obscured. The British Columbia Pandemic Influenza Preparedness Plan is not just an attempt to protect the public from an outbreak, but a reiteration of a worldview that should be challenged from time to time.

**Keywords:** pandemic; health planning; communication; discourse analysis

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<td>SSH</td>
<td>social sciences and humanities</td>
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<tr>
<td>SARS</td>
<td>severe acute respiratory syndrome</td>
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<tr>
<td>MRSA</td>
<td><em>methicillin</em>-resistant <em>staphylococcus aureus</em></td>
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<tr>
<td>GEIG</td>
<td>Groupe d'Expertise et d'Information sur la Grippe</td>
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<tr>
<td>BSE</td>
<td>foot and mouth disease</td>
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<tr>
<td>DDT</td>
<td><em>dichlorodiphenyltrichloroethane</em></td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>BBC</td>
<td>British Broadcasting Corporation</td>
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<tr>
<td>DASP</td>
<td>discourse analysis in social psychology</td>
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<tr>
<td>CDA</td>
<td>conversation analysis, and critical discourse analysis</td>
</tr>
<tr>
<td>CA</td>
<td>Conversation analysis</td>
</tr>
<tr>
<td>GP</td>
<td>general practitioner</td>
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<tr>
<td>US</td>
<td>United States</td>
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<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>USSR</td>
<td>Union of Soviet Socialist Republics</td>
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1. Introduction

This study explores how a potential pandemic flu is constructed as a threat to public health such that developing a plan to manage it is accepted as a commonsense activity. The study also explores why it might make sense to construct a pandemic flu and the response to it in this way, and what might be some of the implications. In using the term *constructed*, I mean the way a disease is defined, determined, talked or written about and otherwise rendered tangible in order to be acted upon. The study is based on a discourse analysis of the *British Columbia Pandemic Influenza Preparedness Plan* (BC Ministry of Health & BC Centre for Disease Control, 2005), the focus of influenza planning activity in the province of BC, Canada, and the template from which municipal, health authority and hospital pandemic flu plans are created.

I became interested in pandemic influenza planning when I realized how much attention it was receiving from a small but very active sector of the healthcare workforce with which I was newly involved.¹ I was working at the BC Centre for Disease Control in Vancouver on an emerging infectious disease social science research project. The topic was new to me, as my work for the previous 20 years had focused on health communication related to chronic diseases. Although these chronic conditions were sometimes referred to as epidemics, they seemed very different from the infectious diseases I had heard about in the media. Those emerged as if from nowhere, ripping through hospitals (*methicillin*-resistant *staphylococcus aureus*; MRSA), sweeping across farms (foot and mouth disease, bovine spongiform encephalopathy; BSE) and swooping into minor cuts and scrapes (*necrotizing fasciitis*). Chronic diseases, by contrast, seemed to creep up on people, compromising their health little by little, and slowly grinding our overburdened healthcare system to a halt.

I was certainly not alone in my focus on chronic disease. In the late 1960s, US Surgeon General William H. Stewart told Congress that victory over infectious disease was imminent. By the third quarter of the 20th Century, say Panter-Brick and Fuentes

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¹ This was before the outbreak of the H1N1 virus in April 2009 which, as I write, continues to capture the attention of more people, in a much wider range of sectors, but only sporadically.
(2008), interest in infectious diseases had waned, superseded by a fascination with “degenerative and human-induced diseases, such as cancer and cardiovascular diseases” (p. 79). Acquired Immunodeficiency Syndrome (AIDS), whose first cases were identified in 1981 and which reintroduced the possibility of major new epidemics (Garrett, 1994; Rosenberg, 1989; Tomes, 1998), did little to change this focus. Millions of dollars continued to flow into research, treatment and policy-making related to the chronic diseases of modern western civilization, even though a host of infectious diseases, treatable and often curable, still thrived in countries around the world. More recently, outbreaks of severe acute respiratory syndrome (SARS), MRSA, tuberculosis and avian influenza have been receiving public attention, but often intermittently, and in specific populations or geographic areas. A pandemic flu, which was said to put everyone at risk, was different from chronic disease, but also different from these other infectious diseases. It opened up a whole new world for me, one in which hundreds of people laboured away in labs and on computers and as members of committees and task forces, preparing for a disease that knew no geographic or demographic boundaries.

Most interesting to me was that unlike chronic disease—but also unlike SARS, MRSA, Ebola Zaire, Creutzfeldt Jakob and any number of other morbidly fascinating maladies featured so dramatically in media coverage—no one had seen this pandemic they worked so hard to prevent. Pandemic influenza, by its nature, is a new virus. Its characteristics remain unknown until it appears. Of course, many a social scientist has argued that neither can one see diabetes, cancer or heart disease. They exist as collections of symptoms, risk factors and expert diagnoses. Unlike with a pandemic flu, though, evidence of these diseases is all around us, filling our hospitals, affecting our families and friends, resulting in modifications to our diets and exercise routines. Pandemic flu has no such tangible qualities. It exists only as a virtual disease. In some way, though, it must be made real—there must be a shared understanding of its nature and its consequences—so that it can be planned for.

To find out more about the construction of this hypothetical threat, I looked to the social sciences and humanities literature, which has a long history of instructive theoretical and empirical research on constructions and conceptions of health and illness. I found little such literature on pandemic flu. It was as if the urgency involved in planning for such an event left no time or energy for reflection. Most of the literature I did
find was practical in nature, rather than theoretical. Its aim, as Turner (1997) would say, was to assist the goals of science rather than critique them. Nettleton and Bunton (1995) make a similar distinction between a sociology for medicine or health promotion, and a sociology of or about medicine or health promotion. In the former, research serves the needs of medicine or health promotion (for example, patient compliance studies); in the latter, authors concentrate on critical analyses of the inherent assumptions underlying medicine and health promotion themselves. Both approaches are important, but I was more interested in critical analysis. This approach would allow me firstly to explore how a disease that does not yet exist is brought into being to be acted on; and secondly, to demonstrate that construction of a phenomenon necessarily invokes specific interventions—that will seem obvious because of that construction—for resolving, managing or otherwise acting on that phenomenon.

My focus became how a pandemic flu is constructed such that preparing for an outbreak seems commonsense. The *British Columbia Pandemic Influenza Preparedness Plan* was an obvious choice for a primary data source, since it deals exclusively with the topic of pandemic influenza preparation and as such, has a great deal of definitional power (having to describe the problem in order to propose solutions). The plan describes its audience as “all British Columbians” (p. 7) and speaks to this audience directly to engage them in pandemic influenza preparedness, but it is also meant to address a number of specific groups (health authorities, municipalities, other governments, media, etc.) for a variety of purposes (to dictate actions, demonstrate accountability, etc.). I saw the plan not simply as an isolated data source, but as a document intimately connected to, and therefore reflecting and perpetuating, ideas and opinions expressed in a wide range of other documents, conversations and other social situations relating to pandemic influenza across the country and even worldwide.

The emphasis on construction of pandemic flu dictated my methodological approach. I was less interested in asking about people’s opinions and attitudes about pandemic flu than exploring how they talked and wrote about it. For this reason, discourse analysis, which enables the study of how meaning is created and shared through language use, was an appropriate choice. Defined as “the study of the use of language for communication in context” (Georgakopoulou & Goutsos, 1997, p. viii) or the systematic and explicit analysis of text within its context (van Dijk, 2007), discourse
analysis is interpretive, contextual, and constructionist (Richardson, 2007). It is concerned with the analysis of the micro-level of linguistic choices within the context of the macro-level of the social frame (Cook, Pieri, & Robbins, 2004). Discourse analysts, unlike those who conduct purely linguistic or content analyses:

offer interpretations of the meanings of texts rather than just quantifying textual features and deriving meaning from this [and] situate what is written or said in the context in which it occurs, rather than just summarizing patterns or regularities in texts... (Richardson, 2007, p. 15)

The term text refers to any meaningful combination of language units used to communicate, rather than isolated units such as sounds, words or sentences (Georgakopoulou & Goutsos, 1997). Discourse, then, is an umbrella term for either spoken or written communication; text is the basic means of this communication, be it spoken or written.

There are many different approaches to discourse analysis, but most share a focus on language as active and constitutive, rather than as reflective of a pre-existing reality or of internal cognitive qualities viewed as inherent traits, such as beliefs or attitudes. Discourse analysis has been particularly useful in challenging traditional thinking about health and healthcare practice (Cheek, 2004), making evident, for example, how specific constructions of health-related issues (e.g., adolescent motherhood) lead to generalizations that become societal givens (e.g., teenagers cannot be good parents). Many discourse analyses have concentrated on issues that are readily understood as controversial, such as drug use or HIV/AIDS. They have also shown, though, how stigmatization can occur even with conditions such as heart disease and cancer (see e.g., Lugton, 1997; Thompson, Dorsey, Miller, & Parrott, 2003). Studying pandemic flu—a seemingly uncontroversial disease in that individuals are not faulted for contracting this “equal opportunity” illness (Garoon & Duggan, 2008, p. 1134)—presented the chance to challenge discourse analysis. For while it is possible to see how individuals get blamed, however subtly (and unfairly), for poor health through overeating, lack of exercise or a negative outlook on life, who could be blamed for coming down with the flu? Whose fault is an influenza outbreak?

The majority of discourse analyses have concentrated on verbal interactions. Atkinson and Coffey (1997) say many researchers:
produce ethnographic accounts of complex, literate social worlds as if they were entirely without writing. Occupational, professional, organizational and even academic settings are implicitly represented as devoid of written documents and other recordings. (p. 45)

There is an increasing focus, however, on documents as a record of how, collectively, members of a society work towards the achievement of social order (ten Have, 2004; O’Reilly, Dixon-Woods, Angell, Ashcroft, & Bryman, 2009). The importance of written texts such as medical records, patient information material and, in this case, a disease preparedness plan, becomes clear when one realizes the extent to which these texts instruct us how to see the world. Prior (1997) gives the example of a star atlas, which describes the universe by reference to constellations, thus informing us how we should observe the night sky, and what we see when we do so. In this way, “the text takes ontological precedence over what is observed and discovered by an observer” (p. 67). Following Prior, it becomes clear that a management or operational plan such as the British Columbia Pandemic Influenza Preparedness Plan instructs its readers on the problem that needs to be solved, and the solutions that need to be implemented. Unfortunately, I could not find any work on planning documents as a genre (or on any planning sub-genres, for example health planning or emergency preparedness planning) to support my observations about such documents; however, here was an opportunity to extend the discourse analysis literature with a new genre.

A discourse analysis of the British Columbia Pandemic Influenza Preparedness Plan, then, would add to the literature in a number of ways:

- by studying a disease that:
  - has not received much attention in the critical social sciences and humanities literature, and
  - does not, in effect, “exist”;
- by investigating a genre (planning documents) that has not to date been the focus of discourse analysis;
- by challenging health discourse analysis through studying a disease that people for the most part do not get blamed for contracting through their own behaviour.

I want to emphasize my intent of adding to the literature: I did not set out to criticize efforts to eradicate or manage illness, or to dismiss existing literature or other
methodological approaches. I simply wanted to study pandemic flu from a new angle. My research question was:

- **How is the pandemic flu constructed in the *British Columbia Pandemic Influenza Preparedness Plan* so that planning for it seems commonsense?**

I also asked:

- **What might be some of the reasons for its construction this way—why does it make sense?**

And finally I asked:

- **What might be some of the broad implications of such a construction?**

Following Barker’s (2001) cultural studies approach, I viewed discourse analysis as a two-phase process. The first phase was the analysis proper (in this case, of the text of the *British Columbia Pandemic Influenza Preparedness Plan*). The second phase involved an interpretation of the text in its context, another defining feature of discourse analysis in its quest to explain how socio-cultural and ideological practices take effect in language (Georgakopoulou & Goutsos, 1997) and therefore may be considered to perpetuate those practices. This second phase comprised three parts:

- complementing the analysis of the plan with an exploration of what was *not* in the plan (presumably because it “goes without saying”);
- situating the analysis of the plan within the context of pandemic-related media coverage over the period of the year in which the plan was released; and
- identifying and discussing broader contemporary social discourses reflecting and reflected in the plan.

As explained in this thesis, the study demonstrates how rhetorical and linguistic strategies construct a pandemic flu in the *British Columbia Pandemic Influenza Preparedness Plan* to be *inevitable, significant* and *manageable*. Unlike media coverage, a genre that employs dramatic figures of speech and rhetorical devices to describe many health-related issues, the plan's language—echoing that of many governmental bureaucratic documents—is very spare, with few metaphors and no gratuitous adjectives and adverbs. Pandemic influenza is made inevitable, significant and manageable.
through short sentences with active language; recalling the past as a key to the future; quoting statistics related to previous pandemics; referring to experts and expert knowledge; and conferring moral responsibility onto the public to worry, be on alert, and generally be involved in pandemic preparedness. Some of the discursive strategies used for a pandemic’s construction relate to the genre of planning itself. Like other plans, this one collapses and generalizes, and uses technical language and design strategies such as bullet points, an assumption section and tables. The modest nature of the few adjectives and adverbs that are used provide the reader with a sense that things are manageable and controllable. The analysis demonstrates that language does not have to be dramatic to wield power: making an issue important and significant can be accomplished by very subtle but powerful means, and in a variety of ways (Russell, Greenhalgh, Byrne, & McDonnell, 2008). The analysis also demonstrates that every disease, despite its biomedical reality, has a strong element of social construction.

Why does this construction of pandemic influenza make sense? It does so because it reflects broader discourses circulating in contemporary western societies. These discourses, the macro-level complement to the micro-level linguistic analysis of the plan, can be conceived as systems of thought with attendant ideas, attitudes, courses of action, beliefs and practices. Following Prior (1997), I identified them for the second phase of my analysis based on how the plan instructs its readers to see the world. In this case, the world is one in which: (a) good health is a personal and societal responsibility and thanks to modern medicine is increasingly achievable; (b) however, a number of risks exist, at a number of levels, from the personal to the global; and (c) expert surveillance and guidance are required to protect us. The related discourses—healthism, risk, expertise and surveillance—are widely prevalent in western (and increasingly global) societies, and account for the plan’s general common sense. Healthism is a term coined in the 1980s and encompasses two ideas: the increasing tendency to relate mental, social and physical phenomena to health; and the question of who—we as individuals or the state—is responsible for our health. Critics suggest that ideas associated with healthism downplay the importance of the social determinants of health, as everyone, despite his or her socio-economic status or demographic group, is seen as equally capable of avoiding disease and maintaining good health.
The concept of risk is pervasive in contemporary western societies; it seems accepted as one’s duty to make oneself aware of risks and act in accordance with expert advice to prevent them or lessen their impact. Health is intrinsically and inevitably associated with risk (Flynn, 2009), which accounts for the very existence, as well as the approach, of the British Columbia Pandemic Influenza Preparedness Plan. The third discourse is expertise, which is very much at work in the pandemic plan and, I argue, still a strong theme—although increasingly ambiguous—in healthcare and society generally. The final discourse is surveillance—both self-surveillance and expert surveillance—and its increasing acceptance as a natural and necessary part of life. Surveillance, of both people and diseases, is seen as important not only to protect us and our property and belongings, but also to generate knowledge that will enable prediction and control, especially in healthcare.

The narrative framed by these discourses—that individual and population health are at risk (from a probably inevitable and definitely significant event) and must be protected (through expert guidance and surveillance)—is also reflected in the media coverage I analyzed as part of the second phase of the study. Despite the differences in rhetorical strategies between the media coverage and the plan, expected due to their different genres and intended audiences, the 1-year’s worth of articles on pandemic flu (during the year in which the plan was released) present pandemic influenza as a potentially dire threat to our health, and one that needs to be monitored, prepared for and managed. Other similarities between the plan and media coverage include minimal reference to the public (other than as victims of disease) and a reliance on experts-in-general to comment. The comparison demonstrates a great deal of inter-textuality (the property a text has of being full of the same ideas, actors, events, arguments and topics that are referenced in other texts) between mass media and the British Columbia Pandemic Influenza Preparedness Plan. It also demonstrates Tomes’ (1998) concept of a dynamic process of knowledge construction about diseases: it is not simply that knowledge is generated in one sphere by one group of people (in this case experts) and given to people who either understand it or do not (the public). Rather knowledge generation is an ongoing negotiation, where ideas and opinions are shared and shaped by and among a wide range of audiences.
Although the focus of this study is the construction of a pandemic flu such that planning is seen as a commonsense response, and the anchoring of that construction in a context, it is also possible to highlight some potential implications of such a construction. These implications stem from two related tensions in the aspect of manageability as presented in the plan. The first tension is that a theme of partnership, empowerment and inclusiveness (of organizations and individuals) is woven throughout the plan—which conflicts with a co-existing theme, equally strong, of authority and control (by the public health sector and government). The language in the plan wavers between a “command and control” tone (using words such as “must” and “will” and referencing the Provincial Health Officer’s powers to declare a pandemic here and gone) and a much more hands-off tone (using phrases such as “is intended to” and “we must all work together” and “everyone has a role to play”). A second, related tension is the confusing role for the public in the plan. We are addressed as an audience of the plan within the document—exhorted (and indeed, positioned as morally obligated) to be active participants in planning and preparation—but in fact we are given very little responsibility. Our role is primarily confined to washing our hands and being on the receiving end of timely information and advice from experts.

One implication arising from these tensions is lack of clarity about roles: particularly, who is responsible for what when difficult decisions need to be made leading up to or during a pandemic. There are a myriad of roles and responsibilities described in the plan—some overt and some implied—but there is a seeming lack of willingness to ascribe full authority to some groups for fear, perhaps, of disempowering others. It may be that the prevailing “discourse of empowerment” (Bercovitz, 2000) in Canadian healthcare, which one can imagine serves a purpose during an era of chronic diseases that can largely be self-managed, does not work during an infectious disease outbreak. The plan reflects this discourse to a great extent, despite the likelihood that during an emergency, public health officials will seek compliance from many organizations and members of the public for certain measures (for example, vaccination and quarantine), rather than seeking to empower them to make their own decisions.

Another implication relates to the role of the public. While they are addressed as an audience of the British Columbia Pandemic Influenza Preparedness Plan as if they are full participants, it is unlikely they will see a role for themselves. My intent is not to
raise this as a problem—I am not convinced that all British Columbians should be preparing for pandemic influenza, or even be particularly worried about it—but simply to highlight contradictions in the plan that could result in confusion or controversy leading up to or during a pandemic. A pandemic influenza is positioned in the plan as on the one hand something that everyone should be involved in preparing for, but on the other hand, something that seems to demand the highest level of expertise to plan for, predict and manage. Much of this expertise is focused on surveillance of people and the disease itself, aimed at ensuring BC is connected with national, international and global systems that will warn of and monitor the progress of an impending pandemic.

These implications also apply to the media coverage, where the question of “Who is in charge?,” arises frequently. In many articles, the government comes under fire from a range of medical and scientific experts (and some journalists) for not taking enough responsibility for and control over pandemic flu preparation. The media coverage also confirms the construction of a pandemic influenza as something that is understandable only by experts. The public is not discussed at all in terms of its responsibility to engage in planning, or even to be informed about pandemic flu on a personal level.

Beyond the above implications related to the management of a pandemic, the use of discourse analysis in this study demonstrates more generally that when things seem common sense, we tend not to question them. When a pandemic flu is constructed as inevitable, significant and manageable, for example, the seemingly obvious urgency hides the interests at play in defining it as such, and obscures the values underlying the construction. We may ask who has what to gain in positioning a pandemic in this way, and why? Then, we may ask if we agree with this construction—is a pandemic influenza in fact inevitable, and will it necessarily be significant? Will it be more significant than the multitude of other apparently urgent health and other risks competing for our awareness? How do we make a decision about which of them should receive our attention, and to what extent? Surely, the notion of trust comes into play, which brings up the increasingly ambiguous concept of expertise. The practice of using scientific-experts-in-general to establish an authoritative “truth” is widespread. In many situations, though—including planning for a pandemic—we would do well to admit that there are more unknowns than knowns, and there is no established or proven way to
proceed. Many types of expertise, including that of community members, will be needed. Finally, is it realistic to think that more and more levels of and mechanisms for health surveillance will enable us to predict and control all disease without generating a number of complicated ethical issues that could perhaps be anticipated and should be discussed broadly?

These questions are beyond the scope of this study to address. However, I highlight them to demonstrate the ability of discourse analysis to surface the kinds of issues that can easily be buried in commonsense constructions and which may not be obvious to the uncritical eye of one reading a document within the context of prevailing cultural discourses that are not easily questioned. Ultimately, regardless of how well intentioned it may be, the British Columbia Pandemic Influenza Preparedness Plan is not simply an attempt to protect the public from an inevitable outbreak, but a reiteration of a certain worldview, one that we should be aware of and perhaps challenge from time to time.

1.1. Structure of the Dissertation

In the previous section, I introduced my topic and research questions, and discussed how I went about answering them and, at a very high level, what I found. In Chapter 2, I discuss the terms pandemic and epidemic, and provide an overview of pandemic influenza from the perspective of the public health sector as well as what has been written in the social sciences and humanities literature. Chapter 3 presents an overview of epidemics in history, and in Chapter 4, I present a theoretical and methodological approach, discourse analysis, as well as a second literature review demonstrating how this approach has been useful in studying health topics in general. Chapter 5 is the study’s methods chapter, in which I discuss discourse analytic methods in general and explain the specific methods I used. Chapter 6 is the analysis proper of the pandemic flu plan, which leads to the interpretation section of the thesis, in turn comprising two chapters. First, I explore the broader context in which the plan was written through an analysis of what is not in the plan (assumptions or “givens”) and an overview of 1-year’s related media coverage (Chapter 7). Second, I discuss the plan and
the media coverage within the larger social discourses they both reflect and perpetuate, but also to some extent challenge (Chapter 8). Chapter 9 concludes the study.

2. About Pandemic Flu

In this chapter, I distinguish pandemics from epidemics, describe pandemic flu from a public health and medical perspective, present an overview of the related social sciences and humanities literature, and summarize the lessons learned from these literatures, including how they influenced my approach. Although these descriptions and literatures would be fascinating to explore in a full discourse analysis, including their genres, rhetorical and linguistic strategies, truth claims and so on, I offer this information by way of an overview only, rather than an analysis.

2.1. Pandemics vs. Epidemics

The terms epidemic and pandemic are sometimes used interchangeably, but are different in scope. Both terms refer to all infectious diseases (i.e., not only influenza), but the term epidemic reflects a situation in which the number of people who become infected with a disease in a certain area rises well beyond what is expected. In the case of an influenza epidemic, the virus responsible is usually a subtype of one already circulating among the population. When a disease exists for some time in an area with little change in the numbers of people it infects, it is often referred to as endemic as opposed to epidemic.

A pandemic affects a much wider geographical area than an epidemic, sometimes the entire world. It is usually caused by a new virus strain—one that humans have either little or no immunity against, which accounts for its rapid spread. Pandemics generally cause many more deaths than epidemics.

The distinction between epidemics and pandemics may not have been meaningful before global travel was so widespread, because the transmission of disease would have been naturally limited, or at least slower, due to geography. That is, what might now be termed a pandemic may in the past have been seen as a series of
epidemics, often far apart in terms of timing. For this reason, in my Chapter 3 overview of outbreaks of diseases in history, I do not limit my coverage to what were called pandemics, but rather I review epidemics in general as relevant to the background for the study. I also focus on outbreaks of all infectious disease, rather than discussing only influenza, since all these diseases have the same epidemic qualities. I do not review chronic or endemic diseases—which along with other conditions such as obesity, diabetes, and even poverty, drug use and traffic accidents—are often referred to as epidemics in contemporary society, if only metaphorically.

2.2. Pandemic Influenza: The View from Public Health

Pandemic influenza is defined by PandemicFlu.gov (a website offering “one stop access to US government avian and pandemic flu information,”\(^2\) US Department of Health & Human Services, n.d.) as “virulent human flu that causes a global outbreak, or pandemic, of serious illness” (¶5). An Internet search of this definition reveals it is widely used by many other organizations.

The Public Health Agency of Canada (PHAC; 2010) website explains how pandemic flu arises.

People are exposed to different strains of the influenza virus many times during their lives. Even though the virus changes, their previous bouts of influenza may offer some protection against infection caused by a similar strain of the virus. However, three to four times each century, for unknown reasons, a radical change takes place in the influenza A virus causing a new strain to emerge. (section About Pandemic Influenza, ¶1)

PHAC is careful to distinguish pandemic influenza as described above from both seasonal influenza and avian influenza (Public Health Agency of Canada, 2010). The organization describes the former as a respiratory infection caused by the influenza virus, different strains of which circulate every year. Most people recover from influenza

\(^2\) Note that sometime in April 2009, the tagline changed to “one stop access to US government H1N1, avian and pandemic flu information.” As of August 10, 2010 it had changed to “know what to do about the flu.”
within 1 week or 10 days, says PHAC, but older people and those with chronic health conditions may experience serious complications. Seasonal influenza is responsible for between 4,000 and 8,000 deaths every year in Canada, says PHAC.

According to PHAC, Avian influenza strain H5N1 is as I write (spring, 2009) circulating in Asia, Europe and Africa, infecting many poultry populations and some humans. This strain is highly pathogenic (capable of causing disease) in birds, but there is no evidence of its transmission person to person. The first case of avian influenza was identified in 1997 from the throat swab of a 3-year-old boy who died in Hong Kong. Public health officials were alarmed at this discovery, as it was the first virus to jump directly from birds to humans without circulating first to pigs, which normally serve as a “mixing vessel” (Kimball, 2006). Public health officials remain alert to the possibility that the virus could mutate to become more easily transmissible between humans, in which case it could become a pandemic.

H1N1, a human form of swine flu, is described by PHAC as a respiratory illness that causes symptoms similar to those of the regular human seasonal flu. It was first identified in Mexico in March 2009, affecting people in several cities in that country. Its spread was originally linked to travellers contracting the virus and infecting others when they went home. The virus spread into the US and Canada, and then to upwards of 50 other countries, but with mostly mild cases compared to those in Mexico. Based on the low severity of the virus, in mid-May the US Centers for Disease Control and Prevention lifted a travel warning it had previously placed recommending that people not visit Mexico unless essential. At the time of writing, neither H5N1 nor H1N1 is a pandemic influenza, which is declared by the World Health Organization when the disease spreads in a sustained manner in several areas. H1N1 may well be declared a pandemic, although likely due to spread rather than virulence. If this happens, the definition of pandemic (US Department of Health & Human Services, n.d.) may need to be revised, since it refers to the disease as both virulent and serious. Such a situation would support the notion of diseases as social constructions rather than objective, static entities.

As far as actual pandemics, the so-called Spanish influenza of 1918 is referenced frequently. It was the first recorded disease to demonstrate the devastating consequences of rapid spread across the world. The pandemic lasted 2 years and
affected one third of the world’s population, primarily healthy adults. It is estimated that between 10 and 20% of people who contracted the disease died. Strangely enough, even though the virus became known as Spanish flu, the first cases to be recorded were actually in a military camp in Kansas. Further cases broke out among British, French and German troops fighting in Belgium, before any cases were reported in Spain. Alcabes (2009) suggests that “scientific perplexity combined with wartime political demands” (p. 110) was responsible for the naming of the disease. Scientists initially did not know where it came from, and because Spain was neutral in the war, and did not censor its press, many articles about the flu appeared in Spanish newspapers.

The relative absence of flu news from newspapers other than those in Spain, scientists’ inability to locate its origins, and the traditional bent for attributing the source of epidemic disease to foreign lands allowed the outbreak to be labelled “Spanish.” By the time the epidemic was first mentioned in New York newspapers, it was already being called “Spanish Influenza.” (pp. 110-111)

The next pandemic, Asian flu (so named because it was first identified in China) occurred in 1957 and caused an estimated 70,000 deaths. Unlike the virus that caused the 1918 pandemic, the 1957 pandemic virus was quickly identified, and a vaccine was developed (although available only in limited supply) within 6 months. Although the worst of the Asian flu seemed to be over by December of 1957, a second wave of the illness occurred in early 1958. A third pandemic began in Hong Kong in early 1968 and spread to North America later that year. The Hong Kong influenza is the mildest pandemic recorded to date, causing about 34,000 deaths.

The current wave of influenza planning was sparked by the 2003 outbreak of SARS, a new and highly contagious form of atypical pneumonia (a pneumonia that does not respond to the usual antibiotic treatment). According to Kimball (2006):

the SARS crisis developed quickly, and it reached two continents with direct contagion and illness in a matter of weeks. Worldwide attention and concern was focused on the situation as the World Health Organization (WHO) issued unprecedented alerts and travel advisories. It was highly fatal; an estimated 10 percent of clinically ill people succumbed to their disease. (p. 44)

The first Canadian SARS cases were identified in March 2003, in people who had traveled to Hong Kong and on their return infected their close contacts. Symptoms of SARS, which affected just over 8,000 people and killed about 800 before it was
contained, included fever, cough and shortness of breath, sometimes severe. Countries affected were China, Hong Kong, Taiwan, Singapore and Canada (Toronto). Depending on what one reads, SARS may or may not have eventually led to a pandemic if it had not been contained, but regardless, the concern about such a possibility was renewed. The World Health Organization urged all countries to develop or update their pandemic strategies, and governments and health agencies worldwide began devoting considerable resources (both financial and human) to preparing for an influenza outbreak deemed potentially devastating in terms of mortality and morbidity. In 2006, the Canadian government committed $1 billion over 5 years in the federal budget for pandemic influenza planning (Department of Finance Canada, 2006). Much of this money flows through the Public Health Agency of Canada, which later that year allocated $617 million over 5 years to avian and pandemic flu preparedness and an additional $94 million per year ongoing after that. These resources and more are being poured into a huge range of activities, from rapid vaccine development and testing, to assessing which populations are most at risk, to emergency preparedness, to stockpiling of antivirals (drugs used to treat viral infections such as influenza), to monitoring the spread of the disease. Underpinning all these activities are vast networks of people engaged continually in collaborating, negotiating, cooperating and sharing. Many a wiki (collaborative web page), blog, online network and “hub” or “one stop access” website is devoted to pandemic flu-related topics. As an example, the Public Health Agency of Canada’s FluWatch is an online surveillance system, monitoring the spread of flu and flu-like illnesses across Canada and providing healthcare professionals with updates on a weekly (more frequently, when warranted) basis. The agency has also developed what it calls a web-based “geospatial information system mapping tool” to make information available during a pandemic. BC researchers are developing population data platforms so that epidemiological information (for example, which communities and which populations are most affected by the disease) will be available provincially and even nationally. Similar platforms are being developed to share virologic (related to the study of viruses) information. Expert reference groups, committees and scientific advisory bodies meet regularly among themselves and with each other, in-person and virtually, exchanging and comparing information and ideas. Entire scientific and medical journals
are devoted to emerging infectious diseases, and research teams are meeting to set joint priorities for pandemic-related studies.

Vital to the success of all this collaborative activity, of course, is a common understanding of what a pandemic flu is, what kind of threat it poses, and what should be done about it. Somewhat confusing to the experts involved, then, is why, despite the level of activity related to pandemic flu planning, and despite extensive media coverage of emerging infectious diseases, the public does not seem to share their understanding of the risk, the urgency or the importance of planning for a pandemic. In Canada specifically, a recent national survey (Public Health Agency of Canada, 2008) suggests that “while the public generally considers the risks of an influenza pandemic to be serious, they are unlikely to give this issue much attention unless confronted with a specific reason why they should” (p. 4). While Canadian adults have high awareness of pandemics (77% reporting they are familiar or very familiar with the term), most—70%—have done little or nothing to prepare. Despite what public health experts think people should worry about, Sandman and Lanard (cited in Elledge, Brand, Regens, & Boatright, 2008) say it is not surprising that the flu does not worry people. First, unlike the more exotic emerging infectious diseases, the flu is natural and familiar (at least the seasonal type, and most recently even the H1N1 virus, which is less severe than annual flu so far). Second, they say, there do not immediately seem to be any issues related to morality or fairness, as there are with AIDS, poverty and many other health-related issues.

This disconnect between public health experts and the public fuels another level of pandemic flu planning activity aimed at closing the gap: public opinion research, health education and risk communication. These topics in turn account for a great deal of the social sciences and humanities literature on pandemic flu, as I show in the next section. I discuss the literature overall; review specific articles under the headings of public opinion and attitudes, preparedness, communications, media, and ethics; and provide a summary of lessons from the literature and how they influenced my approach.

3 For example, *Emerging Infectious Diseases; Infection; Infection Control; Infectious Diseases in Clinical Practice; Infection Control and Hospital Epidemiology.*
2.3. Social Sciences and Humanities Literature on Pandemic Flu

The social sciences and humanities (SSH) are defined by Statistics Canada as follows:

The SSH embraces all disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, business administration and commerce, information and knowledge management, criminology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political science, psychology, religious studies, social work, sociology, and urban and regional studies. (Statistics Canada, 2008, Measurement and Data Collection section, ¶4)

This category contrasts with the organization’s definition of natural sciences: those disciplines concerned with understanding and exploring the natural world, including engineering, mathematics and physical sciences.

I have been monitoring social sciences and humanities literature on emerging infectious diseases for several years, having set up a number of keyword search alerts in databases after an initial baseline search. Although emerging infectious diseases are popular topics in this literature, pandemic influenza per se is not well covered outside of the medical and scientific literature, in which it and other infectious diseases account for a great many specialized journals.

Below is an overview of what I found. It includes pandemic flu as well as avian flu, since the latter is often discussed in terms of its potential to become a pandemic. I have not included SARS, which was not a pandemic (although some of the literature on “lessons learned” from SARS is covered in Chapter 7) or H1N1, which is too new at this point to be covered in the literature. I have gone into some detail in my description of these articles, since what they include and do not include has relevance for my

4 “Emerging infectious disease” is a category that includes pandemic influenza but has a much broader definition, referring to completely new diseases or previously existing ones that are rapidly increasing in incidence or geographic range (MedicineNet.com, 2003).

5 Analysis of the discourse in these journals has not been done, to my knowledge, and would be most instructive.
arguments in later chapters. The articles are categorized under the topics of public opinion and attitudes; preparation; communications; media; and ethics. Although some personal judgement was required to categorize the articles in this way, for guidance I relied on the article key words as well as the type of journal in which the article was published.

2.3.1. Public Opinion and Attitudes

The date of the first public opinion research is a matter of some debate. Crossley (1957) suggests such research arose in the business sector, associated with consumer behaviour, between 1910 and 1920. He does say, though, that:

there may be those who would argue that public opinion research originated with the Cherington courses in marketing, or similar courses. Others will point to the straw polls of 1824 in Harrisburg, or even to the cahiers of the French Revolution. And I have no doubt that some epigrapher or classicist will one day unearth records of an ancient civilization in which measures of people’s attitudes and economic behaviour were taken. (p. 159)

McNemar (1946) noted more than 60 years ago that researchers often used the terms public opinion and attitude interchangeably. This is certainly my observation in reviewing the literature for this study, although I would add the term perception, which is also used frequently and for the most part interchangeably with public opinion and attitude. Such research is extremely popular in healthcare. It is aimed at understanding the opinions/attitudes/perceptions of the public on a health issue, sometimes with a view to changing those opinions/attitudes/perceptions, and sometimes with a view to introducing interventions or information in the context of such factors, so that they will be more readily accepted. Herbst (1993) laments what she sees as the lack of “ferment” (p. 140) in the field of public opinion research.

These days, most [researchers] assume that public opinion is simply the aggregation of individual opinions, as captured by the ubiquitous sample survey. Opinion researchers, so busy measuring public attitudes, seem to have very little patience for grand theory, political philosophy, or normative dialogues. (p. 140)

Certainly most of the articles I found for this review are quite pragmatic in approach, and consequently perhaps not overly interesting from a theoretical point of view. A few, though, push the methodological boundaries and include the kind of
discussion Herbst refers to—hinting in the process that even from a pragmatic stance, capturing what she calls the “elusive public mood” (p. 140) is not so straightforward an enterprise (see e.g., Padmawati & Nichter, 2008; Rowe, Hawkes, & Houghton, 2008).

Blendon, Koonin, Benson, Cetron, Pollard, Mitchell, Weldon, and Herrmann (2008) report the results of a national US survey conducted to help health officials understand how the public will respond to community mitigation interventions for a severe outbreak of influenza. Acknowledging that evidence for the effectiveness of strategies such as social distancing, school closures and quarantine is mixed, the authors say in the absence of better strategies, they are still likely to be used, and will require a great deal of cooperation from the public. Also acknowledging that people’s opinions on what they would do during a crisis may be quite different from what they would actually do, the authors say it is still important to understand what people think of such measures in general. They conducted an 85-question telephone survey in English and Spanish with 1,697 adults. The term pandemic flu was unfamiliar to most respondents, with 33% having heard the term but not knowing what it meant, and 25% not being familiar with the term at all. While most people said they would try to comply with public health measures during a pandemic, the authors concluded that people may have difficulty doing so if a pandemic continued for some time. In particular, those with lower incomes would need to work, and therefore may not be able to follow through with strategies such as quarantine measures. The authors also note that public response is likely to be affected by the perceived effectiveness of government and voluntary agencies in dealing with the outbreak.

Paek, Hilyard, Freimuth, Barge, and Mindlin (2008), noting the importance of the public’s adherence to government health and safety guidelines during a flu pandemic, also conducted a telephone survey in the US. Their aim was to understand the public’s level of awareness, knowledge and perceptions about pandemic flu, as well as the public’s level of support for government intervention. The authors surveyed 1,602 adults in the state of Georgia, finding “significant confusion…around the definitions and facts regarding avian flu and a flu pandemic” (p. 68S). This finding led to a suggestion for risk communicators to focus on the critical information that needs to be known and how most effectively to disseminate that information. A second finding was that there are divergent perceptions about levels of susceptibility and severity concerning a pandemic, with the
poor, less educated, older people and minority populations feeling more vulnerable. The authors' suggestion in response to this finding is that better understanding is needed in order to deliver messages that address a range of concerns. Another finding was that there was a relatively weak level of trust in government's ability to handle a pandemic, but there was general support for government actions ranging from encouraging people not to go to work, to closing the borders to visitors from countries with outbreaks of flu. Recommendations for public health experts stemming from the study are:

- determine what sources and messages are critical for the public in order to provide consistent, simple and memorable messages, including distinguishing avian flu from pandemic flu;
- provide the public with an accurate sense of impacts and consequences of a flu pandemic in personal terms;
- frame messages in a way that engenders public trust.

Similar research has been done in Europe by Kristiansen, Harvorsen, and Gryd-Hansen (2007), who conducted a web-based survey of 1,168 Norwegians. The authors say the survey was done at a time when international media were very concerned about a pandemic threat, although in their survey they used the term serious influenza outbreak, thinking that respondents might not be familiar with the term pandemic. Although the authors note that the study sample was not representative (women, people with lower educations and those with lower incomes were in a minority), they conclude that Norwegians do consider pandemic influenza to be a public health threat (not surprisingly, though, less of a threat than the health authorities consider it to be). Another finding was that few people seem prepared to take precautions that would seriously disrupt their normal social functions.

Ho, Brossard, and Scheufele (2007) focused on trends in American attitudes towards newly emerging infectious diseases by analysing 6 years of poll data relating to avian flu, SARS, West Nile virus and anthrax. They conclude that attention to such diseases is event-driven, peaking when there are new cases, and decreasing when the diseases seem to be contained. Over the time of the polls, behavioural and knowledge trends, as opposed to perception, remained constant. The authors say this finding suggests that informational and awareness campaigns have a limited impact.
Janssen, Tardif, Landry, and Warner (2006) conducted individual interviews with health professionals and held focus groups with the public in four US cities to review draft communications materials about pandemic flu. Participants were asked about their general knowledge of pandemic influenza; perceived likelihood of an outbreak; anticipated seriousness and perceptions of personal risk; credibility of information sources; and possible reactions to public health actions. Findings across both groups indicated that awareness was generally low (higher with health professionals, not surprisingly); showed that participants did not associate avian flu with a potential pandemic; and found that participants reacted negatively to the idea of priority groups for vaccination\(^6\) (until the process was explained). For healthcare providers, there was little sense of urgency about pandemic influenza: they said they are faced with pressures every day in their working lives. These participants suggested that officials should let them know when they should be doing something about it. Members of the public in focus groups questioned why the topic was being raised and wondered if an outbreak was imminent. They did express a desire to know what they could do to protect themselves, but like the healthcare providers, were less interested in things they could do when a pandemic was not present. From these findings, the authors recommend pairing negative information about the flu with positive information about what actions people can take. They also suggest explaining potential controversial decisions, such as vaccinating certain groups before others. If efforts to educate the nation about pandemic influenza are successful, say the authors, the public will increasingly become engaged in discussions about it. Finally, they say this interpandemic period is a good time to continue to develop and test informational materials. A limitation of the study, they note, is that it was conducted with English speakers only, and included none of the “homeless or undocumented who present outreach challenges” (p. 394). Future efforts, say the authors, must focus on materials for other languages and hard to reach populations.

Watkins, Cooke, Donovan, MacIntyre, Itzwerth, and Plant (2008) conducted focus groups with owners of small and medium businesses (under 200 employees) in

\(^6\) The concept of priority groups for vaccination refers to the strategy of vaccinating certain populations before others, or in the case of limited vaccine availability, instead of others. For example, healthcare providers are likely to be given priority for vaccination in a pandemic, because they must remain healthy in order to care for others.
Australia on the topic of pandemic preparedness. The authors say that despite significant levels of concern among health experts worldwide, many small business owners and managers do not recognize pandemic influenza as a personally meaningful threat, and have not been influenced by current public health sector efforts to raise awareness and encourage preparedness. Since managing a pandemic would depend on infection control strategies—which must be acceptable to the community in order to be successful—the authors were interested in finding out what it would take for their participants to comply. Most focus group participants said they would deal with a pandemic when it arrives. Participants also commented on media coverage of pandemic flu, suggesting that it lacked credibility and the information was presented in such a way as to incite fear.

De Zwart, Veldhuijzen, Elam, Aro, Abraham, Bishop et al. (2007) say that despite extensive media coverage about avian influenza, there is little understanding of how the public perceives the risk. They set out to explore receptivity to non-medical interventions, which they say will be important as the public health sector will be dependent on the willingness and ability of the public to adhere to recommendations about personal hygiene, travel restrictions, vaccination, prophylaxis (measures taken to prevent disease before it occurs), and so on. Building on the theory that risk perception influences protective behaviour—in other words people will engage in such behaviour if they feel capable of it and they believe it effective—the authors conducted 3,436 computer assisted telephone interviews in five European countries and three East Asian nations. They found that about 45% of respondents thought they were likely or very likely to get flu if an outbreak occurred in their country (this perception varied across countries, from 32% in Denmark and Singapore to 61% in Poland). They also found a low level of self-efficacy (belief in one’s ability to successfully carry out certain tasks), which they attribute to a pandemic flu’s being an unfamiliar risk as well as something that is not under volitional control. The authors’ recommendation is that attention should be paid—again, in risk communication—to measures of self-efficacy in order to increase adherence to preventive measures.

Jones and Iverson (2008) report on a telephone survey of 203 Australians aimed at determining their knowledge of avian flu, their willingness to engage in preventive behaviours and their acceptance of potential messages for communication campaigns in
the event of a pandemic. Results suggest that awareness and concern about avian flu is low, which the authors say may be due to the country’s geographical isolation. Despite the low awareness, there was widespread support for some control measures, from quarantine, to closing borders to visitors from countries experiencing avian flu, to encouraging people to work from home, to closing schools. The authors say, however, that if the public complied with only the recommended actions with which they agreed, management of an actual outbreak would be compromised. They conclude that:

> current low levels of public concern, combined with lack of awareness of basic preventive measures, suggest the Australian government will encounter a number of significant communication challenges in the event of an avian flu pandemic. (Jones & Iverson, 2008, p. 81S)

Recommendations are similar to those of the other studies in this section: educate the public about the most effective strategies for protecting themselves and the importance of being prepared; develop effective communications strategies for all phases of outbreaks (pre-pandemic, pandemic and after the pandemic); and involve the media.

Elledge et al. (2008) conducted 12 focus groups with the public in Tulsa, Oklahoma to determine the general level of awareness of and knowledge about avian and pandemic flu, as well as the level of concern and the level of preparedness. Their participants spanned a range of ages and income levels, and included community leaders as well as community members. Quite a bit more bluntly than the articles reviewed to this point, the authors sum up their findings as follows: “The public in Tulsa lacks information about avian influenza or pandemics, does not believe a pandemic will occur, and believes that if one does occur, the government will take care of it” (p.56S).

This summation comes from several themes that emerged from the focus groups:

- confusion about terminology (hardly anyone had heard the term pandemic);
- seriousness (it was not among the top health concerns, which included cancer, diabetes and heart disease);
- disaster fatigue (participants had heard about SARS, mad cow disease and the Y2K scare but where had those gone?);
- appropriate precautions (there were misperceptions here along the lines of “if you live a healthy lifestyle you will not be affected”).

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• credibility of health information (there was a range of opinions here, with some people distrusting media most, and others distrusting government. All participants, though, said they trusted local health departments).

The authors say there was an overall indication that people want to be involved in community preparation for disasters. The recommendations in the article, though, as in many other articles, are for the most part a list of communication tips.

Padmawati and Nichter (2008) examine popular perceptions of avian flu in Indonesia—the country that has reported the largest number of cases of the virus—and find a wide range of opinions and views from backyard poultry farmers, commercial farmers and consumers. The authors argue that although global surveillance is necessary, there should be a greater focus on national preparedness programs, which in turn should be informed by anthropological investigation of illness perceptions and behaviours that contribute to and prevent disease transmission. There should also be more emphasis on community organization and preparedness, they say. This prototype study for future anthropological studies of emerging and epidemic disease and community preparedness—which the authors say are lacking—found widely differing opinions among participants on what causes avian flu and how serious it is. Influencing those opinions, claim the authors, are media, government education programs and rumours. The study is meant to illustrate that epidemiology is just one facet of a disease outbreak, and to urge that social and political factors be taken into account in preparing for disease outbreaks. The authors suggest pandemic planners work through existing networks of local organizations and combine their preparedness efforts with those related to other natural disasters, to help build and sustain overall community competency and interest. Unlike the other studies reviewed to this point, these authors call for analyses not just of how to get information to specific groups, but of what specific people and groups have to gain or lose in an emergency situation. By looking at what people have to gain or lose, they suggest, it is possible to see why they might hold certain attitudes and beliefs, and to address those attitudes and beliefs more directly in preparedness activities. The authors also stress the importance of “[anticipating] that ethnic tensions and the politics of othering may interfere with avian flu control, particularly in its early stages” (p. 43).
Rowe et al. (2008) analysed more than 3,000 posts over a 10-day period to questions posed on the British Broadcasting Corporation (BBC) website after the 2007 discovery of avian influenza in the UK. One set of questions related to people’s reaction to the cases of bird flu, and a second dealt more explicitly with imports and exports of poultry and the extent to which consumers would change their purchasing behaviour. The research method for this study was similar to many public opinion studies, in which themes are said to emerge from the data. In this case, the themes were:

- official blame,
- here we go again,
- anti-industrial,
- information inadequacy,
- jingoism.

Not surprisingly, given the experiences in the UK related to bovine spongiform encephalopathy, foot and mouth disease and MRSA (see e.g., Brown & Crawford, 2009; Kewell & Beck, 2008; Miller, 1999; Washer, Peter & Joffe, 2006; Wright & Nerlich, 2006), the government is criticized in many of these messages: people suspect they are not being told the full story. There were also many references to the various scares that people feel they are supposed to concern themselves with, but which amount to nothing in the end. A large number of respondents mentioned media overreaction, and there were complaints about industry in terms of avian flu’s being a consequence of modern farming and modern methods in general aimed at making as much money as possible. The authors categorized about 20% of responses under the theme of information inadequacy, meaning that people were confused by the information they heard about avian flu or their questions were not being answered by the information available. Some respondents took others to task for not taking the avian flu situation seriously, citing the Spanish flu epidemic as an example of how bad a pandemic can be. A reader cannot tell how prevalent this view was, though, since the authors simply say this happened in a number of posts. Just over 200 posts were coded under the theme of jingoism, demonstrating that othering (defining oneself in a positive way by stigmatizing others as different) can indeed be an issue.
In summary, the articles reviewed in this section are for the most part pragmatic in approach, seeking to generalize public opinions and attitudes in order to change them or to reflect them in communications materials. Although there is nothing wrong with this approach, such studies can easily overlook important aspects of public opinion and attitudes by isolating them from the social and political contexts in which they form, and in which they are maintained or change. These aspects are discussed in only a few of the above articles, including the last example, where it is demonstrated that people’s opinions are also about many things other than the topic at hand, including politics, previous experiences, simultaneous events and so on.

2.3.2. Preparedness

The emergency preparedness literature, like the literature on public opinion and attitudes, is large and well-established, increasing in the years since the World Trade Centre attacks and the attendant concerns over international terrorism in addition to natural disasters. Dedicated journals include *Journal of Emergency Management, Disasters, Disaster Management and Response*, and *Disaster Medicine and Public Health Preparedness*. The mandate of many of these journals is to provide practical information and education for those responsible for emergency management in organizations. For example, the *Journal of Emergency Management* homepage explains its offering as follows:

> With a well-focused game plan carried out by an unbeatable team of emergency preparedness and response experts, *Journal of Emergency Management* is already being hailed as long overdue and a “must have” for anyone responsible for the safety and well-being of both personnel and property. *(Journal of Emergency Management, n.d., ¶2)*

Others cover a broad spectrum of articles, including theoretical and political, as well as practical, aspects of emergency planning. Disasters, for example, are described as:

> a major, peer-reviewed quarterly journal reporting on all aspects of disaster studies, policy and management. It aims to provide a forum for academics, policy-makers and practitioners for high-quality research and practice related to natural disasters and complex political emergencies around the world. *(Pantuliano, Young, & Alexander, 2009, ¶1)*
The articles I review here were collected as part of my database searches on pandemic flu in the general social sciences and humanities literature.

Paton, Parkes, Daly, and Smith (2008) challenge the notion that providing the public with information about a hazardous event motivates people to prepare. They argue that researchers and communicators should take into account the social context in which information is disseminated, and propose a model to inform public education strategies that will encourage adoption and maintenance of preparedness and protective measures. The model is based on the premise that when faced with uncertainty, people turn to others (family, neighbours and other community members) to reduce this uncertainty. The model suggests that people will not treat a pandemic as a unique, objective problem about which information from health agencies should be accepted unequivocally, but that they will interpret information about a pandemic in the context of the sum of experiences they have had with the health sector over time. The model was tested through a telephone survey of 400 New Zealand residents using structural equation modelling (a statistical technique for testing and estimating causal relationships). They conclude that preparing for a pandemic such that people will have the knowledge, resources and plans to cope alone for up to several weeks is as much a function of relationships among people as it is about information. Public education, then, must go beyond information provision. Disappointingly, many of the recommendations still focus on risk communication and dissemination of appropriate messages, although the authors encourage the integration of pandemic risk management and community development activities in ways that allow discussion, develop problem-solving competencies, and involve health agencies and communities working together. A promising idea is having health agency representatives act as consultants to communities, rather than directing preparedness and development activities in a top-down manner.

Doxtator, Gardner, and Medves (2004) conducted a tabletop exercise in a rural Ontario community to determine the ability of a rural health unit to manage a pandemic influenza outbreak. Participants (healthcare professionals, government, media and morticians) were presented with scenarios that might occur during a pandemic, and asked to make decisions about how to respond as if they were actually doing so. The authors say the exercise identified critical issues such as communication, emergency
decision-making, vaccination prioritization, local hospital capacity, and disease containment. Beyond specific issues, though, they also speak to the benefit of conducting an exercise to experience how things would be managed in real time. Among their recommendations are:

- a coordinated method for coping with mass fatalities;
- provincial guidelines on pandemic response to guide consistent community decision-making;
- communication of the rationale behind decisions, especially in cases such as vaccine prioritization, which may result in public fear and protest.

Even among participants, say the authors, agreement was not reached on which groups should be a priority for vaccination.

Kleinman, Bloom, Saich, Mason, and Aulino (2008) propose what they call a biosocial approach to pandemic influenza control and prevention, commenting that to date most discussions about the current spread of avian influenza (said to be a precursor to a pandemic) have lacked rigorous analysis of the local contexts in which diseases arise and in which effects would be felt. A biosocial approach, say the authors, means taking into account the inseparable interactions that take place among biological, social, political and environmental phenomena. When these factors are taken into account, questions will arise whose answers are critical to effective and ethical preparedness. These questions include:

- What is at stake for individual people at a local level when they are faced with large-scale disease control measures?
- What systems are in place to help populations curtail the spread of influenza?
- What practices and situations aid its spread and to what extent are government and health agencies prepared to intervene?

The last article in the preparedness category is by Reissman, Watson, Klomp, Tanielian, and Prior (2006), who argue that too little attention has been paid in preparedness activities to identifying and managing psychological and social factors likely to influence human behaviour during a pandemic. The reason such attention matters, say the authors, is that health and medical strategies employed will require
people to behave in prescribed ways to avoid exposure, prevent infection and halt disease transmission. Based on previous disasters, the authors foresee a grim scene:

- a massive surge on the medical system is likely;
- adherence to public health recommendations will be low;
- individual decisions may have grave consequences (they remind readers of Hurricane Katrina, where some people refused to evacuate, and subsequently died);
- providers may be too fearful to care for patients.

The authors convened an expert panel whose members developed three strategic approaches and provided guidance for implementation. The approaches are:

- measures to shape the public’s behaviours so they are as adaptive and risk-reducing as possible (These measures include maximizing public trust, communicating effectively and maximizing adaptive behaviour change—such as facilitating self-care and appropriate care-seeking);
- measures to reduce social and emotional deterioration and improve functioning (For example deploying appropriate programs and policies such as counselling programs);
- measures to support key personnel in critical infrastructure functions (such as training to deal with the crisis, and support for their families—but also policies to deal with non-compliance of healthcare professionals).

2.3.3. Communications

There are only two English language journals dedicated to health communication: *Health Communication* and *Journal of Health Communication*. However, as Thompson et al. (2003) note, thousands of articles on the topic are published in other academic disciplines in both (a) the physical science literature and (b) the social science and humanities literature. Much of the literature is aimed at practical interventions, such as demonstrating how communication techniques can be used to improve the public’s understanding of health issues, or how healthcare professionals can communicate more effectively with patients. However, there is a strong critical health communications literature as well, challenging some of the assumptions in the mainstream literature (for example, the assumption that providing people with the right information will—and should—cause them to change their health behaviour).
Freimuth, Hilyard, Barge, and Sokler (2008) begin their article like most others: commentary on an imminent pandemic and the devastation it may cause. They report on a simulation of a pandemic flu outbreak undertaken by 17 public health risk communicators in health districts across the US state of Georgia. Over a period of four hours, communicators learned of a suspected outbreak; received emails from the public, reporters and health professionals (the latter requesting materials translated into several languages); responded to erroneous news coverage; and developed key messages and dissemination plans. The evaluation showed how different planning a response is from actually responding. “Even veteran risk communicators were surprised by the demands of the 4-hr exercise” (p. 43S), say the authors. The exercise demonstrates the value of conducting a simulation as opposed to simply a tabletop (discussion) exercise, say the authors. It also emphasizes the importance of including communications personnel in simulation exercises undertaken by emergency planners.

Saliou (1994) claims that unlike with an industrial disaster, blame cannot be individually apportioned for a pandemic. His article—written in 1994, the earliest I could find on pandemic influenza—discussed the crisis communications principles of a strategy developed by Groupe d’Expertise et d’Information sur la Grippe (GEIG), an expert public health committee in Paris. The principles included:

- one message, one voice (i.e., using one spokesperson);
- the collection and coordination of information through a scientific council;
- the identification and prioritization of target groups;
- relationships with the media;
- information packs adapted to different groups of the public.

Saliou’s article is a reminder of how recent use of the Internet is, despite its seeming ubiquity in today’s Western social life: there is not one mention of electronic communication.

Quinn (2008) writes about the difficulties of communicating about a pandemic with what she calls “special populations,” defined as those who have cognitive or physical impairments; no access to mass media; language barriers; or cultural beliefs relevant to the pandemic. The point of her article, recognizing that during a pandemic, public health professionals will be limited in their abilities to create targeted
communication, is to suggest a model for building community capacity for disasters and pandemics. The model uses community-based participatory strategies to identify community concerns about preparedness as well as about the government's response and communications issues.

In addition to the above general pandemic flu communications articles, there are several on the topic of crisis communications related to emerging infectious diseases in general. These include:

- communicating during an emergency (e.g., Arguin, Navin, Steele, Weld, & Kozarsky, 2004; Covello, 2003; Glik, 2007; Golan, 2003; Koplan, 2003; Nowak, 2007; Saliou, 1994);
- using the Internet for communicating during an emergency (Kittler, Hobbs, Volk, Kreps, & Bates, 2004);
- theory and models for crisis communication (Reynolds & Seeger, 2005; Williams & Olaniran, 1998);
- assessing newspaper preparedness for health crises (Lowrey, Gower, Evans, & Mackay, 2006);
- understanding public response to disasters (Glass, 2001).

2.3.4. Media

Media and health research studies are popular, no doubt reflecting the sheer volume of health-related stories in newspapers and on radio, television, and the Internet. In a recent article (Holmes, 2009), I suggested that media play a big role in people's understandings of health and illness, contributing to the definition of what is and what is not a health issue. Although it is difficult to measure the effects of media on people's views in isolation from other interactions they may have (with family, friends, healthcare professionals and so on), media studies have much to offer on the subject of the social construction of health and illness.

Ungar (2008) replicates and extends his previous study on media and Ebola (Ungar, 1998) to determine whether media coverage of avian flu shifted from alarming to reassuring as the virus spread out of Southeast Asia and into Europe, signalling a potential pandemic. Using Google Internet alerts to download English language newspaper articles for 2 years starting early April 2004, he traced three broad stages of
discourse over time: *sounding the alarm* (where fearful claims making predominates); *mixed messages* (still some alarm, but tempered with assurances); and finally what he calls *hot crisis and containment* (which includes efforts to undo earlier frightening messages). Ungar’s (2008) conclusion is that for the most part, journalists: “complied with the dominant party line, presumably because of some combination of political pressure, a sense of obligation in possibly dire circumstances, a lack of knowledge or expertise, and a willingness to accept routine claims” (p. 494).

Ungar’s (2008) discussion of a “preparedness” frame at one point in the cycle of coverage is interesting. The frame (a set of messages characterizing a situation) seemed to have been created by government, who were not in fact prepared, but wanted to come across as if they were. Ungar’s view is that governments did not want to be accused of doing nothing if a pandemic looked likely, especially given past experiences in the UK with BSE and in the US with Hurricane Katrina. Ungar notes that the frame was unchallenged by journalists.

Dudo, Dahlstrom, and Brossard (2007) analysed the quality of avian flu risk-related coverage in four US newspapers, suggesting it is important to understand because avian flu “has the potential to ignite a lethal pandemic” (p. 430). Media coverage has been extensive since 2005, say the authors, reaching up to 90 articles every month. The authors defined “quality information” (noting that it can be subjective) and then tested for it. Quality risk coverage, they say, will provide more qualitative than quantitative information. The quantitative information should have contextual denominators (for example, not just 20 people died, but 20 out of 100); should provide minimal comparison to known risks; should avoid sensationalizing risks by using worst case scenarios and “loaded” words; and should use thematic frames more often than episodic ones (the former providing more context, the latter being one-off). In addition, say the authors, quality coverage should provide information to increase self-efficacy, such as discussing symptoms and measures for personal protection. The study suggests that there is an overall low quality of mediated risk information about avian flu, with a heavy use of sensationalism. Like Ungar (2008), the authors of this article say that if the threat had been closer to the US, there may have been a drop in sensationalism. The authors do not go so far as to equate coverage with public perception, but say that exploring media coverage is a first step to understanding media effects of avian flu.
In one of only a few articles using discourse analysis to study pandemic flu, Nerlich and Halliday (2007) study the metaphorical construction of avian influenza in UK media coverage as well as in scientific journals. Through the analysis of metaphors within the context of a theory of negative expectations, they find two main but conflicting discourses: a scientific discourse of “early warnings” (which they say contributed to a rhetoric of fear in newspaper coverage), and a “wait and see” government discourse (which they say resulted in a rhetoric of blame). The clash of these discourses resulted in mixed messages in the media, relating to, on the one hand, the need for urgent action, and on the other, a need for caution. The authors suggest these mixed messages could have been the reason for a third discourse, uncertainty, which they also uncovered. Like Dudo et al. (2007), Nerlich and Halliday (2007) discuss the increase in media coverage of influenza since the end of 2004. They find it unusual, since unlike other topics that generate such peaks in coverage, it was still a faraway illness for those in the UK. Unlike foot and mouth disease or BSE, there were no local human interest stories to tell. The authors suggest what accounted for the media coverage was increasing activity by special interest groups such as the World Health Organization. They also observed that journalists did not seem to be fully responsible for sensationalizing avian flu: scientists and public health officials were as heavy handed with the warning messages. These messages mobilized media, and messages from both in turn mobilized governments to act. Nerlich and Halliday say the study demonstrates how media and experts can use discourse to bring about certain actions. In some cases these actions are positive; in others they may have unintended consequences. For example, governments may allocate resources immediately to avoid criticism, without thinking about how those resources could be better put to use. Another unintended consequence of certain discourses such as warnings is that if they occur too early, or are issued too frequently or in the context of high uncertainty, they may demoralize individuals and society, neutralize urgency, or produce cynicism and indifference.

2.3.5. Ethics

As Callahan and Jennings (2002) explain, early bioethics articles (from the late 1960s until the 1990s) focused for the most part on issues related to high-technology medicine. The authors say that:
the time has come to more fully integrate the ethical problems of public health into the field of public health and, at the same time, into the field of bioethics. Public health raises a number of moral problems that extend beyond the earlier boundaries of bioethics and require their own form of ethical analysis. (p. 169)

Although the public health-ethics area is slow to develop (Selgelid, 2005), I found some interesting articles on the ethics of pandemic flu planning, as follows.

In the only article on pandemic influenza that uses the methodology of discourse analysis, Garoon and Duggan (2008) claim that pandemic preparedness plans do not pay enough attention to ethical considerations. This, they say, despite the fact that policy decisions in the plans are rife with ethical challenges, and that past pandemics have disproportionately affected disadvantaged populations. To illustrate, the authors conducted a critical discourse analysis of 37 US plans. Unfortunately, they do not show their analysis in any way, but they do say that the construction of the plans appears to lead naturally to a neglect of ethical considerations such as determining who should be vaccinated first—or at all—if there is a vaccine shortage. Pandemics are referred to as being equal opportunity and global (in other words, everyone is at risk), a construction that encourages preparedness, but does not tell the whole story. The authors identified three prominent discourses—scientific, political and legal—that are in turn embedded within an economic discourse. Missing in the plans is any substantive discussion of social and cultural relations. While the plans do allude to culture, say Garoon and Duggan, it is primarily in terms of its being a barrier to overcome in order to ensure effective implementation.

Blumenshine, Reingold, Egerter, Mockenhaupt, Braveman, and Marks (2008) explored pandemic flu planning from a health disparities perspective, aiming to call attention to avoidable disparities that can be expected in the absence of systematic attention to differential social risks in preparedness. They looked at three levels where social disparities could occur:

- likelihood of being exposed to the virus (e.g., through crowded housing or the need to take public transit);
- likelihood of contracting it if exposed (by those who are less likely to be robust in the first place);
- likelihood of receiving timely and effective treatment after contracting the disease (through lack of access to healthcare).
Plans in the US, say the authors, fail to provide guidelines in these areas. The message that comes through strongly in this article concerns the importance of local community planning, since the community itself holds the knowledge about what is necessary for successful preparedness.

Thompson, Faith, Gibson, and Upshur (2006) present an ethical framework to guide decision-making in pandemic preparedness planning. Planning requires reflection on values, they say, and the bioethics community has been slow to respond to pandemic influenza planning. Their distinction between applied and critical ethics is intriguing. I struggle with this distinction in my academic work in general and specifically with discourse analysis. These authors’ work is in the realm of applied ethics, since it is designed to provide guidance and standards to use in planning. However, the authors say their work can also address the kinds of issues that a critical ethical analysis would, by promoting values and processes that could redress power imbalances. Their overriding point, like authors of the other ethics-related pieces, is that reflection on values is necessary in pandemic planning because scientific information alone cannot drive decision-making.

Ruderman, Tracy, Bensimon, Bernstein, Hawryluck, Shaul et al. (2006) argue there is a pressing need to clarify the rights and responsibilities of healthcare professionals in the current context of pandemic flu preparedness, and that such rights and responsibilities should be codified in professional codes of ethics. Finally, in a much-cited article, Kotalik (2005) examined pandemic flu plans from the US, the UK and Canada from an ethical perspective. Concerns raised include the lack of involvement in planning of healthcare professional organizations; the lack of attention to the benefits vs. the burdens of vaccination (which is touted as the most important instrument for reducing the impact of the virus); and the fact that various populations have been inadequately informed about the planning. Also raised are assumptions that are never challenged, such as the fact that a shortage of resources is unavoidable—"Why not increase them?" asks Kotalik. Like other authors of ethics-related articles, Kotalik says the development of plans is not strictly a scientific and administrative task. A unique point made in this article is that plans are important to critique not only as they apply to circumstances they address directly, but because sections of them, or approaches, will
be adopted—perhaps uncritically—for other situations such as new infectious diseases outbreaks.

2.4. Summary

As shown in the previous section, there are lessons to learn from the social sciences and humanities literature on pandemic influenza. Among the most prominent from interviews and focus groups:

- many people are unfamiliar with the term pandemic influenza as well as with details such as who is most at risk and how to prepare for it (this may have changed with the outbreak of the H1N1 virus);
- not many people seem inclined to prepare for a pandemic before there is seen to be a need, including health professionals;
- when asked about containment measures, and when those measures are explained to them, people say they would try to comply;
- there seems to be some disaster fatigue as well as scepticism about media coverage.

When we look beyond settings where specific opinions are solicited at a point in time (focus groups, interviews) to more natural settings (media coverage and the online posts), the lessons are given more context:

- media are not always more alarmist than scientists and public health officials;
- opinions about avian flu are never really just about avian flu;
- the quality of pandemic flu information (as defined by one study’s authors) in media is low;
- alarmist media coverage may lead to disaster fatigue.

Recommendations from the authors of the above studies, as well as from those authors of theoretical as opposed to empirical studies, are also instructive. Unfortunately, many of those recommendations relate to communications, even in the articles whose authors warn that more information, even if it is targeted to specific audiences, does not equal better understanding. Apart from the oft-heard recommendations to focus on accuracy and timeliness and appropriateness of messages and their sources, though, we learn:
• everyone has either something to gain or lose in relation to a pandemic situation, which is important to take into account in preparedness;
• information and awareness campaigns are not very effective;
• community capacity and resilience—not only with regard to pandemics, but for other emergency situations—are important aspects of preparedness planning;
• more attention must be paid in pandemic planning and preparedness to the potential effects of a pandemic on vulnerable populations;
• more attention must be paid in pandemic planning and preparedness to values, as the practices of science and public health are not value-free.

A majority of these lessons and the literature they came from are similar to the public health literature discussed in Section 2.1. Research for rather than of or about public health. Language in this type of research is a-theoretical, a vehicle for transmitting previously established facts and information. Southwell (2000) would call this administrative research, in the service of health-promotion endeavours. In this case, it is assumed that a pandemic will occur. It is a given that the public needs to know and think certain things about it and prepare for it in certain ways, and therefore research is conducted on the state of this knowledge-perception gap and how to fill it. While this type of research is important, so too is more critical research that would view the language relating to a potential pandemic as constructive, rather than representative. These explorations are found in the literature review to some extent (e.g., Garoon & Duggan, 2008; Nerlich & Halliday, 2007) but are in a minority. More research along these lines might question the assumption that there is only one way to define a pandemic and that there is only one, commonsense, way to react to it and prepare for it. It might challenge the notion that everyone needs to know about pandemic flu and about the specific ways in which it is different from avian or seasonal influenza, or even the idea that we should all be worried about a potential pandemic.

As Thompson et al. (2006) point out, the line between critical and applied studies is a fine one, and findings from one type can contribute to the other. In my methodology section, I describe discourse analysis as a theoretical and methodological approach that can add to the existing literature on pandemic influenza, which to date includes only one such study (Garoon & Duggan, 2008). First, though, I add to the background begun by this literature review by presenting an overview of epidemics in history, in the next chapter.
3. Epidemics throughout History

In *The Conquest of Epidemic Disease*, Winslow (1967) presents a chronological history of outbreaks alongside the progression of medical and scientific discoveries that led to an understanding of the disease processes involved. Winslow concludes that:

we shall never return to the demonic and miasmic theories of the past; and the practical application of the principles developed by a series of clear thinkers and brilliant investigators—from Fracastorius to Chapin—has forever banished from the earth the major plagues and pestilences of the past. (p. 380)

Certainly it is possible—and interesting—to explore epidemic history as the progress and victories of medicine. Slack (1999) points out that many disease chronologies recount the steps by which “popular superstitions and folklore were replaced, first, by government regulation in the interests of public health…and then by a triumphant biological and medical science” (p. 10). However great the triumphs of science may be, though, they are only part of the story. Also involved in the outbreak of and response to epidemics is a “labyrinth of cultural values, social and political contexts, and personal stories” (Walzer-Leavitt, 1992, p. 629). Noting such cultural and social aspects of disease outbreaks, Alcabes (2009) sees epidemics from three perspectives: as physical events, as events that play a role in social crisis, and as narratives.

These three aspects of the epidemic can’t be divorced from one another: all significant spread of illness also creates a social phenomenon; every social crisis moves us to make sense of it; each revision of the story of our society alters the way we study disease (and even the way we define illness) and changes the pitch of social change. (p. 5)

I suggest it is not just the “significant spread” of illness that creates a social phenomenon, but even the threat or potential of such spread. The 1976 swine flu outbreak, which spurred the US government to launch a massive vaccination campaign for a pandemic that never materialized (Garrett, 1994), is one such example. Another, with less serious results, is the pandemic flu planning movement itself. As Alcabes (2009) notes, “despite the poor prospects that H5N1 flu might create a serious human outbreak, scientists and officials have invoked the Spanish flu scenario to demand resources for pandemic flu planning” (p. 113). Such reactions demonstrate the influence of previous epidemics—situations most of us have not experienced personally, but only
read or heard about. As has been well documented, historical epidemics had a profound effect at the time of their occurrence (Blakely, 2006). It is also the case that their effects continue well beyond the outbreak itself, a demonstration that epidemics are also intellectual constructs “which, once formulated, have a history, vitality and resilience of their own” (Slack, 1999, p. 8).

As a backdrop to the study to follow, this chapter presents an overview of epidemics of the past. I draw on Winslow’s chronological scientific framework as an outline, weaving in observations of other writers who focus on additional aspects of disease outbreaks. First, though, I discuss modes of thought with regard to disease causation. After the chronology, I summarize the chapter in terms of its relevance for this study.

3.1. Disease Causation: Three Modes of Thought

*The Conquest of Epidemic Diseases*, which Winslow wrote in 1943, is about the “progressive stream of human thought” (p. xi) on why outbreaks occur, a “great men of science” tale that recounts a series of impressive discoveries in the history of medicine. All these discoveries, says Winslow, have taken place in the latter of three modes of thought on disease causation: demonology/religion, metaphysical medicine, and the universal laws of science.

Winslow reminds us that the belief in disease as caused by malign supernatural powers has prevailed for much of human history. He does not dismiss this mode of thought as irrational superstition, though, referring to it as a “well-knit philosophy and a complex system of ‘applied science’” (p. 15). When someone became sick, there was a reason for it, says Sigerist (1943). “Somewhere, somehow his vigilance had broken down and a stronger power was in command. A fellow man had bewitched him, or a spirit had taken possession of his body” (p. 131). Across the world, every illness was seen as the work of a particular evil spirit who entered or otherwise laid claim on the body (Hatty & Hatty, 1999). (An exception to this mode of thought, in Hippocrates’ time, is explained below.) Winslow sees religion as part of this phase of thinking. Despite its view that disease is an act of god rather than of demons, the world is similarly viewed as
governed by supernatural as opposed to natural forces. The second mode of thought on disease causation is metaphysical medicine. Unlike many other writers, Winslow separates this mode from demonology/religion as it does not assume the influence of a supernatural being. Like scientists, magicians claim to be influencing life by a knowledge of its laws, which are usually of a logical rather than observational nature. As examples, Winslow cites practices associated with "sympathetic magic" (p. 45), as when the Maya treated skin eruptions that resembled insect stings with a poultice made from crushed wasp nests. The third mode of thought is the universe of natural law, more commonly known as scientific thinking or the scientific method. Alcabes (2009) suggests this phase emerged around 1600. Plague outbreaks were still a frequent occurrence in Western Europe, but by this time an epidemic was thought to have a physical rather than demonic or religious cause.

Winslow emphasizes that these modes of thinking are not progressions from early civilization to current day: all modes could be in operation at once in any society. “In the Classical Period…the leading thinkers show us a prevailing trend of science contaminated by occasional remnants of superstition; in the Middle Ages, the corresponding picture is one of superstition, shot through with gleams of science” (p. 88).

Despite his insistence that modes of thought other than scientific thinking are based on “well-knit philosophies,” it is clear from Winslow’s language (superstition “contaminates,” but science “gleams”) that he is firmly on the side of scientific-thinking-as-progress. Others debate the extent of the differences among magic, religion and medicine. Gwyn (2002) wonders, for example, if we need to dismiss the idea of demons and gods as the cause of disease, or if we should simply accept that they represent “a different and incommensurable vision of the body and of reality” (p. 12).

3.2. Epidemics and Epidemic Thinking

According to Winslow, the “conquest of epidemics” story starts in 500 BC, with Hippocrates’ theories of cause and effect demonstrating “the inspiring vision of a world no longer the playground of chaotic personalized forces but an orderly universe of law” (p. ix). This, says Winslow, was the most important turning point in the history of human
thought: the idea that the universe is a rational system, and it is possible to discover the laws by which it operates. A similar concept of the universe, he says, existed even prior to this in China (8th Century BC) and is evident in Hindu writings from the same time.

Medicine, says Winslow, played a large part in these discussions about an orderly universe. Hippocrates described two types of fevers: epidemic and sporadic. Both were believed to be caused by air, but the latter affected those who do not take care of their health (a view that foreshadows the current theories about lifestyle playing a large part in disease susceptibility). Public health measures related to illness in this era included lighting fires in the street and throwing flowers on them, which was believed to clear the air. There was also an understanding of contagion, in that it was deemed dangerous to associate with ill people for fear of catching the disease. People fled villages affected by epidemics, and the sick were kept out of unaffected communities. Contagion was also recognized in early Hindu scriptures, says Winslow, which stated that if one sees rats behaving strangely or dying, plague is near.

The three factors—predisposition to disease, atmospheric influence and contagion—underpinned scientific thinking until germ theory, associated with Pasteur, was developed to account for disease causation, says Winslow: “For more than sixteen hundred years the history of epidemiology is a story of the shifting emphasis on these three basic conceptions” (p. 74).

With the fall of classical civilization, in which significant public health strides were made, says Winslow, came a retreat from scientific thinking: demonic theories of disease predominated during the Dark Ages, which saw epidemics of leprosy, bubonic plague and syphilis. Leprosy is thought to have originated in Egypt before it threatened Western Europe in the 6th Century, leading to the establishment of leper houses as early as the 7th Century in France. It was not until about 900 AD that “the infiltration of Arabian knowledge began and that the Europeans once more resumed the use of their intellectual faculties” (p. 92). Even still, Winslow laments the lack of intellectual thought, including in medicine, during this period.

Leprosy continued sporadically, with an epidemic around the 1100s spurring the development of about 19,000 “lazarettos” in Europe to house the sick. People with leprosy were required to wear “costumes” (Sigerist, 1943) so that others would know not
to touch them. They were also to walk only on certain roads, sound a bell when they were nearing others, keep away from healthy people, and not drink from or bathe in running streams. A type of surveillance program was in effect, involving rules about the reporting of individuals suspected of suffering from the disease to authorities. Hatty and Hatty (1999) say these measures involved in the examination, classification, surveillance and segregation of lepers provided a powerful tool for western European communities threatened with other epidemics. Despite the seeming relation of such measures to contagion, Winslow attributes them rather to religious beliefs, as do Hatty and Hatty.

Leprosy gained its association with “uncleanness” from biblical pronouncements. In the Middle Ages, this provided the incentive for the segregation of lepers, and the categorization of their “unclean” bodies as “disordered.” The “clean” and “ordered” bodies of the unaffected in medieval society distanced themselves from those suffering from leprosy. (Hatty & Hatty, 1999, p. 52)

It was the plague—specifically the Black Death of 1348—that prompted further thinking about the communicability of disease. Black Death was, says Winslow, “perhaps the greatest single calamity ever visited upon the human race” (p. 96). Most historians agree it killed about a quarter of the population of Europe between 1347 and 1351. Of course, plague was not only a physical experience. As Alcabes (2009) points out, people heaped meanings on this devastating event, including “treachery, foreignness, sanctity and faithlessness, dying for one’s religion, obeying (or rebelling against) authority, and the fecklessness of nature” (p. 22). The social disruption may have been greater even than the mortality, as many people could not work, and there were few people who could work for them (Sigerist, 1943). Each city would experience a plague outbreak for 4 or 5 months, until the susceptible rats and humans had died. “The survivors would then face famine and economic collapse, caused by the sharp reduction in workforces” (Garrett, 1994, p. 238). The situation not surprisingly led to resentment—sometimes of Jews, who were accused of poisoning the water; or of “cripples”; or even of the nobles. Winslow believes, however, that these prejudices were “delusions of the vulgar” (p. 98), rather than attitudes of entire nations. The prevailing approach, he says, was to help those affected and seek rational explanation for the illness. Others would disagree, pointing to the social prejudices and fear (as opposed to pity) that shaped government responses to disease in the west in the late medieval and early modern periods (Slack, 1999).
In Europe, physicians had been treating most diseases for several centuries and there was widespread confidence in their abilities (Hatty & Hatty, 1999). The plague changed that situation, as it was beyond the experience and comprehension of medical practitioners. Particularly confusing were its three forms. The most common was bubonic, caused by fleabites and resulting in large, painful swellings near lymph glands. Another form was pneumonic, spread through droplets from coughing and sneezing. The third and most virulent form was septicaemic, which usually proved fatal within 24 hours. Black Death challenged all current theories of disease causation, and therefore made questionable the efficacy of remedies that were usually prescribed. Still, despite the confusion and difficulty of managing plague, physicians tried to come to terms with it. Many tractates (pamphlets) were written to explain as best possible the symptoms, causes and treatments of plague to the public. Most tractates accepted contagion as a theory, albeit contagion as a chemical property of the air. Among the recommended measures were fumigating rooms or whole houses with certain herbs; sprinkling floors with rosewater and vinegar; avoiding violent exercise; purging; and bleeding. Sanitation measures were also recommended by one tractate author, including ridding the towns of animal entrails and refuse. Reporting of plague victims to authorities was required.

According to Winslow, the Black Death (not named as such, according to Alcabes, 2009, until the 1800s), led to the development of an epidemiological theory that suggested:

- a disease like the plague was highly contagious, spreading from the sick to the well on contact, with infection also associated with things that sick people have touched;
- the infection was caused by a corruption of the air;
- the corruption of the air was from decomposing bodies, organic material, putrid waters and accompanying climatic factors such as heat, dampness and winds;
- a major epidemic was possibly the result of a misalignment of planets and stars;
- individual predisposition plays a role in who falls ill.

Plague was not the only epidemic disease during this time. In 1485, England experienced what was referred to as “sweating sickness,” which returned in 1506, 1516 and 1529. Its cause remains unknown. Influenza was also recorded on many occasions,
including 1410, 1427, 1510, 1557 and 1580, although the first pandemic influenza agreed on by most authors occurred in 1580 (Potter, 2001), originating in Asia, spreading first to Africa, then to Europe and finally to America. Typhus was always present, so could be considered endemic rather than epidemic, although a major outbreak occurred in Europe in the 1580s. Also assuming epidemic proportions at various times were smallpox, measles, diphtheria, cholera and dysentery.

Throughout this period, surveillance programs became more formalized. The number of diseases that were required to be reported increased steadily and have so since then, says Sigerist (1943), with the realization that “such diseases are no longer a private matter of the individual; they are a public concern since the community is menaced by them” (p. 88). Quarantine was a leading prevention measure in the 15th and 16th Centuries, with stations established across Europe. It was regular practice in Venice for authorities to board ships to identify sailors and other travellers with bubonic plague symptoms in order to keep them on board (Stoto, 2008). When they did come ashore, their clothes and many of their belongings were burned and the ships were fumigated. On land, the perfuming of clothes was recommended from the late 1500s (Alcabes, 2009), and practices such as washing money in vinegar and fumigating letters was widespread.

The main concern in the 14th Century was plague, but in the 1490s there was an outbreak of syphilis, originally called “French blisters” (Hatty & Hatty, 1999). Sigerist (1943) says that initially the venereal source of infection was not understood and “the disease was accepted as a catastrophe, like other epidemics” (pp. 75-76). According to Winslow, syphilis is not always included in epidemic histories due to its chronic nature, but he uses it in his “conquest” to discuss a new theory of contagion, albeit still one linked to miasmas rather than living organisms. Italian physician, Fracastorius, who was in Winslow’s view the next great figure in the medical field after Hippocrates, developed this theory based on what he witnessed during the syphilis epidemic. He differentiated among three types of contagion: those that infect by direct contact only, those that may spread by fomes (elsewhere called fomites—everyday objects that are thought to transmit disease), and those that infect at a distance. Winslow deems this a good theory of contagion, with the only missing element being the biological nature of the contagious element.
By 1550, sweating sickness, leprosy and epidemic chorea (various disorders of the nervous system) had almost disappeared. Typhus and typhoid continued to be prevalent (and therefore may not by some authors be considered epidemics), and smallpox epidemics were numerous. Another plague outbreak, the “great plague” of London, began in 1665, and eventually affected Vienna and Prague. During this time, German Jesuit scholar Athanasius Kircher theorized that organisms were the cause of disease. The only problem with his theory, says Winslow, was his belief that these organisms were spontaneously generated by the decomposition of organic matter. Italian physician and poet Francesco Redi disproved this theory in a series of experiments involving rotting flesh, which he put in a series of jars, some open to the air and others protected by gauze. When the former grew maggots and the latter did not, Redi had proved that rotting meat did not spontaneously generate maggots, but rather that flies were responsible. Using his new invention, the microscope, which “opened up a new world of infinitely small organisms, too small to be seen by the unaided eye” (Sigerist, 1943, p. 173), Dutch scientist Antony van Leeuwenhoek demonstrated that the carriers of maggots could be creatures much smaller than flies. Had only someone put the work of Kircher, Redi and Leeuwenhoek together, says Winslow, the germ theory of disease could have been developed in the 17th Century rather than the 19th Century. Still, the 17th Century, concludes Winslow, was a “brilliant period of human history” (p. 144), setting the stage for a new theory of disease.

Unfortunately, Winslow (1967) says, medicine “fell under the sway of a very different concept, that of the overwhelming importance of the epidemic constitution of the atmosphere” (p. 159). This conception was the result of influential ideas promoted by English physician Thomas Sydenham, according to Winslow a brilliant clinician but one who minimized the importance of contagion in the spread of epidemic disease. At this time, more laypeople believed in the theory of contagion than did physicians, as they witnessed firsthand what they interpreted as disease passing from person to person. Physicians tended to be sceptical of contagion (Rosenberg, 1989) because they were more likely to see that this was not always the case. For them, Sydenham’s theory on the causes of disease was compellingly logical (cited in Winslow, 1967). It suggested that disease was a result of either:
• an internal factor  
  (development in the body of an abnormal composition of humours);
• an external factor  
  (due to climate and seasons);
• a second external factor  
  (the mysterious epidemic constitution of the atmosphere, characteristic of a given year).

By the 17th Century, the practice of using mortality records to track the rise and fall of an epidemic was in full swing (Alcabes, 2009). John Graunt published *Natural and Political Observations Made upon the Bills of Mortality* in 1662. In it, he noted that certain conditions seemed to produce consistent mortality from year-to-year, while mortality from other diseases—plague, for one—fluctuated. His work made it possible to see where disease was most destructive, which was among the poor. A new area of inquiry on epidemics as a product of social arrangements became possible. Sigerist (1943) explains how this understanding developed such that eventually it was accepted that in any given society “a low living standard, lack of food, clothing and fuel, poor housing conditions and other symptoms of poverty, have always been major causes of disease” (p.55).

England’s last large outbreak of plague occurred in 1665, the Baltic region’s in 1709, and France’s in 1722. Exactly why it disappeared is a matter of some debate. Quarantine measures no doubt played a part, but so, says Alcabes (2009), did broader ecological shifts. Other epidemics were less serious and widespread. Malaria, influenza and scarlet fever persisted, as did pertussis and smallpox to a lesser degree (a vaccination existed for the latter by 1796). According to Rosenberg (2008), one of the most disturbing of 18th Century epidemics in America was an outbreak of diphtheria in the 1730s in northern New England, which targeted the children of poor families. Typhus continued to occur, as did epidemics of yellow fever. Influenza came and went, with the first agreed on pandemic occurring in 1580, followed by one in 1781, then 1830-33 (which ranked with the 1918 pandemic in terms of severity) and 1888 (Potter, 2001).

In the period starting in the mid-19th Century, disease-related problems were very different from the plague years, says Winslow. He describes a “great sanitary awakening” (p. 236) that took place in England in the mid-1800s. The man behind this “great awakening” was English social reformer Edwin Chadwick, who argued that the
cleaning up of filth reduced the prevalence of such diseases as typhus, typhoid and cholera. The remedy was the flushing of streets and the introduction of water transport and sewage systems. Indeed, good sanitation did play a role in reducing these intestinal diseases, but the theory behind it was still one of miasms rather than microbes. Winslow notes that: “we can well understand today how such conditions spread disease, by direct contact with filth, and by fly transmission; but in 1842 it was natural to postulate atmospheric effluvia as the vehicle of dispersal” (p. 245). Water supply was important, says Winslow, but ideally would have been seen as a means to promote cleanliness rather than as a vehicle of disease. Even though measures such as removal of refuse and improvement of water supplies were based on an incomplete concept of disease causation, says Winslow, they were the result of sound deduction based on observed relationships. Unfortunately, the great sanitary awakening, says Winslow, was a good example of the human mind tending to “the fallacy of a single cause” (p. 250).

The 19th Century saw the large scale organization of “epidemiological intelligence” (Sigerist, 1943, p. 90), particularly as a means of controlling repeated epidemics of cholera, which is caused by ingestion of water or food contaminated with human feces containing a specific bacterium. Indigenous to the Indian subcontinent, cholera had circulated there for centuries (intermittently, and not in the form of sudden, severe or widespread outbreaks) before affecting the rest of the world (Alcabes, 2009). When the British created and maintained trade routes with India, cholera started to travel, probably in water tanks on ships. Cholera brought what Alcabes calls a “wave of death” to Europe (p. 60), affecting mostly the poor. British physician John Snow seems to be the leading historical figure in the understanding of cholera. Sceptical of the miasmic theories of contagion, he attributed the intestinal symptoms of cholera to internal rather than atmospheric causes. In one of the earliest examples of epidemiologic investigation, Snow found that people more who drank water from the Thames contracted cholera than those who drank water from other sources. “Filth” finally came to be recognized as the means by which the contagion was transmitted rather than as the primary source of the contagion, says Winslow. Although the cholera situation enabled British social advocates to point to poverty as a cause of disease, the advocates of industrialism insisted it was the opposite: that cholera in fact caused poverty. In America, says Alcabes (2009), cholera was seen as a punishment from God. It was “a sharp tool for detecting bad behaviour. Cholera was supposed to demonstrate that some people,
however worshipful they might be, still disobeyed laws of nature: they failed to keep clean, drank too much, indulged in sexual impropriety” (p. 75).

English physician William Budd did for typhoid what Snow did for cholera. Typhoid and typhus were initially believed to be two of many forms of the same fever, but Budd thought they were two separate conditions. Indeed, typhus is caused by lice, whereas typhoid is a water- and food-borne bacterial infection causing fever, headache and gastrointestinal problems. Budd proved that typhoid fever was waterborne when he showed how people whose water was supplied by a well contaminated by sewage suffered from the disease, whereas their neighbours whose water came from different sources did not. Independently, Snow and Budd had demonstrated that certain diseases were transmitted only by direct transfer of material from an infected human body to a susceptible victim.

At last, says Winslow, “came the unrivalled brilliance of French chemist Louis Pasteur and the firm establishment of the germ theory of disease” (p. xi). Pasteur discovered that bacteria occur in greatest number in the immediate vicinity of people (Sigerist, 1943), and established that these bacteria caused diseases by invading the organism and living off it as parasites. By the end of the 19th Century, Pasteur’s insights into infection and German physician Robert Koch’s work on laboratory techniques, along with the efforts of many of their followers, enabled the identification of the different bacteria responsible for typhoid, leprosy, tuberculosis, cholera, gangrene, botulism, dysentery and plague (Alcabes, 2009).

Tomes (1998) says most physicians initially had reservations about the germ theory of disease. Despite the discovery being positioned in retrospect as if it immediately enlightened a generation of scientists, there were many “rival clusters of medical attitudes and theories” (Slack, 1999, p. 13) competing for attention. Certainly, the germ theory of disease did not immediately answer all questions about disease transmission, for example, why people who had no contact with the sick sometimes became ill, and why some people in intimate contact with the ill did not always contract the disease. Some light was shed on these mysteries in time, though, and elaborated on in *The Sources and Modes of Infection*, written Charles Chapin (1910), health officer for Providence, Rhode Island. Chapin’s work demonstrated the generally low viability of
disease germs outside the human or animal body, and also developed the notion of the
disease carrier, in which individuals who were infected with an organism could infect
others, even if they seemed untouched by the illness it caused (Alcabes, 2009, p. 99).
Chapin lobbied to replace environmental sanitation programs with programs that
focussed on germ carriers, preaching a “new gospel of individualized public health”
(Walzer-Leavitt, 1992, p. 611), in which citizens had even more responsibility to avoid
diseases. Arguably, the most famous “carrier” story is that of cook Mary Mallon, who
earned the name “Typhoid Mary” in 1906 when she was traced as the source of an
outbreak among the New York well-to-do. Although she was never ill herself, Mallon is
said to have infected at least 53 people, three of whom died. When she refused to stop
working as a cook (rejecting the idea that someone who was healthy could make other
people sick), Mallon was quarantined—for 26 years.

Tomes (1998) says germ theory was responsible for fundamental changes to
America’s public health program, including the introduction of municipal sewage and
water purification systems, garbage collection and food inspection. The modern notion of
the US government’s responsibility for public health, she says, dates from the period
1890 through 1930. There was a parallel interest in individual public health as well, says
Tomes.

Between the 1880s and 1920s, Americans of all ages were subjected to
aggressive public health campaigns that taught them the new lessons of the
laboratory: that microscopic living particles were the agents of contagion, that
sick bodies shed germs into the environment, and that disease spread by
seemingly innocuous behaviours such as coughing, sneezing and spitting,
sharing common drinking cups, or failing to wash hands before eating. (pp. 6-7)

Briggs (2003) suggests the British “great sanitary awakening” described by
Winslow and the American “gospel of germs” described by Tomes form a central
narrative underpinning discussions of public health even to this day. The narrative
implies that American and European nations were spared from cholera and other
epidemic diseases that continued to plague other countries because of a new type of
relationship between states and citizens. Although the idea that government has a duty
to protect society from disease was not a new one (Slack, 1999), it took on a new
sensibility. Protecting the health of citizens became a basic function of the state, which
established institutions to provide technologies and infrastructure for environmental
sanitation and for conducting disease surveillance and control. The narrative also suggests, says Briggs (2003), that the public accepted responsibility for adopting hygienic practices, ordering their domestic surroundings and handing over authority for disease prevention and treatment to health professionals. This was a turning point not only in biological medicine, according to Briggs, but in the supremacy of medicine and in governance.

The state thus claimed primary responsibility for producing…sanitary citizens, individuals who (1) conceive of the body, health and disease in terms of medical epistemologies, (2) adopt hygienic practices for disciplining their own bodies and interacting with others, and (3) recognize the monopoly of the medical profession in defining modes of disease prevention and treatment. (p. 288)

Winslow’s book ends with the discovery and elaboration of germ theory. He says hopes his work is of interest as the consecutive story of “an intellectual progress which has made possible one of the greatest practical triumphs in the history of the human race, the conquest of epidemic disease” (p. xii).\(^7\) This story has been told so many times, it has what Tomes (1998) calls an “aura of a timeless and universal truth” (p. 2). She points out, though, that it is difficult to write about the evolution of ideas without imposing more of an order on them than is warranted. In the countless retelling, even pieces of the story, concepts and phrases, are endowed with “more consistency and coherence than they ever really had” (p. 19). Such retrospective tale-telling accounts for Alcabes (2009) view: now that we know so much about viruses and bacteria and their associated illnesses, it is tempting to view the rise of germ theory as a steady progression of information accumulation and rational inference. He warns of the dangers in believing that an epidemic is a simple matter of infection with germs, suggesting that it paves the way for “suspicions about genetic predisposition and hereditary fitness [to] move to the forefront of thinking about public health” (pp. 102-103). Tomes (1998) confirms this view, saying germ crusaders in America in the early 1900s increased stigmatization of the poor, sick, immigrant and non-white communities in their contagion

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\(^7\) Winslow does not discuss the 1918 Spanish Influenza pandemic, presumably because it occurred after the germ theory of disease was developed. Alcabes (2009) claims that the Spanish flu, though well-accounted currently, was not mentioned in literature or art for decades afterward. It was only in the 1970s, says Alcabes, that it became a “central element of the epidemic imagination” (p. 6) when scientists seized on it to promote their theory that devastating flu outbreaks occur every decade or so.
campaign. However, it was not only these groups who were targeted. A great deal of responsibility for avoiding disease was placed on women, who were encouraged in “scrupulous adherence to a detailed hygienic code of behaviour” (Tomes, 1998, p. 65). They were at once potentially powerful—apparently able to keep disease from their homes—and potentially to blame, should disease strike despite their efforts.

Despite Winslow’s compelling story and confident conclusion, the germ theory of disease did not conquer epidemics. During World War I, typhus took thousands of lives, and continued to do so after the war, particularly in Russia. Typhus was also prevalent in concentration and prisoner of war camps during the Second World War. A major epidemic of cholera broke out in Indonesia in 1962, in Bangladesh in 1963, in India in 1964, and in the USSR in 1966. In the meantime, further progress in science revealed that things were more complicated than originally thought. The discovery of new forms of bacteria, including viruses, led to the adoption of the term medical microbiology as opposed to bacteriology in recognition of the expanding world of germs (Tomes, 1998). The evolution of resistant strains of malaria, tuberculosis and other familiar infections during the 20th Century was a sure sign that epidemic diseases had not been conquered. Garrett (1994) says the worldwide incidence of malaria in 1975 was about 2½-times what it had been in 1961, due to mosquitoes becoming resistant to the once widely-used pesticide dichlorodiphenyltrichloroethane (DDT) and the malaria drug, chloroquine. However, despite these continued epidemics, faith in science remained high. Tomes (1998) refers to the complacency brought about by an expanding array of new drugs and vaccines, which led to a relaxing of vigilance on infectious diseases. During the 1950s and 1960s, “nearly every week the medical establishment declared another ‘miracle breakthrough’ in humanity’s war with infectious disease” (Garrett, 1994, p. 30). It was a time of general optimism about science, says Blakely (2006), with even the Asian flu pandemic in 1957 unable to dissuade media from framing news of the outbreak within the context of “a great trust and faith in new scientific advancements” (p. 108). Brandt (1985) says that in general the 20th Century medicine can be characterized as a search for “magic bullets.”

A number of authors agree that AIDS, the first cases of which were identified in the early 1980s, was responsible for a renewed concern that not only were infectious diseases still with us, they showed signs of getting worse. AIDS “reminded us forcefully
of that traditional understanding [of epidemics as fear and sudden widespread death]” (Rosenberg, 1989, p.1). Virus experts (as there were no “AIDS experts,” points out Berridge (1999)) were shocked, says Garrett (1994), seeing it as a sign of things to come. Among the public, AIDS resulted in a resurgence of fear about germs, says Tomes (1998). As such, it was a very political disease. “It touched every nerve that polarized Americans: sex, homosexuality, race, Christian family values, drug addition, and personal versus collective rights and security” (Garrett, 1994, p. 319).

SARS was the first epidemic of the 21st Century, but unlike AIDS was capable of being contained by old fashioned techniques: keeping the sick away from the well and the possibly infected away from the definitely uninfected (Alcabes, 2009). Quarantines were in effect, voluntary isolation was recommended, travel advisories were issued, and masks were provided for healthcare providers. Individual case surveillance was also an important strategy in controlling SARS (Stoto, 2008), which Alcabes (2009) says played out much like a plague: first nothing, then a report of a severe outbreak, then a few cases, then many cases, then few, and then none. It was after SARS, in 2005, that the World Health Organization modified the International Health Regulations to require that all countries notify them of all events that may cause a public health emergency (Stoto, 2008). According to Heymann (2006), because of SARS, a “new world order prevails over issues that once had been considered the sole domain of a sovereign nation” (p. 1). The SARS outbreak also led to the development of the Public Health Agency of Canada, in response to allegations that Canada was not prepared enough to deal with the challenge of emerging infectious diseases.

As discussed in several places in this thesis, avian influenza currently presents the threat of an epidemic. Despite its not having materialized, Rosenberg (2008) claims that it already exists virtually in western society, through the planning and research underway, the social expectations that have been generated, and the representations created by media. Many members of the medical and scientific community see the potential for still other epidemics. Laurie Garrett’s The Coming Plague (1994) is largely devoted to such possible outbreaks, including the highly contagious Bolivian hemorrhagic fever and the Ebola virus. Antibiotic-resistant micro-organisms, also called “superbugs,” are feared as bringing about the re-emergence of diseases that are currently well-controlled. Over the last 20 years, common bacteria such as
staphylococcus aureus and enterococcus have developed resistance to various antibiotics, and antibiotic-resistant organisms have become an important cause of healthcare-associated infections. Still, the most serious of epidemic diseases currently occur predominately outside America and Europe: malaria, tuberculosis, sleeping sickness, diarrhea, and AIDS. Alcabes (2009) points out that:

when we talk about disease outbreaks today, the discussion is more often about what might happen and what we must be prepared for than about the massive mortality that is already happening, albeit not in our part of the world. (p. 224)

All this is not to say that infectious disease control has been an unmitigated disaster. There have been many successes. By the 1920s, chronic diseases had replaced infections as the leading causes of death, at least in North America (Tomes, 1998). Vaccination campaigns have all but eliminated once-common childhood diseases, including diphtheria, tetanus, poliomyelitis, smallpox, measles, mumps and rubella. In the 1940s, successful vaccines were developed for influenza viruses A and B (Blakely, 2006). A successful polio vaccine was developed in 1953. In 1977, after a decade-long campaign, smallpox was eradicated worldwide—the only disease ever to have claimed such status.

Ultimately, though, the optimism with which Winslow closes his book has been tempered. As McNeill (1998) wrote in a 1998 preface to his 1977 book Plagues and Peoples, there is an increasing realization, if not acceptance, that:

infections are coming back, regaining some of their old importance for human life; and medical men have begun to recognize how their increasingly powerful interventions had the unexpected effect of accelerating the biological evolution of disease germs, making them impervious to one after another form of chemical attack. (p. 10)

3.3. Summary

The above section draws on several authors (who in turn, draw on others, and so on) to present a very high level chronology of epidemics throughout history. Like the books on which it is based, it is a variation of the oft-told tale about illness through the ages and the response to it, including shifting ideas in history about the extent to which individuals are responsible for their own health, as opposed to being able to rely on, or
being under the power of, the state. The story elaborates Sigerist’s (1943) point that “from the moment of conception, human life unfolds itself in an environment which is both physical and social” (p. 3). Diseases may be explored as purely biological entities—which is the framing Winslow uses—but these explorations are undertaken by social beings in social environments. Similarly, the diseases themselves occur within social environments and thus are social phenomena (Brandt, 1985). As Walzer-Leavitt (1992) says, the story of Typhoid Mary demonstrates the impossibility of viewing disease solely in biological terms.

It was one thing to develop bacteriological explanations for public health activity; it was obviously another to apply that science in the public domain. Early 20th Century proponents of bacteriology could no more isolate disease from its environmental and social context than could their predecessors who were driven by the filth theory of disease. (p. 629)

Despite this acknowledgement of illness as a multi-factorial phenomenon, stories about diseases at least over the past 200 years reveal a persistent faith in science as “a thing apart” that will save us; they demonstrate the unwillingness of western societies to believe that there may be no “magic bullet” (Brandt, 1985). Certainly there have been setbacks—during which confidence about overcoming illness has been badly shaken by the appearance of new diseases or inability to control existing ones—but still, increasingly, human health has come to be seen as within our control (Tomes, 1998). This view seems especially prevalent now given a highly funded health research enterprise which, in addition to looking for treatments and cures for existing disease, is increasingly focused on the genetic causes of ill health with a view to avoiding disease in the first place.

Much of this research activity, though, is concentrated on chronic illnesses: diseases we can anticipate at a population level, and have experienced in the past. Epidemics are different. They still have the power to shake our confidence badly. Even if they are epidemics of diseases we are familiar with, they are sudden and violent, frightening and unpredictable (Rosenberg, 2008). It does not matter that epidemics are a kind of “complicated accident” (Alcabes, 2009, p. 24), the result of an “improbable conjunction of climate, diet, human social arrangements, animal and insect population dynamics, and the natural movements of germs” (p. 24)—they are still reminders that there are things beyond human control.
As mentioned, pandemic influenza is by definition a disease with which we will not be familiar. Regardless of how much research we conduct and how much we plan and prepare, it will still at some point come out of nowhere. Alcabes (2009) claims that when we are threatened by such illness, we immediately return to the “antique memory” (p. 21) of the Black Death. The popularity of fictional books and films about globally devastating viruses certainly attests to society’s fascination with epidemics and pandemics, as do non-fiction books, documentaries and regular mass media coverage of such illnesses as Ebola, flesh-eating disease and a variety of other “superbugs” that surface when it seems we least expect them (Gwyn, 2002; Tomes, 2002). Epidemics have both a famous history and a current cultural status that together create a “resonant context” (Rosenberg, 2008, p. S6) for pandemic influenza planning and preparation. In the next chapter, I describe my approach to studying this phenomenon.

4. Methodological Approach

4.1. Introduction

The methodology I used for my study was discourse analysis, comprising both theory and a set of processes for qualitative data collection and analysis. In this chapter, before describing discourse analysis itself, I discuss definitions and conceptions of discourse and texts, which comprise the data for discourse analysis, and note the definitions for discourse and text that I use in this study. After describing discourse analysis, including its theoretical stance, a comparison with other forms of textual analysis, and validity, I discuss the broad inter-disciplinary field of discourse analysis, including some debates within it, and situate my study within this field. Finally, I demonstrate through a literature review how discourse analysis has been used in healthcare.

4.2. Discourse

Discourse has been described as all spoken and written forms of language use (Wood & Kroger, 2000), as “regulated ways of speaking about a topic which delimit the
sayable and unsayable” (Barker, 2001, p.2), and as language use conceived as social practice (Titscher, Meyer, Wodak, & Vetter, 2000). Gwyn (2002) sees discourse as both broad (a way of representing a type of reality, such as a discourse of war, or a discourse of medicine) and more specific, as in the production and reproduction of words and images. Gee (2005) describes this duality of discourse as big D and little d, where the former refers to ways of acting, interacting, feeling, believing and using objects and symbols (so as to pull off, for instance, being a “tough cop” or a “good student” or an “avid bird watcher”), and where the latter refers to the use of specific language. Similarly, Cook, Robbins and Pieri (2006) see discourse as the interaction between the macro-level of the social frame and the micro-level of linguistic choices, and for Woods (2006), discourse is language plus context. Grace (1991) distinguishes discourse from language as follows:

Discourse connotes the actively political and strategic role of words and how they are connected to form sentences and construct meaning. This differs from understandings of “language” that imply universal and fixed linguistic structures and meanings for words. (p. 330)

All these definitions, though worded differently, are aligned in their conception of discourse as an umbrella term for either spoken or written communication, usually beyond the sentence (Georgakopoulou & Goutsos, 1997). Georgakopoulou and Goutsos’ definition of discourse is the one I adopt for the purposes of my study. The specific communication of interest to discourse analysts comes in the form of a text, as described below.

4.3. Texts

Lemke (1995) distinguishes between discourse and text by explaining that: “when we want to focus on the specifics of an event or occasion, we speak of the text; when we want to look at patterns, commonality, relationships that embrace different texts and occasions, we can speak of discourse” (p. 7). In other words, discourse is defined on a more abstract level than text (Wodak, 2008), which is a monological stretch of written language that shows coherence (Sanders & Sanders, 2006) or, the definition that I adopt, “the visible evidence of a reasonably self-contained purposeful interaction.
between one or more writers and one or more readers, in which the writers control the interaction and produce most of (characteristically all) the language” (Hoey, 2001, p. 11).

It should be noted that a text, like discourse, can be either written or spoken communication. For the purposes of analysis, however, the spoken word is transcribed into a written document. Thus, discourse is often referred to as writing in the discussion of analysis.

When writers or speakers compose texts, they draw upon models that have become common within their culture. Most writers and speakers know that readers and listeners will expect certain things on the basis of previous texts of the same kind that they have read or heard, and so make sure to conform to those expectations. Readers and listeners are the same. At any point in a text, a reader or listener has expectations about what might happen next. Sometimes these expectations are precise and strong; sometimes they are vague and weak, says Hoey (2001). However, “a text which left us with no idea of how it might develop would be a text with which we were not properly engaging or from which we were gaining little” (p. 20).

A text creates its sense by connecting its content with readers’ or listeners’ knowledge of the world. Most texts are successful, claims Hoey, because our knowledge and experience of the world is not randomly distributed in our minds but is carefully organized in terms of schemata or scripts. When one part of knowledge is activated, the rest becomes available and is brought to bear on the task of interpretation. As an example, Hoey points out that many problems do not have to be named. For example, poverty and burglary—and I would add disease—are inherently understood as problems. Sometimes things are not automatically problems but become so by association. For example, “illiteracy” is a neutral factual description, but has a negative connotation.

Georgakopoulou and Goutsos (1997) remind us that a text does not have to be a book or a long conversation. It is simply a meaningful language unit, which primarily will derive that meaning from situated use. Texts can include shopping lists, advertisements, signs, phone calls, bus tickets, receipts, or short conversations involving asking for directions. Demonstrating the need for coherence in a text, Georgakopoulou and Goutsos take the latter example and point out that if someone responded “Thank you so much” to the question “Excuse me, could you tell me where Frith Street is?”, the poser of
that question would be confused. We expect conversations and other texts to confirm to certain rules. Another example comes from Brown and Yule (1983), who point out that:

when two strangers are standing shivering at a bus-stop in an icy wind, and one turns to the other and says “My goodness, it’s cold,’ it is difficult to suppose that the primary intention of the speaker is to convey information. (p. 3)

The above example demonstrates that words do much more than provide information. In this case, the speaker is probably indicating a readiness to be friendly and to talk, and the listener would probably recognize this move, whether he chose to respond or not. This active and situated nature of language use and the resulting texts are the concern of discourse analysis, which I turn to next.

4.4. Discourse Analysis: Theoretical Position, Comparisons, and Validity

Following from the above, for the purposes of my study I use van Dijk’s (2007) definition of discourse analysis as the systematic and explicit analysis of text within its context. The method used to analyze texts, according to Lupton (1992), is similar to that of the micro concerns of literary criticism combined with a broader sociological perspective.

Although there are different approaches to discourse analysis, a theoretical position common to most equates language with action, suggesting words do far more than communicate information. This approach is different from some other forms of textual analysis. In the following three sections, I discuss the theoretical position of discourse analysis, distinguish discourse from other textual analyses, and discuss reliability and validity in discourse analysis, in turn.

4.4.1. Language as Action: A Theoretical Underpinning

The concept of language as action is often discussed by discourse analysts in the context of Austin’s (1962) theory of speech acts, which deals with the performative function of language. Austin described three features of language: locutionary (what the
words mean), illocutionary (what is done with them) and perlocutionary (their effect on the reader/hearer). Wood and Kroger (2000) illustrate with the statement: “You stole the money,” which describes an event, accuses someone of something, and (probably) provokes a response, be it anger, defensiveness, or perhaps even a confession. Looking at discourse this way, it is possible to see how it implies, often subtly, moral responsibilities and obligations (Breheny & Stephens, 2007; Coupland & Coupland, 1998; Tracy, 2001). According to Woods (2006), “the discourse presented to us…seeks to construct us in particular ways, to fulfil certain social roles—usually roles that are of benefit to the producers of the discourse” (p. xv).

Austin’s theory is at too micro-linguistic a level for some discourse analysts. Austin did not deal with context, instead trying to formalize speakers’ intentions, which as Georgakopoulou and Goutsos (1997) point out, is difficult to do. Such intentions are unobservable psychological states, which are hard to define and assign. Others acknowledge the theory’s relevance but also draw on social theorists such as Foucault to describe how language not only acts in the moment or in specific instances (e.g., accusing someone of theft) but creates, negotiates and perpetuates subjects and their social reality (Barker, 2001; Boutain, 1999; Woods, 2006; Breheny & Stephens, 2007; Cheek, 1997b; Watson, 1997). Gwyn (2002) takes up this notion of language as immediately performative as well as constitutive of a larger social reality in his discussion of the word epidemic. Used metaphorically (to describe a range of issues from traffic fatalities to drug use to obesity) as well as literally (most recently in the H1N1 outbreak), the term epidemic demonstrates the power of language to create a sense of urgency and mobilize collective social action and consumer behaviour (Rosenberg, 2008). It is also part of a larger discourse, however, both reflecting and perpetuating an environment of fear, uncertainty and risk, and situating people and their responsibilities (Bauman, 1999; Beck, 1996; Beck, 1999). In other words, discourses occur at a particular time and in a particular place, with particular participants (the micro-context); but they also occur in the macro-context of organizations, institutions and entire cultures (Atkinson, P. and Coffey, 1997; Titscher et al., 2000; Wodak, 2008).

As has been shown in many studies, language does not have to be dramatic to wield power. The terms male nurse or female doctor (which would not have seemed unusual a few decades ago) are hardly alarmist, but as Gee (2005) points out, they
suggest that nurses are “really” female and doctors are “really” male unless modified by a gendered adjective. Some terms, as Boutain (1999) points out, become so natural that no one thinks about where they came from or how they came to be accepted. “The process of classifying, as well as the reasons for it, is rendered invisible and the words themselves remain as if they had always been there” (p. 4).

The point, then, is that language is not simply an abstract system of terms (Potter, 2003a) used to communicate information, but a way of acting on the world (McKee, 2003; Potter, 1996; Potter & Wetherell, 1987; Wood & Kroger, 2000; Woods, 2006). Richardson (2007) illustrates how active language is when he discusses newspaper coverage in which a particular argument may have been seen to “attack” someone and “support” someone else: “Hence, language use is not just talk; language use should be regarded as an activity or as a social action” (p. 12). In this way, a distinction might be made between discourse analysis and many other forms of text analysis. Below I discuss this distinction further.

4.4.2. Discourse Analysis vs. Other Textual Analyses

The theoretical position described above accounts for the distinction made by some researchers between discourse analysis and other forms of textual analysis. It is seen that the latter view language as representing reality (a channel through which pre-existing meanings are expressed), and the former views language as constituting reality (Boutain, 1999; Lupton, 1992; Willig, 1999).

Beyond this high-level distinction, however, things are less cut and dried. On the one hand, a linguistic textual analysis, which may concentrate on the function of words within a sentence and look across settings for universal rules as to these functions, may be distinguished from discourse analysis (which would not confine itself to one sentence). On the other hand, a sociolinguistic approach—while still a linguistic analysis—would explore the function of words and sentences within a social context. These analyses are distinguished from discourse analysis by some researchers, and seen as forms of discourse analysis by others.
A distinction can be made between discourse analysis and content analysis, another type of textual analysis, if one accepts Berelson's (1952) definition of the latter as “a research technique for the objective, systematic and quantitative description of the manifest content of communication” (p. 263). Similarly, the difference may be clear if one sees language functioning as a label for discrete objects or subjects in the world (Fierke, 2004), or if one accepts, as proposed by Hardy, Harley, and Phillips (2004) that the two methods are based in very different philosophical camps (content analysis = positivist and quantitative; discourse analysis = social constructivist and qualitative). However, while it is probably the case that discourse analysis is not positivistic, it is possible to analyze content—including quantifying it—within a social constructionist framework. Indeed, Krippendorff (2004) suggests that content analysis has moved far beyond its earlier obsession with quantitative measurement, and focuses on not only the meaning of words but what the information conveyed by them does.

While there seems to be an acceptance of the differences (the most obvious being that content analysis focuses on the “what” and discourse analysis on the “how”), then, it is also accepted by many that content analysis can be useful in discourse analytic studies. As I discuss in my methods chapter, I used content analysis both to establish the initial concepts for my full discourse analysis and as support for several arguments in the phase two media analysis, including the extent to which experts, the public and government feature in the articles. Richardson (2007) suggests the coding of content can be a helpful initial task in discourse analysis to capture a sense of patterns or frequencies across a large text or large sample of texts. Pollack (2008), who conducts discourse analyses of documentary films, says counting the number of minutes devoted to certain topics or certain social actors can be very telling. Wood and Kroger (2000) suggest that quantification may be helpful for selecting data. “For example, a researcher may wish to quantify...various features of discourse in order to select for analysis a particular feature that occurs frequently or rarely. Quantification may also be helpful in the detection of patterns of analysis” (p. 139).

There are many similar definitions of content analysis, but not all content analysts agree with them. Krippendorff (2004), for example, objects to the notion that meaning is contained in a text, waiting for an analyst to discover it.
Herrera and Braumoeller (2004) edit a series of articles discussing “how discourse and content analysis are similar and how they differ” (p. 15). The authors, while stressing that the methods of analysis are different, propose possibilities for their combined use. Hardy et al. (2004), for example, describe the differences as shown in Table 1, then suggest how content analysis can be used within a discourse analytic approach, as shown below the table.

**Table 1. Differences between Discourse Analysis and Content Analysis**

<table>
<thead>
<tr>
<th></th>
<th>Discourse Analysis</th>
<th>Content Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ontology</strong></td>
<td>Constructivist: assumes reality is</td>
<td>Realist: assumes an independent reality</td>
</tr>
<tr>
<td></td>
<td>socially constructed</td>
<td></td>
</tr>
<tr>
<td><strong>Epistemology</strong></td>
<td>Meaning is fluid and constructs reality</td>
<td>Meaning is fixed, reflects a reality</td>
</tr>
<tr>
<td></td>
<td>in ways that can be posited through</td>
<td>that can be grasped through use of</td>
</tr>
<tr>
<td></td>
<td>interpretive methods</td>
<td>scientific methods</td>
</tr>
<tr>
<td><strong>Data source</strong></td>
<td>Textual meaning</td>
<td>Textual content</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>Qualitative (but can use counting)</td>
<td>Quantitative</td>
</tr>
<tr>
<td><strong>Categories</strong></td>
<td>Exploration of how participants</td>
<td>Analytical categories taken for granted</td>
</tr>
<tr>
<td></td>
<td>construct categories</td>
<td>and data allocated to them</td>
</tr>
<tr>
<td><strong>Inductive/ deductive</strong></td>
<td>Inductive</td>
<td>Deductive</td>
</tr>
<tr>
<td><strong>Subjectivity/ objectivity</strong></td>
<td>Subjective</td>
<td>Objective</td>
</tr>
<tr>
<td><strong>Role of context</strong></td>
<td>Text needs context</td>
<td>Does not necessarily link to context</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td>Coding justified according to academic</td>
<td>Formal measures of intercoder reliability crucial</td>
</tr>
<tr>
<td></td>
<td>norms; differences in interpretation not</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a problem</td>
<td></td>
</tr>
<tr>
<td><strong>Validity</strong></td>
<td>Demonstrates plausible case that</td>
<td>Demonstrates patterns in content of</td>
</tr>
<tr>
<td></td>
<td>patterns in text meaning are constitutive</td>
<td>text reflect reality</td>
</tr>
<tr>
<td></td>
<td>of some reality</td>
<td></td>
</tr>
<tr>
<td><strong>Reflexivity</strong></td>
<td>High – author is part of the process by</td>
<td>Not necessarily high – author reports</td>
</tr>
<tr>
<td></td>
<td>which meaning is constructed</td>
<td>on findings</td>
</tr>
</tbody>
</table>

*Note.* Adapted with permission from Hardy et al. (2004).

A content analyst using a discourse analytic approach, say Hardy et al. (2004), would do the following.

- When dealing with meaning, assume there is no inherent meaning in the text, but rather that meanings are constructed in a particular context.
- When dealing with categories, allow categories to emerge from the data;
• When dealing with technique, develop a coding scheme from categories that emerge;
• When dealing with context, locate the meaning of a text in relation to a social context and to other texts and discourses;
• When dealing with reliability, approach reliability in the sense that the results are reliable to the degree that they are understandable by and plausible to others;
• When dealing with validity, show how patterns in the meanings of texts are constitutive of reality;
• When dealing with reflexivity, take into account the role that she or he plays in the analysis and in making meaning.

Many content analysts use only this approach; it is not the case, for example, that all content analyses are realist or assume that meaning is fixed. Similarly, it is not the case that all discourse analysts consider context. For example, conversation analysis, a type of discourse analysis, downplays the role of context, as I explain in the next chapter.

In sum, as with many qualitative analytic methods in the social sciences, there is much blurring of boundaries between discourse analysis and other forms of textual analysis. This being the case, it is important to clearly define one’s methodology and one’s approach to a particular study. For my part, a significant distinction between discourse analysis and some other forms of textual analysis is that the former comprises both a theory and methods, while much textual analysis comprises methods that can be used within many methodologies. Content analysis, for example, is referred to by Krippendorff (2004) as a “scientific tool” (p. 18). Another distinction between discourse analysis and some other forms of textual analysis, for the purposes of this particular study, is that like Potter and Wetherell (1987), I approach language not as a resource (which would mean exploring language to see what study participants think or what attitudes or beliefs they hold), but as the topic of interest itself. While I am certainly interested in the content of the language as well as the language itself, I am looking beyond what the discourse is about, to what is being done with it and how.
4.4.3. Reliability and Validity in Discourse Analysis

Unlike some research methodologies, discourse analysis does not strive for
generalization as a way to demonstrate reliability. Rather than looking for consistency
among views, the discourse analyst is more interested in finding variability in accounts,
and using that variability for analytical purposes (Auburn, Lea, & Drake, 1999; Potter &
Wetherell, 1987; Wood & Kroger, 2000).

In contrast to conventional approaches, discourse analysis thrives on variability;
variability is something to be understood, including the way in which participants
use variability to use their talk for different purposes, for different audiences, and
for different occasions. (Wood & Kroger, 2000, p. 10)

Neither does discourse analysis strive for validity in the scientific sense of
attempting to represent the “real world.” Validity for the discourse analyst is critical, but it
consists of producing a sound, coherent, convincing argument that is grounded in and
supported by the data. Claims can be verified, suggest Wright and Nerlich (2006), by
references to other studies. Lupton (1992) discusses the need to show the actual textual
material used in the analysis, allowing others to assess the researcher’s interpretations.
For Gee (2005), validity in discourse analysis is based on four elements:

- convergence: the analysis offers compatible and convincing answers to the
  questions asked of the text;
- agreement: the analysis is supported by participants, other discourse analysts
  and other researchers;
- coverage: the extent to which the analysis might be able to predict the sorts of
  things that could happen in similar situations;
- linguistic details: the analysis is linked to grammatical devices that serve
  particular functions.

Taking another approach, Antaki, Billig, Edwards and Potter (2003) outline six
mistakes commonly made in discourse analysis that can lead to invalidity of findings.
They are:

- summarizing what a text says, rather than actually analyzing the discourse
  used;
- taking sides, or showing sympathy or solidarity with certain participants or
  audiences, and therefore selecting quotations for rhetorical effect;
• using over- or isolated quotation, which shows through a low ratio of analyst’s comments to data extracts, and the tendency of the writing to refer to the quotations rather than analyze them;
• treating talk and text as the expression of views, thoughts and opinions;
• extrapolating from one’s data to the world at large;
• simply “spotting” features (features of discourse must be more than noticed, they must be explained in terms of what they are doing).

Also important for validity, as Starks and Trinidad (2007) note, is for the analyst to remain aware of and explicit about his or her role, perspective and position with regard to the analytic process.

Below I describe the broad inter-disciplinary field of discourse analysis—including some debates among its proponents—and situate my study among these approaches. I then present a literature review of discourse analyses on health topics, which I believe demonstrates the promise of this methodology for increasing understandings of health and illness.

4.5. The Broad Field of Discourse Analysis

Models for understanding and methods for analysing discourse were first developed in linguistics, anthropology and philosophy. Over the past two decades, many more disciplines have extended and used the methodology, including psychology, sociology, communication, political science, anthropology and English literature (Lupton, 1992; Wood & Kroger, 2000). Those looking for a nice clean overview will be disappointed. The taxonomies are diverse and confusing, as illustrated in Section 4.4.2 with other forms of textual analysis.

Titscher et al. (2000) describe a large range of discourse analytic approaches: content analysis, grounded theory, ethnographic methods, ethnomethodological methods, narrative semiotics, critical discourse analysis and functional pragmatics. A glossary by Wood and Kroger (2000) includes action-implicative discourse analysis,

9 Unfortunately, notes Wodak (2008), most discourse analysis references are restricted to research published in English by authors of British, American, Canadian or Australian origin.
applied linguistics, comprehensive discourse analysis, discourse dynamics, ecolinguistics, feminist discourse analysis, forensic linguistics, sociolinguistics, systemic functional grammar and text linguistics. Wetherell, Taylor, and Yates (2001) describe six research traditions in discourse analysis: conversation analysis and ethnomethodology, interactional sociolinguistics and the ethnography of communication, discursive psychology, critical discourse analysis and critical linguistics, Bakhtinian research, and Foucauldian research. Gwyn collapses discourse analysis into three related but distinct methods or, as he calls them, discourse paradigms: conversation analysis, critical discourse analysis and ethnographic discourse analysis.

Among those approaches most commonly referred to and used in the literature are discourse analysis in social psychology (DASP), conversation analysis, and critical discourse analysis (CDA). Even within CDA, Fairclough (1992) identifies eight approaches: French discourse analysis, critical linguistics, social semiotics, sociocultural change and change in discourse, sociocognitive studies, the discourse-historical method, reading analysis and the Duisberg School.

DASP is associated with Potter and Wetherell (1987). It emphasizes the importance of drawing on research participants' discursive practices (what they say and how they say it) as well as the resources (such as interpretive repertoires, signalled by certain tropes or figures of speech) upon which they draw. The analytic focus is on the devices used in talk and text to construct facts. Conversation analysis concentrates on the language of participants' talk rather than the context in which it is undertaken. Examples of topics studied in this approach are turn-taking in conversations, adjacency pairs (two utterances together, such as a question and answer), interruptions and apologies. Critical discourse analysis (CDA) is associated with Fairclough (1992) and emphasizes the connection between language and power. Rejecting the possibility of a value-free science, CDA is explicit in its search for power imbalances and its desire to address social problems, and its proponents are particularly interested in power that is not exercised in obviously abusive acts, but rather "enacted in the myriad of taken-for-granted actions of everyday life" (Titscher et al., 2000, p. 355). Control of discourses is of particular interest for critical discourse analysts, for example professors and scholarly discourse, doctors and medical discourse, lawyers and legal discourse. [One does not have to be a critical discourse analyst to have an interest in power, however. Prior
(1997) reminds us that in any professional discourse, certain agents, by their apparent knowledge of the subject, can “authoritatively pronounce on the shape and form of the world,” (p. 71). Critics of CDA (e.g., Hoey, 2001; Widdowson, 2000) say while valuable, it does not always consider alternative positions in its overt search for power abuse.

Some approaches, such as structural linguistics, see language as the key to understanding underlying mental processes. People’s accounts in this view are taken as transparent representations of events and attitudes. However, language as conceptualized in most discourse analysis is not a neutral medium between a social actor and the world, but rather the means by which personal, social and political activities are accomplished (Starks & Brown-Trinidad, 2007) or sites in which meaning is negotiated (Gillies, 1999).

Discourse analysis has proven useful in a number of disciplines. In communication studies, according to Tracy (2001):

> discourse analysis provides…researchers with a compelling way to study how people present themselves, manage their relationships, assign responsibility and blame, create organizations, enact culture, persuade others, make sense of social members’ ongoing interactional processes, and so on. (p. 734)

Questions asked in such studies would include what identity, task or relationship function is served when a speaker or writer talks or writes this way or that way, and what are the advantages and disadvantages of selecting one strategy over another? Discourse analysis is also well-used in social psychology, whose practitioners use various approaches, from conversation analysis to critical discourse analysis to post-structural and Foucauldian approaches (Antaki et al., 2003). It is increasingly popular in healthcare, especially in nursing and health communication studies, as I discuss in Section 4.6 below. Barker (2001) sees the potential of discourse analysis for extending cultural studies, where he says researchers are: “more and more often making claims about the discursive construction of social and cultural life [but only rarely engaging] with the detailed analysis of discourse itself” (p. 62).

Barker’s view is that formal linguistic and textually oriented analysis can enrich the studies of cultural study researchers by “putting them on a firmer, more empirically grounded, footing,” (p. 85). As described in my methods chapter, it is Barker’s cultural
studies approach that guided my theoretical and analytical work in this project. Before explaining the approach more fully, I review some debates and challenges in discourse analysis.

4.5.1. Debates and Challenges in Discourse Analysis

I am convinced that discourse analysis, with its emphasis on the exploration of how language is used in specific situations, has much to offer studies of health and illness. As with every methodology, however, it is not without its challenges. Two issues debated regularly among discourse analysts, for example, are the extent to which (a) context and (b) cognition should be brought into analyses. These issues, which are related, are well-illustrated in a debate between Martyn Hammersley and Jonathan Potter in one 2003 issue of *Discourse & Society*. The debate is introduced by Hammersley as being about the extent to which conversation analysis and discourse analysis are paradigms (overall frameworks or approaches) or simply methods. Hammersley argues strongly in favour of the latter, but as Potter (2003a) explains, it is not clear who has claimed in the first place that discourse analysis is a paradigm. Potter would agree that it is not a paradigm unto itself; however, he would argue that it is more than a method.

In any case, despite this framing of the debate as paradigm vs. method, the focus of the articles is really Hammersley’s (2003) critique of what he calls two of the methodological commitments of conversation analysis and discourse analysis (for many researchers, conversation analysis is part of discourse analysis, but Hammersley separates them):

1. a refusal to attribute to particular categories of actors distinctive, substantive psychosocial features—ones that are relatively stable across time and/or social context—as a basis for explaining their behaviour.
2. a refusal to treat what the people studied say about the social world as a source of information about it.

While acknowledging that the study of a discursive situation in isolation can tell us some things about human behaviour, Hammersley (2003) rejects the idea that “discourse analysis based on such a model [can be] treated as a self-sufficient way of
understanding such behaviour” (p. 763). He argues that context—including participants’ cognition—is a vital part of any analysis. Potter (2003a) disagrees, suggesting the constructive, active use of language in everyday situations alone should be the topic of analysis. Below I discuss context and cognition in separate sections.

4.5.1.1. Context

I will start with Hammersley’s (2003) first point, the persistence of a misguided unwillingness on the part of conversation analysts and discourse analysts to: “view actors as controlled, or even as guided in their behaviour, by substantive, distinctive and stable mental characteristics such as ‘attitudes,’ ‘personalities,’ ‘perspectives’ or ‘strategic orientations’” (p. 752). Although Hammersley starts out by discussing psychosocial characteristics, he later broadens the category to include other characteristics such as sex, marital status and so on. This debate is not just between Hammersley and Potter, of course—it is a major theme in discourse analysis, where it goes beyond characteristics of particular participants to much broader contextual factors. Candlin and Candlin (2002), for example, raise the issue of whether and to what extent explanation of specific features of discourse should be linked to broader social structures—and if they should, how, methodologically, these structures can be shown to influence specific interactions.

Heller (2001) says approaches to this question can be loosely grouped into two categories: ethnomethodological and interpretivist. The former have a strong preference for limiting analysis to what is actually observable in the text or talk (Potter places himself here), and the latter are prepared to bring other sources of data to bear on the analysis (Hammersley is here). Some analysts simply assume one stance or another, not even raising context as an issue. For example, Lupton (1992) demonstrates her view that discourse analysis comprises textual and contextual factors.

Textual dimensions are those which account for the structures of discourses, while contextual dimensions relate these structural descriptions to various properties of the social, political or cultural context in which they take place. The former is therefore concerned with such micro elements of discourse as the use of grammar, rhetorical devices (such as metaphor), syntax, sound forms and the overt meaning and content matter of words and sentences or a text or talk, and such macro structures as topics and themes. The latter examines the production and reception processes of discourse, with particular attention to the
reproduction of ideology and hegemony in such processes, and the links between discourse structures and social interaction and situations. (p. 145)

Gumperz’s (2001) interactional sociolinguistics, which seeks “replicable methods of qualitative analysis that account for our ability to interpret what participants intend to convey in everyday communicative practice” (p. 215), is another example of the text and context approach. Heller (2001) places herself in the interpretive camp as well, suggesting it has become clear that the specifics of linguistic practices are linked to more broadly shared and ideologically framed ways of using language. Van Dijk (2001) offers several ways to analyze and bridge the micro level (language use, verbal interaction) with the macro level (power, dominance, inequality between and among social groups). Wodak (2008) says as opposed to a more text linguistic approach, a discourse analysis will attempt to: “Transcend the purely linguistic dimension and to include more or less systematically the historical, political, sociological and/or psychological dimension in the analysis and interpretation of a specific discursive event” (p. 12).

Wodak’s (2008) four levels of analysis based on this are:

- the immediate language or text internal co-text;
- the inter-textual and inter-discursive relationship among utterances, texts, genres and discourses;
- the extralinguistic social/sociological variables and institutional frames of a specific context of situation;
- the broader socio-political and historical contexts in which the discursive practices are embedded and related to.

Richardson (2007) sees three levels of analysis in his discussion of media coverage, which cover the above in a different way: social practice (the influences that shape the production and consumption of news and other texts), discursive practice (text production, distribution and consumption), and text. Barker collapses these into two levels: Wodak’s first and the next three, the latter group of which he calls the interpretation phase. This is the model I have followed, as I explain in the next chapter. The view of the interpretive group, which I share, is that text is not produced in a vacuum; its existence is conditioned by the cultural and historical context in which it occurs (Cheek, 2004; Kaplan, 2000; Myers, 2008).
Discourse analysts of the ethnomethodological stream are not suggesting that text is not constitutive of or influenced by context, only that for the purposes of analysis, it does not matter. What matters is what is being said, as that is all that is accessible to the researchers. Context, such as it is, does not exist independently to be brought into the analysis, but is constituted in and through the talk itself. Conversation analysis (CA) offers one such example. Based on ethnomethodology, CA limits inferences to what can be validated through observation of the discursive data. According to Schegloff (cited in Tracy, 1998), aspects of context should be invoked only insofar as a researcher can display that the participants themselves in their talk show that they have attended to or are being influenced by that feature of context.

Back to the Hammersley and Potter debate: one compelling point in the former’s argument is not necessarily whether context is useful or important or not (he clearly thinks it is both), but that it is unavoidable. I agree with Hammersley (2003) here, as I believe that simply by virtue of analyzing, an analyst brings context—for instance his or her worldview, perspectives on the topic and so on—to any situation. Data, in this case texts, do not speak for themselves but are always the subject of interpretation (Barker, 2001). Further, it is hard to see how a conversation could be analyzed exactly as it exists independently in the world. From Hammersley’s (2003) point of view:

recordings are not the same as the social interactions they record. They are selective. Much went on before they started and after they stopped. Furthermore, what is ‘picked up’ or ‘in shot’ is only part of a wider realm of happenings.
(p. 759)

Hammersley (2003) cites a study by Margaret Wetherell in which she introduces her participants as 17- and 18-year-old male students attending the sixth form of a single sex boys’ independent school in the UK. She provides further context by describing “relatively stable sets of resources that are held to be constantly available to the young men” (p. 768) such as ideas about male sexuality as performance and achievement, and about alcohol and dis-inhibition. In this way, says Hammersley, discourse analysis protests too much: it does not reject all psychosocial and social attributes, but only some of them.

Potter’s (2003b) rebuttal is that attributes and other elements of context are indeed used in discourse analysis, but “they are not excluded from issues of
construction. Nor are they prerequisites for the analysis. They aid its interpretation, and help guide its implications” (p. 800).

Tempting though it is to try to focus solely on what is observable, I think it is impossible to explain everything that goes on at a micro level by analyzing particular interactions or texts. Woods (2006) argues compellingly for consideration of context by referencing it as a critical component of shared meaning. The simple question “who’s talking?” means one thing when asked by a teacher in a classroom (in this case, it is probably an order for a student to be quiet). It means quite another thing when asked of one friend by another in a kitchen, in relation to the dinner guests in the living room and the extent to which they are getting along and enjoying themselves.

Assuming that one allows context, though, the dilemma becomes what to use and how to relate it to the data. According to Wood and Kroger (2000), inter-textual analysis (looking for similarities among texts or discourses) can be a way to incorporate external context into an analysis. They also speak to the importance of context to the extent that it will aid understanding.

We shall probably want to use information about circumstances and setting in which an interaction occurred in order to set the scene for the text that is about to be analyzed. This is not done to justify any claims about the text, but to make it comprehensible for the reader by positing some possible contexts in which the text would make sense. (p. 130)

Gilbert (2005) suggests adding context through literature reviews. Barker’s (2001) idea is that discourse analysis involves two stages, and it is in the second, what I regard as the discussion component of any study, that context is brought to bear: “Interpretive analysis comes after the phenomena in the text structure have been observed and analyzed linguistically” (p. 85). Wood and Kroger (2000) agree with this second stage of analysis and its relation to the context of larger societal discourses. The aim of this stage would be to “identify the ways in which your analysis could be seen in relation to issues of ideology, culture and so on, and in particular, with respect to what is not there from your perspective as an analyst and critic” (p. 133).

In the final analysis, so to speak, the important thing is to ensure that aspects of context included and excluded are precisely argued and justified within the concrete analysis of a particular case (Titscher et al., 2000).
4.5.1.2. Cognition

Hammersley’s (2003) second point deals with internal states of mind or thought processes. He positions Potter as rejecting “the representational model of language, whereby statements are held to correspond to phenomena that exist independently of them” (p. 756). Hammersley sees no harm and no methodological compromise—in fact sees much benefit—in attributing views and opinions to participants.

Potter (2003a) equates his view on cognition with his position on context, arguing for similar analytic constraints on it. Discursive psychological work on attitudes, he says, has brought to light conceptual difficulties with the way attitude scales are designed and interpreted. As an example, he compares attitude measures on food and eating with naturalistic recordings of people talking about food and eating. The latter, he says, “show how particular distinctions (e.g., between ‘subjective’ and ‘objective’ assessments of food) can be highly consequential and yet are blurred together in standard measures of food attitudes” (p. 785).

Others agree, seeing in the field of discourse analysis a move away from speculating about internal states of the mind such as attitudes. Gilbert and Mulkay discussing an analysis of scientists’ discourse, say that the analysis “does not seek to go beyond scientists’ accounts in order to describe and explain actions and beliefs as such. It focuses rather on describing how scientists’ accounts are organized to portray their actions and beliefs in culturally appropriate ways” (quoted in Sarangi & Candlin, 2003, p. 117).

In general, methodologies that lean towards social constructionism have generally moved away from the study of psychological attributes such as attitudes or beliefs as coherent, internal, self-sufficient and discrete entities (Crossley, 2002a) to embrace the study of attributes emerging during processes of social interaction and negotiation. Antaki et al. (2003) argue against interpreting discourse as “the expression of some underlying realm of thoughts, ideas, attitudes and opinions” (p. 15), although they acknowledge not all discourse analysts share this viewpoint. Van Dijk (2001), for instance, conducts sociocognitive studies on ethnic prejudice and racism, specifically incorporating cognitive factors within his model. According to Antaki et al., however, “van Dijk still analyzes discourse as discourse. He does not see discourse simply as a means
of discovering cognitive structures or mental representations, nor does he see the cognitive structures or mental representations as producing the discourse" (p. 15). Willig (2000) is sympathetic to this balance in van Dijk’s approach, especially with regard to the potential of discourse analysis to shed light on conceptions of health and illness. She thinks the dismissal of cognitive factors has moved too far.

In my view, [we need] to move beyond a concern with discourse practices and a conceptualisation of ‘selves’ as purely contextual and transient discursive formations…because the experience of our bodies as ‘sick,’ ‘healthy,’ ‘disabled,’ ‘able-bodied,’ ‘fit,’ ‘fat,’ and so on, though undoubtedly subject to shifts and variation across discursive contexts, can become internalised and reified. (p. 554)

Context and cognition are just two of the debates taking place among discourse analysts, but they are perhaps the liveliest. My read on the Hammersley-Potter debate is that they are talking past each other, each misunderstanding to some extent what the other says. I am sympathetic to claims made by both. Ultimately, like Cheek (2004), I believe the way around these contentious issues is to be as clear as possible in one’s study about how and why analytical decisions and claims are made.

4.6. Discourse Analyses of Health Topics in the Literature

As I discuss in Chapter 2, most of the social sciences and humanities literature on pandemic flu does not take a theoretical position on language. Many health communications studies, says Ainsworth-Vaughn (2001), treat language as a transparent medium. As shown below, however, there are some good examples of discourse analyses on health topics, and they seem to be increasing. In fact Dew (2007) presents discourse analysis, with its focus on “features of language, styles of argumentation and the way the language is used to represent a particular phenomenon or issue” (p. 435) as one of six major qualitative methodological approaches used in health research, along with:

• phenomenology
  (concerned with apprehending experiences of illness, often in relation to the health system);
• grounded theory  
  (inductive research, starting with no prior theoretical claim, aimed at theory building);

• ethnography  
  (involving close observation and often participation in the social life of the group being researched);

• ethnomethodology  
  (exploring by observation how the organization of society is achieved);

• action research  
  (aimed at understanding and changing a factor of the social world, often working with participants).

Discourse analyses in health studies are conducted in a variety of settings on a range of materials and topics, including transcripts of meetings among health professionals, interactions between health professionals and lay people, and conversations among lay people; and health promotion materials, health information in the news and entertainment media, medical and health journals, and health policies. Lupton (1992) suggests discourse analysis has the potential to reveal valuable insights into the social and political contexts in which varied discourses about health take place. Boutain (1999) advocates the use of critical discourse analysis in nursing research to explore associations between health and society through language, thereby exposing the ways in which terms such as race, gender and class, which are used to classify people, are deemed so natural as to obscure their origins. Cook (2005; as well as Southwell, 2000) suggest discourse analysis could be put to good use in health promotion, where “crucial issues…are often extremely difficult to research in a manner that provides direct implications for health promotion practice” (Cook, 2005, p. 129). Cook feels that health promotion practice on a theoretical level has moved beyond seeing the individual in control of his or her health, but that for the most part this theoretical understanding has failed to transfer into research and practice. Discourse analysis could help, Cook says, by exploring at a deeper level the assumptions behind both the theories and the practices. What discourse analysis allows, says Cheek (1997b), is a focus on communication as creating understandings of health rather than

10 Others would disagree, citing changes that have been made to social policies that support better health, for example taxation on tobacco, anti-smoking laws, and environmental hazard regulations.
as *conveying* understandings of health. Discourse analysis can also avoid a simplistic representation of complex discussions, such as those in focus groups, from which analysts often pull out fragments of discussion and code them into themes (see Crossley (2002a), below, for an example). Willig (2000) sees discourse analysis as able to move researchers beyond the view that individuals acquire a set of static beliefs in relation to health and illness, which in turn, shape their behaviour. There is no doubt that frameworks such as the health belief model offer important insights, says Willig. However, she also believes we need—and can obtain, through discourse analysis—a view on people’s statements about health and illness not just as expressions of inner thoughts, but as “the mobilization of culturally available explanations” (p. 548). Candlin and Candlin (2002) suggest healthcare outcomes can be related closely to the quality of the discursive encounters between health professionals and patients, and among health professionals.

Below I discuss discourse analyses in health, extending the few examples in the first section (the discourse analysis conducted on pandemic influenza and those on avian flu) to include a broad range of health topics. Guided by the journal key words, I grouped the articles under four headings according to the subject of study: media coverage, policy documents, interviews and focus groups, and a mix of texts.

### 4.6.1. Media Discourse Analyses

The biggest category of health discourse analyses contains those conducted on media coverage. Gough (2006) analysed a special feature on men’s health in a UK national newspaper. He found several interrelated discursive patterns that draw on essentialist notions of masculinity, unquestioned differences between men and women, and constructions of men as naïve, passive and in need of dedicated help. Cheek (1997a) explored the way in which toxic shock syndrome was represented in Australian print media between 1979 and 1995. She was interested to see how, through the course of the media coverage, the syndrome became established as a fact. She found the coverage dominated by three discourses: one of concealment, one of science and medicine, and one of individual responsibility. These discourses reveal competing and vested interests in the portrayal of the syndrome (the interest of tampon manufacturers, public health practitioners, women and their families) and should be challenged, says
Cheek, so that other understandings can be brought to bear. Roy (2008) used discourse analysis to examine how responsibility for health is constructed in popular English-Canadian women’s magazines. Themes she found were *health is an important responsibility*, *you are responsible*, and *take responsibility or suffer the consequences*. The devices of cautionary tales and inspirational stories further cemented these themes and contributed to a glossing over of the complex factors involved in health status. Larson, Nerlich, and Wallis (2005) compared the use of militaristic metaphors in British newspaper coverage of invasive species, foot and mouth disease and SARS. The authors make a good case for the use of metaphor as follows: “The opacity of much scientific and medical knowledge to most nonspecialists means that attempts to disseminate it outside its original context in the laboratory and the academy unavoidably depend on [metaphors]” (p. 244). From the outset, say the authors, invasive species have been framed with militaristic metaphors, which work to preclude any opposition to anti-invasive policies. With foot and mouth disease, the authors find militaristic metaphors justify drastic solutions, excuse government from responsibility, and focus on a rigorous mode of action, linking the discourses of farmers, policymakers and scientists and providing a common ground for action. Conversely, war metaphors are only an occasional feature of SARS reporting, which was framed in a bureaucratic discourse of management—a problem or a crisis or a disaster, not an attack. The authors wonder whether the lack of war metaphors used in SARS coverage relates to the fact that concurrently, an actual war, in Iraq, was receiving a lot of media attention. More likely, though, they conclude, it was that SARS lacked a general, or an organizing lobby (there was no “other side”), and the desire of most stakeholders was to minimize panic, not incite it.

Washer and Joffe (2006) examined the meanings of MRSA circulating in Britain’s newspapers over the period 1995-2005. They found MRSA presented as a potentially lethal superbug, marking the end of a golden age of medicine. This presentation—which involved focusing on the idea of spread, and which allowed blame to be placed on the National Health Services for lack of cleanliness—was quite different from that of other emerging infectious diseases, which focused on their genesis. Koteyko, Nerlich, Crawford, and Wright (2008) also studied MRSA, exploring how uncertainty surrounding the origin and spread of MRSA was portrayed in debates within the media and in policy circles towards particular policy ends. They examined assumptions, judgements and
contentions that formed two discourses of MRSA: one that suggested MRSA control is “not rocket science” and that there are simple ways of avoiding infection, and the other that positioned MRSA as a more complicated matter with “no silver bullet.” Like the other studies in this category, the work of Koteyko et al. reveals how different constructions of a disease can lead to outcomes such as blaming certain groups or individuals, and vindicating others.

4.6.2. Policy Documents

Shaw and Greenhalgh (2008) studied health research policy, challenging the assumption that it is value free. They argue that policymaking is not just a means for finding solutions for pre-existing problems, but a key way in which problems are constructed in the first place. They analysed 29 documents spanning the years 1971 to 2005, and conducted 16 interviews with policy stakeholders. Their findings show that health research policy shapes and is shaped by a discourse of the knowledge-based economy (a term referring to the trend in advanced economies towards greater dependence on knowledge and information), revealing a shift from earlier scientific models of industrial technology associated with large scale production, to micro discoveries and the effective development and exploitation of information. This vision of a knowledge economy is commonly portrayed as commonsense—a natural course of events. What is not discussed is that this vision benefits some people and disadvantages others, supports particular choices and negates others, shapes what is and is not possible, and becomes self-perpetuating.

Rayner, Scarborough, and Allender (2006) analyzed a document called the “National Service Framework for Coronary Heart Disease”. They identified three main discourses—managerial, clinical and political—and a fourth, albeit marginalized one, public health. The theme of the managerial discourse was that the health system could be made more efficient using new management tools. The theme of the clinical discourse was that healthcare could be made more effective with greater application of professional knowledge. The political discourse theme was that market forces will optimize both the efficiency and distribution of healthcare. The public health discourse theme, much minimized, was that inequity in health can be reduced by focusing on the wider social determinants of health. This discourse analysis suggests a primacy of
values of efficiency. The values of equity, choice and autonomy in healthcare were much less in evidence.

4.6.3. Interviews and Focus Groups

Crossley (2002a) claims that too many focus groups emphasize content rather than the process of interaction, thus resulting in a simplistic presentation of complex issues. She analyzed the transcript of one focus group on health and health promotion to demonstrate that rather than offering a view on pre-existing attitudes and opinions, these attributes are actively constructed during the course of the interaction among participants. This is an important article as it raises the discussion point that “the very notion of a final coherent position may not do justice to the open-endedness and interactive constitution of attitudes” (p. 1,481). On a more practical note, Crossley’s article points out the risk run by health promotion practitioners when they attempt to highlight the dangers of certain behaviours. Crossley found that despite participants’ linking of health with the moral concepts of responsibility and goodness, and their desire to be healthy, responsible and good, they also demonstrated a desire for individualism and rebellion when pushed too far.

McKinlay, Plumridge, McBain, McLeod, Pullon, and Brown (2005) conducted a discourse analysis of two focus groups—in this case of general practitioners (GPs)—for similar reasons to Crossley’s. By analysing the interactions of participants, the authors reveal that the seemingly commonsense notion of GPs incorporating health promotion into regular appointments is not so commonsense at all. For the GPs, there were many barriers to this activity, which manifest themselves in a covert resistance to health promotion. Part of the reason for the resistance, suggest the authors, is that the field and practice of health promotion did not arise in primary care (the area of healthcare system in which GPs work) but in the population and public health sector. This study emphasizes the need to consider the issues related to GPs opportunistically taking time to educate their patients on health promotion topics.

Wright and Nerlich (2006) conducted a discourse analysis of a public focus group conducted at the height of the UK’s foot and mouth disease outbreak. In particular, they looked for how the rhetorical device of the deficit model, which is usually attributed to
scientists’ conceptions about the lack of public understanding of science, was also used by the public themselves. The study reveals the importance of not simply viewing the relationship between science and society as one-way communication from scientists to the public.

Moving to interviews, Breheny and Stephens (2007) explored the social construction of adolescent motherhood in interviews with 17 New Zealand health professionals. Through a discourse analysis, they show how interviewees drew upon a shared social understanding of what it means to be a teenager (for example to account for why the teenage mothers did not show up sometimes for appointments, or why they smoked or drank) and what it means to be a good mother (for example having good parenting skills, expressing pride in pregnancy and parenthood). Ultimately, their study suggests that the attributes of a good mother cannot be reconciled with those of adolescent motherhood. The implications are that it is extremely difficult for young women to resist this negative construction of adolescent motherhood, and that surveillance by health professionals is justified. The importance of questioning the assumptions about appropriate behaviour (in this case, having a baby as a teenager) comes through strongly in this study.

Finally, Charles and Walters (2008) interviewed 48 men and women in their 20s and 30s to find out if recent media coverage and health promotion campaigns related to men’s health had an effect on the discourse of individuals. They conclude that dominant definitions of masculinity are still widespread, and recommend that to be effective, health policies must take into account the way that health talk and behaviour are rooted in social circumstances, rather than simply seeing them in individualistic terms. While these findings are interesting, unfortunately it is hard to trace them back to the interviews themselves. Although the authors introduce their study as a discourse analysis, it is of the type discussed by Crossley (2002a) in which “fragments of discussion are pulled out of focus groups and presented as illustrations of more general themes being analysed in the research” (p. 1,471).
4.6.4. A Mix of Texts

Southwell (2000) looked at audience construction in organizational reports on public communication about AIDS. Through a discourse analysis of materials, he demonstrates how the notion of analytic audience—the assumptions made by public health professionals as they construct an audience for communication—might deny individuals agency in the prioritization of health problems or might apply analytic frameworks that run counter to stated or unrealized interests of individuals or groups involved.

Taking an ethnographic approach, Allender, Colquhoun, and Kelly (2006) analysed the discourses of a workplace health program through semi-structured interviews, participant observations and workplace health program documents. They identified two competing discourses: health as safety and health as lifestyle. The former focused on the interaction of employees with their physical working space (legitimized through legislation); the latter concerned employee behaviour in and outside the workplace. The lifestyle discourse was marginalized due to its complex nature (lifestyle means many things) and its lack of the “hook” of legislation, but common to each discourse was the role of the worker as passive and compliant to experts. This study reveals how the concept of empowerment can be constructed in such a way that it is quite the opposite in practice: employees are encouraged to take responsibility for their health in their own interests, but the ways in which they should take and act on that responsibility are prescribed, and are in fact in the service of their employer.

Linell, Adelsward, Sachs, Bredmar, and Lindstedt (2002) compared risk discourse from five different healthcare contexts between health professionals and clients: genetic information talks, health information talks, booking of mental health interviews, medical testing situations, and talk during urography and kidney radiography. Their intent was to study how participants orient to risks. They found a wide variation across the settings: in some situations there were explicit discussions of risk, in others there was implicit talk about risk, in yet others there was a clear avoidance of talk about risk. From their study, the authors generate hypotheses for further testing including that explicit talk about risk is more likely if:

- patients can influence future risk;
• patients are at high risk;
• patients are being informed only, rather than currently undergoing medical treatment;
• there is enough time for a discussion about risk.

The study casts doubt, say the authors, on discourse theories that say all relevant understandings in discourse are made verbally manifest.

4.7. Summary

An emerging infectious disease, viewed from a discourse analytic perspective, is much more than the collection of words used to define it by, for example, the World Health Organization or the Public Health Association of Canada. As Fox (1993) says:

Illness cannot be just illness, for the simple reason that human culture is constituted in language, that there is nothing knowable outside language, and that health and illness, being things which fundamentally concern humans, and hence need to be ‘explained,’ enter into language and are constituted in language, regardless of whether or not they have some independent reality in nature. (p. 128)

Viewing illness from this perspective enables an exploration of the implications, usually unintended, of language use. “Unintended” is an important word here. Although everyone uses rhetoric effectively and very purposefully from time to time to persuade others to think or feel a certain way or do a certain thing, much discourse use is natural and unconscious (Titscher et al., 2000). While discourse analysts use the term “strategies” to discuss methods of speakers and writers, this does not mean those strategies are consciously being used. In fact, discourse analysis attempts to surface those unconscious strategies and comment on what might be some of the implications. As an example, Cho and Salmon (2007) looked at the unintended effects of health discourse, and found evidence of:

• obfuscation
  (creation of confusion and misunderstanding);
• apprehension;
• culpability
  (blaming the individual);
• social norming
  (communicating in such as way as to unwittingly stigmatize those who find
  themselves out of alignment with the majority).

Another example of the unintended effect of communicating in certain ways is
complacency on the part of the public in relation to emerging infectious diseases (Ho et
al., 2007), which in turn has implications for what might happen during an outbreak. All
of these potential effects and implications and more can be explored through discourse
analysis. In this way, discourse analysis can do more than achieve abstract
understandings of text (Gee, 2005). It offers the opportunity to deal with practical
problems in the real world by considering how ideas and concepts and activities could
be positioned, discussed and undertaken differently. As demonstrated in Section 4.6,
studying the discourse of health can help uncover important conceptualizations, such as
how we understand the moral economy of “good” and “bad” health as well as the
respective roles of individuals, societies, governments and wider structures in explaining
health and health outcomes (Orsini, 2006). Discourse analysis offers a unique
opportunity to add to the literature by studying the construction of a “virtual” disease and
examining its commonsense through the broader discourses it reflects. In the next
chapter, I explain the methods involved in discourse analysis.

5. Methods

5.1. Introduction

This chapter builds on the previous discussion of discourse analysis as a
methodology (an overall approach to analysis) to discuss methods (tools for analysis). In
the first section below, I cover general methods used in discourse analysis. In the
second section (5.3), I describe the specific methods I used to identify the three
characteristics of pandemic influenza (inevitable, significant, manageable) on which I
conducted a full discourse analysis, the focus of Chapter 6. Also in the second section, I
describe the methods I used to highlight assumptions in the plan, analyze the media
coverage, and identify the broader social discourses in which the plan is embedded.
5.2. Methods in General

A great many data sources and tools may be used in discourse analysis; their ultimate selection depends on the research question. I could have chosen to approach a research question related to pandemic influenza planning in many ways. For example, I could have compared the metaphorical framing of a pandemic in the plan with the framing of avian flu in media and journals described by Nerlich and Halliday (2007). I could have analyzed the British Columbia Pandemic Influenza Preparedness Plan for the scientific, political and legal discourses found by Garoon and Duggan (2008) in their critical analysis of 37 national pandemic influenza preparedness plans. However, as discussed in the introduction, my interest was how a yet-to-exist pandemic flu itself was constructed (not how the plan was constructed) in order to make planning for it seem commonsense. This question dictated my primary data source (the British Columbia Pandemic Influenza Preparedness Plan) and the choice of methods (looking for ways in which a pandemic is constructed in the text). Although I could have explored construction of a pandemic at a high level across many countries’ or Canadian province’s pandemic preparedness plans, I was more interested in an in-depth exploration of a pandemic in one text to ensure full consideration of its textual context. I saw this one text, however, as reflecting inter-textuality among itself and other pandemic plans, as they are all modelled on recommendations of the World Health Organization.

Once the data source and methods are chosen, says Barker (2001), a first step is reading through the text or texts several times, at first as uncritically as possible, but with an increasingly critical eye (Wood & Kroger, 2000). The point is to look for the overall perspectives presented in the words themselves, but also in the choice and placing of photographs, diagrams and tables as well as in the use of chapters, sections, headings, keywords and quotes. McKee (2003) suggests keeping three strategies in mind on a first reading:

- exnomination: looking for ideas, concepts and events that do not seem to need naming because they are so obvious;
- commutation: replacing one element of a text with another to see if it still makes sense;
- structuring absences: looking for the exclusion of certain types of people without acknowledgment of the absence.
Gee (2005) describes seven building tasks and related questions, which draw on DASP and critical discourse analysis for analysis. They are:

- **significance**: How is this piece of language being used to make certain things significant and how? What are the situated meanings of some of the words and phrases that seem important? What situated meanings and values seem to be attached to places, times, bodies, people, objects and institutions? What situated meanings and values are attached to other oral and written texts alluded to?
- **activities**: What activity is this piece of language being used to enact? What sub-activities compose it? What actions compose these activities?
- **identities**: What identities (roles, positions) and attendant personal, social and cultural knowledge, beliefs, feelings and values seem to be relevant, taken for granted or under construction? How are the identities stabilized or transformed? What big D discourses are made relevant or irrelevant and how?
- **relationships**: What relationships does the language seek to enact? What relationships seem to be relevant, taken for granted, under construction? How are these relationships stabilized or transformed? How are other oral or written texts alluded to so as to set up certain relationships to other texts, people or big D discourses?
- **politics**: What perspective on social goods is this piece of language communicating? (i.e., what is seen as normal, right, good, proper, appropriate, etc.) How are social goods made relevant or irrelevant?
- **connections**: How does this piece of language connect or disconnect things, make things relevant or irrelevant to one another?
- **sign systems and knowledge**: How does this piece of language privilege or dis-privilege certain sign systems or ways of knowing?

As discussed in the last chapter, Barker (2001), whose approach I follow, endorses a two-stage analysis. The first stage is meant to be as independent as possible from the researcher in that she presents a repeatable and empirically verifiable analysis of the text (assuming readers agree with the analyst and with each other on the lexico-grammatical rules of the English language). The second stage is the interpretation, bringing in contextual factors and theories. Barker’s linguistic tools of the first phase of discourse analysis include exploring:

- **transitivity** (showing what happens in a discourse and to whom, through strategies such as passivization or nominalization);
- **vocabulary** (the use of words; here Barker gives the example of the different perception one could have of the US Central Intelligence Agency if its role were described as spying rather than performing intelligence tasks);
• mood (declarative, interrogative or imperative);
• metalanguage (the retelling of a narrative within a text, and the author or writer’s attitude towards what is being said);
• modality (a speaker or writer’s attitude to what s/he is saying as revealed in the utterance. Modal expressions include may, could and should);
• forms of address (Mr., Ms., Mrs., Dr., etc.)
• cohesion (looking at how various elements of a text are linked to each other and form larger sections).

Woods (2006) recommends exploring semantic strategies, the “sounds, words, utterances, interactional routines” (p. xi) used in discourse. In her study of advertising, educational, legal and medical discourse, she looks at sound symbolism (a linguistic term given to the association of certain sounds with particular meanings, concepts, ideas or emotions), as well as the effects of onomatopoeia, alliteration, assonance and simile. She shows how the use of hyperbole (excessive exaggeration), metaphor (perceiving one thing in terms of another) and euphemisms (a mild or inoffensive term used to express what is disagreeable) can be effective rhetorical strategies, often going unnoticed as such. Richardson discusses the power of rhetoric, “the science and art of persuasive language use” (Reisigl, 2008, p. 96), and suggests additional tropes to look for, including metonym (substituting a word or phrase for another with which it is associated); neologism (a new word or expression); and puns (the usually humourous use of a word such that its different meanings are exposed).

Woods (2006) discusses the effectiveness of the three part list, explaining that “lists constructed in three parts seem to have an air of completeness about them” (p. 29). As an example, she provides three statements, the third of which she considers more powerful and effective than the first two.

- The discourse of advertising is potent.
- The discourse of advertising is potent and powerful.
- The discourse of advertising is potent, powerful and persuasive. (p. 29)

Other semantic strategies such as the use of count nouns rather than mass nouns, and employing personalization, presupposition and personification, are instructive. Like Barker, Woods suggests exploring grammatical features such as the active as opposed to the passive voice, nominalization, and hedging through modal
verbs. As an explanation of the latter, O’Reilly et al. (2009), demonstrate effectively in a study of accountability in research ethics board letters how the modal verb “should,” a weaker directive of “must,” can indicate obligation but also be defended as advice giving.

McKee (2003) suggests looking for connections between sentences and sections, for what assumptions are made by not connecting them explicitly, and for what expectations might be raised for the reader. Multiple readings of relevant sections—usually much smaller pieces of text—enable a honing of the analysis and development of arguments. As mentioned above, the idea is to be guided by the data (Wood & Kroger, 2000), identifying speakers’ and writers’ discursive strategies and the ways in which they construct and employ categories, as much as possible avoiding developing categories of one’s own (although as I discussed earlier, I do not think this is entirely possible). Like Widdowson (2000) my purpose was not to expose power relations or to attribute specific intention to social actors, but simply to try to work out what is in the text that might give rise to certain interpretations and why, and what these interpretations might suggest. Following Potter (1996), I am ultimately interested in how descriptions are produced so that they are treated as factual, and how they are put together in ways that allow them to perform particular actions.

5.3. My Methods

As discussed, my analysis was conducted in two phases, reflecting Barker’s (2001) approach. The first phase, the discourse analysis proper of the British Columbia Pandemic Influenza Preparedness Plan, was meant to be as independent as possible in that I attempted to present a repeatable and empirically verifiable analysis of the text. The second phase of the analysis was the interpretation, which moved from text to context and consisted of three parts. The first part added to the analysis of the plan by exploring what is not in the plan and therefore what assumptions were made in developing it. The second part situated the plan within the narrative of 1-year’s media coverage on pandemic flu, in order to account for the plan’s common sense but also to note where the coverage might diverge from the plan. The third part attempted to establish the broader meaning of the plan by locating it, and the analysis of it, within a
cultural context (Gillies, 1999). In the following two sections, I outline the steps I took in this two-phase discourse analysis.

5.3.1. Analysis of the Plan

As discussed in my introduction, I chose as my primary data source the British Columbia Pandemic Influenza Preparedness Plan because I was interested in how a pandemic was constructed such that planning for it made sense. Although the plan is only one document, it is modelled on the pandemic influenza preparedness plans of other countries, and in turn models other plans developed in British Columbia. In the sense that it is part of a global approach to pandemic influenza planning, it also reflects a broad range of collective thinking, discussion and negotiation involved.

For as comprehensive an analysis as possible, I used Barker’s methods (transitivity, vocabulary, mood, metalanguage, modality, forms of address and cohesion) complemented by Richardson’s rhetorical tropes (hyperbole, metaphor, metonym, neologism and puns), which I felt would add important elements. Keeping in mind my initial research question—How is the pandemic flu constructed in the British Columbia Pandemic Influenza Preparedness Plan so that planning for it seems commonsense?—I reviewed the document in the context of its genre as well as for its stated purpose, and also to get a sense of its look and feel.

A genre can be thought of as a classification concept, referring to a class of communicative events, the participants of which share a certain set of conventions defined in terms of formal, functional and contextual properties (Georgakopoulou & Goutsos, 1997). As Kaplan (2000) notes, writers choose a genre (sometimes unconsciously) to accomplish a particular communicative function, and readers recognize (again, perhaps unconsciously) what the choice of genre communicates. Swales (cited in Hoey, 2001) suggests sometimes a genre is for the most part controlled by a particular discourse community, for example the legal profession (with documents such as court briefs, contracts and wills), physicians (medical charts and patient case notes) or, more broadly, the academic community (peer reviewed journal articles). On the one hand, Georgakopoulou and Goutsos (1997) discuss the advantages of taking genre into account in discourse analyses, because it can show us how communications
events can be constrained by convention. On the other hand, they point out as problematic the lack of a clear-cut definition of genre, confusing the issue of where to draw the line between genres and sub-genres. They note that “to take the logic of this tendency to extremes, each new different text should be classified as a separate genre” (p. 34).

According to Pare and Smart (1994), though, genre theory and studies have evolved over recent years, focussing initially on textual patterns (which seems to be what Georgakopoulou and Goutsos refer to in their discussions of genres and sub-genres) and later, increasingly, on genre as social action. In this sense, the view of genre is similar to discourse analysts’ view of discourse itself. Contextualizing genre within a social constructionist framework, Pare and Smart refer to it as “a broad rhetorical strategy enacted within a community in order to regularize writer/reader transactions in ways that allow for the creation of a particular knowledge” (p. 146). This view aligns with Georgakopoulou and Goutsos’ (1997) suggestion that genres are not fixed or static categories (e.g., horror movies, newspaper editorials) but should be seen as “dynamic compilations of textual and contextual dimensions that form a continuum” (p. 34). From this perspective, there is utility in analyzing the British Columbia Pandemic Influenza Preparedness Plan within a genre of government planning documents in order to understand its need to appeal to a multitude of audiences (the public, other governments, health authorities, etc.) for a variety of purposes (e.g., not just protecting the health of the public, but demonstrating accountability to that same public, as well as to media and other groups)—but also, to analyze in which ways it reflects and perpetuates the social world in which it exists.

Moving onto stated purpose and look at feel, the British Columbia Pandemic Influenza Preparedness Plan is a 201-page document (37 pages proper with 164 pages of appendices) whose stated purpose is “to help all of us anticipate, prepare and respond to the next influenza pandemic and to other new emerging diseases” (p. ii). The “us” in this sentence is not defined, and as I show in the analysis, seems to refer to different groups of people at different times for various reasons, as is the case with most government documents. For the most part, though, the plan’s language indicates that it means to address all British Columbians. In addition to the 37 pages comprising the core of the plan, there are 164 pages of appendices. I reviewed these but did not include
them in my analysis, heeding the advice of seasoned researchers who stress the
importance of keeping a discourse analysis manageable (Barker, 2001; Wood & Kroger,
2000). I began the analysis by reading the plan as uncritically as possible, and then
reading it a second time with a more critical eye. At this stage I was not deciphering
the text word-by-word (an ambitious task, in a 201-page document—not to mention
analytically unhelpful at this point) but rather looking for overall perspectives presented.
This meant looking not just at how the story unfolded, but also considering choice and
placing of photographs and diagrams and tables, as well as chapters, sections,
headings, keywords and quotes.

In subsequent, more detailed readings of the 37 pages of the core plan—but still
at the level of the full plan within its genre—I began looking for the strategies outlined by
Barker and by Richardson. I read the plan looking for one of the following every time
through: transitivity, vocabulary, mood, metalanguage, modality, forms of address,
cohesion, hyperbole, pun, neologism, metaphor and metonym. I made notes on each
(see Appendix A) and used them to write an introduction to my analysis consisting of a
discussion of the plan overall within its genre, as well as a discussion of the foreword as
an important tone-setting component of the document (Section 6.1).

I then embarked on my research question specifically, which involved as a first
step conducting a content analysis: going through the plan line by line capturing all
instances of the word pandemic and noting characteristics of a pandemic as identified
and categorized by the authors themselves. The intent was at this stage to be as
objective as possible in order to be directly replicable. As I read the plan, I noted every
sentence that contained the word pandemic, unless the word was used as an adjective
(e.g., pandemic committee, pandemic preparation). It was important to make a
distinction at this stage between what the authors of the plan said about a pandemic and
what I as a reader would need to assume, since my intent was to use the categories of
the authors as much as possible, not my own. An example of the former was “a
pandemic is…,” which explicitly describes the pandemic. An example of the latter is
“most experts believe we will have six months before it is identified.” The assumption a
reader probably makes here is that a pandemic can, in fact, be identified. However, the
plan does not state that it is identifiable but rather demonstrates it as such in the
grammatical construction of “before it is identified.” Because the plan does not explicitly
state "a pandemic is identifiable," I did not record it as such. If a sentence did not contain the word pandemic but rather the word “it” where it was clear that “it” referred to the word “pandemic” in an immediately preceding sentence, I included it with the word “pandemic” in brackets to indicate where it went. I did not, however, include phrases such as “Clearly, such widespread illness,” which could have been interpreted to mean pandemic but did not use the term explicitly.

For this preparatory content analysis, I used the Provincial Health Officer’s introduction, the foreword, the introduction, and the sections “About the plan,” “Roles and responsibilities,” and “Emergency financial assistance,” since these are the major narrative sections (and are followed by tables that do not contain many instances of the term pandemic). The intent was to identify major characteristics so that I could then perform an analysis proper to confirm or dismiss them.

The final list is presented in Table 2 below. As the table shows, in a first interpretation I made a list of keywords in the right hand column that summarized the characterization in each sentence. Keeping as close as possible to the words in the sentence (which as the table shows was not always possible), I developed 24 keywords that resulted in 45 mentions. The term manageable was first, with six mentions; followed by inevitable and estimable with four each; global and significant with three each; catastrophic, imminent, documentable, unpredictable, multi-stage and costly with two each; and the rest with one each.

Because there was little difference among the numbers of occurrence, my next task was to see if through interpretation I could collapse these characterizations. Starting with manageable, I went through the list to see if it could fit in any of the other categorizations. The ones it related to most closely were estimable, documentable and predictable. However, I decided that while these categories could perhaps be subsumed under the category manageable, it was not so the other way. In other words, if something was documentable or estimable or predictable, there was an indication that it was manageable, but because something was manageable, that did not mean that it was by definition predictable. Manageable was a higher order term, subsuming the other terms with which it was related. Similarly, characteristics that related to inevitable were imminent, recurring and unpreventable. This one was less straightforward than
manageable, as it could be argued that any one of these could perhaps work as a higher order. I collapsed these under the category with the largest number: inevitable.

Table 2. Characteristics of a Pandemic as Analyzed in Sentences Containing the Word “pandemic” in the British Columbia Pandemic Influenza Preparedness Plan

<table>
<thead>
<tr>
<th>Sentences containing “pandemic” as the subject or object of a sentence</th>
<th>pp.</th>
<th>A pandemic is…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza pandemics represent global emergencies with catastrophic impact.</td>
<td>ii</td>
<td>Global, catastrophic</td>
</tr>
<tr>
<td>During a pandemic, worldwide epidemics of influenza due to a new viral subtype occur simultaneously and with high death rates.</td>
<td>ii</td>
<td>Global (worldwide), new, prevalent, deadly</td>
</tr>
<tr>
<td>Pandemics have been documented every 10 to 40 years dating back to the 1600s, and likely long before that. There were three [pandemics] during the last century alone.</td>
<td>ii</td>
<td>Documentable, historic, inevitable, recurring</td>
</tr>
<tr>
<td>The last pandemic occurred in 1968. Experts agree—we are overdue for another [pandemic].</td>
<td>ii</td>
<td>Documentable, inevitable, imminent</td>
</tr>
<tr>
<td>Between the onset of a pandemic and the production and dissemination of an effective vaccine lies a period of months during which medical and social resources will be stretched to the limit.</td>
<td>ii</td>
<td>Opportunistic, significant</td>
</tr>
<tr>
<td>When a pandemic occurs—and it will—no time can be lost in responding.</td>
<td>ii</td>
<td>Inevitable, urgent</td>
</tr>
<tr>
<td>This revised planning guide is intended to help all of us anticipate, prepare and respond to the next influenza pandemic and to other new and emerging diseases.</td>
<td>ii</td>
<td>Manageable</td>
</tr>
<tr>
<td>The committee’s mandate is to plan a coordinated response to pandemic influenza by:</td>
<td>1</td>
<td>Manageable, estimable, time-limited</td>
</tr>
<tr>
<td>• Assessing the expected impact of pandemic influenza on British Columbians.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providing advice related to epidemiology and related public health actions during the pandemic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparing a final report when the pandemic is over, including an assessment of the measures taken and recommendations for the future.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some time in the future, British Columbians will face an influenza pandemic—a global epidemic caused by a strain of influenza virus that spreads rapidly and causes high rates of illness and death. No one can predict exactly when [a pandemic] will happen but scientists say [a pandemic] may be imminent.</td>
<td>3</td>
<td>Inevitable, catastrophic, unpredictable, imminent (perhaps)</td>
</tr>
<tr>
<td>These estimates are based not on a worst-case scenario but on the impact of the 1957 and 1968 influenza pandemics, which were relatively mild compared with the 1918 epidemic.</td>
<td>3</td>
<td>Estimable</td>
</tr>
<tr>
<td>There is no way to predict the severity of the next pandemic.</td>
<td>3</td>
<td>Unpredictable</td>
</tr>
<tr>
<td>Sentences containing “pandemic” as the subject or object of a sentence</td>
<td>pp.</td>
<td>A pandemic is…</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>-----</td>
<td>----------------</td>
</tr>
<tr>
<td>For detailed information on estimating the impact of pandemic influenza on BC health authorities, see Annex B.</td>
<td>3</td>
<td>Estimable</td>
</tr>
<tr>
<td>Although the pandemic itself cannot be prevented, effective planning now can mitigate its impact.</td>
<td>3</td>
<td>Unpreventable, manageable</td>
</tr>
<tr>
<td>The purpose of this Plan is to inform British Columbians about the global and local risks of an influenza pandemic, and to provide the information and guidelines needed to fulfill roles and responsibilities to minimize these risks.</td>
<td>3</td>
<td>Risky, manageable</td>
</tr>
<tr>
<td>One of the best ways to prepare for a pandemic is to make better use of existing prevention and control measures between pandemics.</td>
<td>3</td>
<td>Manageable</td>
</tr>
<tr>
<td>Based on the last two pandemics, it is estimated that the next pandemic virus will arrive in Canada within 3 months after it emerges in another part of the world.</td>
<td>4</td>
<td>Estimable</td>
</tr>
<tr>
<td>A pandemic usually has two or more waves, either in the same year or in successive influenza seasons.</td>
<td>4</td>
<td>Multi-staged, predictable</td>
</tr>
<tr>
<td>The [vaccine] supply will be limited during the early stages of the pandemic; therefore plans for the first wave should assume lack of influenza vaccine and priorities for vaccination will need to be established.</td>
<td>4</td>
<td>Multi-staged, significant</td>
</tr>
<tr>
<td>Since pandemics are global events, this plan is consistent with other provincial, national and international plans for pandemic influenza preparedness and response (listed below and under Influenza Information Resources).</td>
<td>6</td>
<td>Global</td>
</tr>
<tr>
<td>Everyone has a role to play in planning for an influenza pandemic.</td>
<td>7</td>
<td>(does not immediately suggest a characteristic)</td>
</tr>
<tr>
<td>Although this Plan is the focal point for provincial pandemic preparedness, every BC government ministry, crown corporation and local government is also responsible for developing its own plan to ensure that key public services continue to be available during a pandemic.</td>
<td>7</td>
<td>Manageable</td>
</tr>
<tr>
<td>Everyone has a role to play in preparing for a pandemic.</td>
<td>7</td>
<td>(does not immediately suggest a characteristic)</td>
</tr>
<tr>
<td>Because of its immense scope and broad, prolonged impact, an influenza pandemic will result in additional costs in a number of different areas.</td>
<td>8</td>
<td>Significant, widespread, long-running, costly</td>
</tr>
<tr>
<td>During a pandemic, information regarding available emergency financial assistance will be posted on the Provincial Emergency Program web site at <a href="http://www.pep.bc.ca">www.pep.bc.ca</a>.</td>
<td>8</td>
<td>(does not immediately suggest a characteristic)</td>
</tr>
<tr>
<td>Be prepared to document any extra costs incurred during a pandemic.</td>
<td>8</td>
<td>Costly</td>
</tr>
</tbody>
</table>
Continuing with this pattern, and having dealt with estimable, I came to the next term: global. In the context of a pandemic, global could be significant, but significant does not necessarily mean global. The only other word related to global, I determined, was widespread, which I also coded under significant. Moving down the list, to deal with significant itself, I determined the related key words to be catastrophic, deadly, costly, prevalent, urgent and risky. In working with these categories, I determined that significant could subsume them all, but they in turn did not necessarily subsume significant. To give an example, if something is catastrophic, it makes sense to describe it as significant, but that something is significant does not necessarily say it must be catastrophic.

The remainder of the characterizations, I determined, could not be collapsed further. These were the characterizations of unpredictable, multi-stage, new, prevalent, historic, opportunistic, time-limited and long running. Clearly, there was judgement required, as I could have decided that if a pandemic was unpredictable and long running, for example, it was probably significant. However, I thought it might not necessarily be so. The only remaining word of that type was widespread, which I coded as significant because it had an intermediary to which I attached it: global, which I argue is significant.

In the end, I was left with three characterizations from my initial coding exercise, as shown at the bottom of the table: significant, manageable and inevitable. These were the characterizations I took forward for the analysis proper, which is presented in Chapter 6, in which I analyzed the plan thoroughly using the strategies outlined by Barker and Richardson.

5.3.2. Interpretation through Analysis of the Context

The second phase of the analysis was the interpretation—that is, an exploration of the context in which the plan is situated to determine how and why it might make sense as well as where there may be tensions. Two of the three parts of this interpretation (absences and assumptions, and media coverage) are covered in Chapter 7; a third, in Chapter 8, discusses the broader social discourses in which the plan is embedded. While these two chapters provide context to help interpret the meaning of the plan, it is also the case that the literature review at the beginning of the thesis, as
well as the chapter on epidemics in history, provide an interpretive backdrop. They add to the context in that they enable an understanding of how and why this kind of plan is possible at this time, and what sorts of knowledge and worldviews it presupposes (Abell & Myers, 2008).

5.3.2.1. Assumptions and Absences

The first part of the interpretation phase of my analysis involved using McKee’s (2005) exnomination strategy. This meant looking for assumptions and absences in the form of ideas, concepts and events that do not seem to need naming because they are so obvious. Adding to my overall analysis of assumptions and absences in initial readings of the plan, I devoted one reading of the plan solely to recording all the assumptions and absences page-by-page. The method I used to do this was to ask of each sentence “What do I need to understand or believe in order for this to make sense?” The full list is presented in Appendix B. I chose the first three assumptions to expand on in order to demonstrate some of the ramifications, as shown in Section 7.2 of the analysis.

5.3.2.2. Media Coverage

The second part of the interpretation was a review of media stories for the year during which the plan was released. I chose to investigate a print medium because I wanted to explore a completely different genre from government planning documents, but also the connections between them in the form of inter-textuality, the property a text has of being full of the same ideas, actors, events, arguments and topics that are referenced in other texts and a great part of why texts make sense (Wodak, 2008). Also of interest was that media reflect widely shared constructions of the social reality (Mautner, 2008) in which I was seeking to locate my analysis of the plan. Finally, when looking at language as active, Richardson (2007) notes, it is important to remember that some people’s speech is more powerful than others’, and that certain genres of communication have more potential effects on social life than other forms of communication. Journalism, he says, is one such powerful genre. Characteristics of the genre of mainstream media include hyperbole, neologism, use of expert quotes, personal stories, controversy, and lack of detail, to name only a few.
Since this was a contextual interpretation rather than a textual analysis per se, I did not conduct a full discourse analysis as I did on the plan, but rather explored elements of narrative and content along with some discursive strategies when the latter were necessary for comparison. My intent was to see how the plan made sense within the wider storyline of media coverage over the year in which the plan was produced, during which there would have presumably been a lot of public interest in pandemics and related planning.

Before focusing on specific articles, I tracked the number of articles in all Canadian newspapers that mentioned the word pandemic in either the title or abstract over a period of 10 years up until the end of 2008 to see how the volume changed over time. These articles came from the Canadian Newsstand Database, which contains the full text of articles in major Canadian and small market BC newspapers. (See Section 7.3 for a discussion on this topic.)

For my data source, I chose the Vancouver Sun, one of two provincial dailies and the most widely read newspaper in the province. The Vancouver Sun estimates it has 837,000 weekly adult readers across the province (an equal number of men and women) (Holmes, 2009). Readers are described as age 35 and over, educated, primarily urban, with higher than average household incomes (Holmes, 2009).

I used the same search strategy as described above: looking for the word pandemic in either the title or abstract in articles in any section of the newspaper over the period of 1 year (2005, 6 months before and 6 months after the British Columbia Pandemic Influenza Preparedness Plan release in August of that year). There were 71 related articles in the Vancouver Sun in 2005. I excluded duplicates (many articles had an early edition and final edition version) and several articles that were not relevant for my study (for example, one was a review of a novel called Pandemic, one was a review of a film about the AIDS epidemic, another used the term pandemic to refer to a non-health related topic). In the end, there were 54 articles, most of which referenced avian flu, the most likely suspected cause of a pandemic at that time. I created a table with each article’s headline and sub-heading (Appendix C). I then read all the articles in order of their publication to get a sense of the stories within themselves but also the storyline overall, a technique used by Blakely (2006) in her study on media coverage of epidemics.
in history. This “year at a glance” review is important to demonstrate the ebb and flow of ideas and negotiation and discussion over a period of time, as well as show how a phenomenon such as a pandemic influenza does not comprise a stable set of characteristics that remain static over time and that can be explained solely through a thematic analysis. The review is presented in Section 7.3.1.

After the chronological analysis, my next step was to read the articles one by one in detail. I created a second table (Appendix D) listing the type of story as identified by the paper (editorial, news, business, opinion, column, letter); noting the transitivity (who are the actors, including individuals and organizations, and what are their actions); showing how a pandemic is described or presented; and making analytical notes. My analysis of this exercise is presented in Section 7.3.2.

5.3.2.3. Interpretation and Discussion of Larger Discourses

Different approaches to discourse analysis emphasize different aspects of context—and diverge in their view on how much of the context needs to be taken into account. For my purposes, it was important to go beyond locating the analysis of the plan in the context of its absences and assumptions and of related media coverage. I wanted to relate the analysis and the first part of the interpretation (absences and assumptions, media coverage) to broader social discourses underpinning their production. To identify these discourses, I went back to the story of the plan (which was also the story of the media coverage) and viewed it as a problem-solution pattern (Georgakopoulou & Goutsos, 1997; Hoey, 2001). This pattern starts with a general description of the conditions in which the problem arises, moves to the problem, and then to the solution. In this case, we have a situation in contemporary western culture where good health is paramount, and where health problems are increasingly addressable—and largely seen to be the responsibility of the individual. Into this situation is introduced the problem: the risk of pandemic influenza. This problem poses a risk not only to the individual but also to the population. A large part of the solution is surveillance (individual, population and global) which will allow us to foresee, monitor and manage the problem. Key to the solution is expertise. From this storyline I came up with four larger, interrelated discourses—which also happen to be well-established literatures—that demonstrate both why the plan makes sense and also the tensions within the document and between it and its context. These discourses are *healthism,*
risk, expertise and surveillance. Drawing on and developing ideas in the literature related to these wider cultural discourses, I was able to demonstrate that the plan works because of its resonance with them, and to comment on what the plan and the discourses seem to say about the society in which they were produced (Richardson, 2007).

The next chapter presents my analysis of the British Columbia Pandemic Influenza Preparedness Plan.

6. Analysis

This chapter presents my discourse analysis of the British Columbia Pandemic Influenza Preparedness Plan. There is no intent as part of this analysis to comment on the pandemic flu plan from a healthcare communications or editing standpoint. Rather, my goal is to determine how and why the plan makes sense through an investigation of its construction of the pandemic flu as something that justifies a plan and the actions therein. As Gee (2005) says, to make sense to readers, the document must align with their ideas about a great number of concepts involved, in this case: health and illness, evidence, expertise, risk and responsibility, to name only a few. Importantly, the plan must also meet readers’ expectations about plans themselves—how they are structured, what they contain and so on. Rather than ask readers about whether the plan meets their expectations (which would mean adopting a cognitively oriented approach), I based my analysis, like other discourse analyses, on general principles of interpretation by which people normally make sense of what they read and hear (Brown & Yule, 1983). For that reason, although a full genre analysis is beyond the scope of this study, before discussing the construction of the pandemic influenza, my analysis starts with a description of the plan, including some notes on its genre and an overview of its introductory statement as setting the scene for readers.

My analysis focused on the 37-page British Columbia Pandemic Influenza Preparedness Plan, version 3, August 2005. This was the latest plan at the time of writing posted on the website of the BC Centre for Disease Control, the organization responsible for maintaining the document. The plan has no explicit authors, as I explain below.

The front cover of the plan displays the logos of the BC Ministry of Health (since split into two ministries: Health Services and Healthy Living and Sport) and the BC Centre for Disease Control, as well as the subtitle: “Guidelines for Planning, Response and Recovery, August 2005” and a tagline: “Hope for the Best, Prepare for the Worst.” The first page with narrative content (p. ii) features three paragraphs under the headings: “Why We Should Worry About Influenza” (in upper and lower case) and “A WORD FROM THE PROVINCIAL HEALTH OFFICER” (below the previous headline, but larger, and as demonstrated, in capital letters). The Provincial Health Officer’s photograph (head shot only), with his name, designations and title below it, is placed after the text. (In Section 6.1.2 I offer a more substantial review of this page.)

The following page of the plan includes a list of the names, professional titles and organizational affiliations of the 22-member British Columbia Influenza Advisory Committee responsible for developing the plan. The committee appears to represent a wide range of healthcare and emergency planning professions across many different organizations. I found it interesting that there are no professional designations attached to the names, even though some of the members are clearly physicians. There could be several reasons for this. One is the difficulty of establishing rules for what designations should be used, and ensuring their consistency. Another is the cluttered look that would result from adding a lot of letters and acronyms to the page. Alternatively, perhaps it was important to demonstrate teamwork and equality, which might be difficult if some people were obviously more credentialed than others.

A 2-page table of contents and 2-page list of tables and figures follow; the document proper begins with an unattributed foreword on Page 1. Page 2 is titled
“ADMINISTRATIVE AUTHORITY AND AMENDMENTS,” and describes who maintains the plan (the BC Centre for Disease Control) and where readers should send comments and recommendations for changes. There is also a short table with dates of revisions to the plan. Pages 3 and 4 comprise the formal introduction, which includes a section on planning assumptions. The purpose of the plan is highlighted in bold (nine pages into the document, including the front section) as follows: “The purpose of this Plan is to inform British Columbians about the global and local risks of an influenza pandemic, and to provide the information and guidelines needed to fulfil roles and responsibilities to minimize these risks” (p. 3).

The second chapter, “ABOUT THE PLAN,” explains that it is a work in progress (2.1), describes how it is organized (2.2.), and discusses its connection to other pandemic flu plans across the country (2.3). Two short sections on Pages 7 and 8 deal with roles and responsibilities and emergency financial assistance respectively,11 followed by three major chapters on what are referred to as the three phases of a pandemic: pre-pandemic, pandemic and post-pandemic. Each of these sections starts with an overview of the chapter to follow and a chart listing provincial and health authority responsibilities (in one column each) for six areas of planning: emergency response, vaccine, antivirals, clinical health services, surveillance and communication. The rest of each chapter provides detail on all six of these areas. Small text boxes at the end of each chapter and each major subsection repeat what seems to be a highlight from the preceding pages. A 15-page glossary and 11 annexes, each containing between one and seven appendices, comprise the 164 pages following the body of the plan.

As discussed in my methods chapter, the above description of the plan overall positions it firmly in a genre of government planning documents. In fitting with the discourse of a bureaucratic planning community, the British Columbia Pandemic Influenza Preparedness Plan follows generic rules in that it defines a problem, positions itself to deal with the problem, tells readers who has developed the plan, what

11 The emergency financial assistance section explains that during a pandemic, local government bodies such as municipalities and health authorities may be eligible for financial support to cover extraordinary costs. A link is provided where more information would be posted during a pandemic.
assumptions they have made in doing so, and when they last updated it. In what seem like claims to both credibility and accountability, this plan places itself within a larger context—provincial, national and international—of pandemic flu planning (by referring to and indicating awareness of other plans) and refers to partnerships with other organizations involved in pandemic planning. Also for accountability—or perhaps to avoid responsibility should things not work out as planned, so to speak—the plan refers to itself as a work in progress. In other words, what is currently written may not be the case in the future. More clearly defining the scope of responsibility for the plan is a statement in the foreword emphasizing that the plan is not regulatory and represents guidelines only, and that the contributors are not responsible for "use or adaptation issues arising from the use of these guidelines" (p. 1).

Like other business or operational plans, this one explains to its readers how it is structured, tells them what they are about to read before they read it, and sums up what they have read after they have done so. There is a well-established framework to each chapter, with as much information as possible presented in tables, extensive use of bullet points, and strict attention paid to the ordering and numbering of subheadings and subsections. A glossary defines terms that may be unfamiliar, and additional information, presumably deemed unnecessary or distracting in the body, is presented in annexes and appendices.

All of the above strategies are recognizable and commonsense ways to construct a plan, and therefore they work in its favour. It is widely accepted that plans, by their nature and true to the genre, collapse, generalize, reduce complexity, organize, make manageable, assign responsibility and contain measurable goals. From a discourse analytic perspective, however, they do much more. First, they define a problem such that only certain solutions make sense. Second, like all texts, although they address what seems like an existing audience, they actually construct that audience as they are written and as they circulate (Briggs, 2003; Southwell, 2000). Third, although plans simplify and reduce complexity for valid reasons, much can be lost in the boiling down of a complex issue. Fourth, as well as overtly assigning some responsibilities, a plan more subtly implies other, often moral, responsibilities. Finally, in establishing parameters for what it covers, a plan can effectively avoid responsibility on the part of its authors or authoring organization.
In summary, the *British Columbia Pandemic Influenza Preparedness Plan* is in many ways true to its genre. However, it departs from that genre in a way I believe important to the analysis, as explained below.

6.1.1. The BC Pandemic Influenza Preparedness Plan: Generic Anomalies

Most business and operational plans favour technical, factual and authoritative language, employing short sentences with active construction, few adjectives and limited use of explicit metaphor. The BC pandemic flu plan follows this convention to some extent (which provides for an interesting read, as I discuss later, in that a potential crisis is described with very little dramatic language). However, there is a tension evident throughout the plan between this technical, authoritative language and a discourse of partnership, empowerment and inclusiveness. The document is introduced as a pandemic preparedness plan for the province, and details actions to be taken by the provincial government and health authorities. As such, it has a tone of overall authority. The subtitle of the document, though, is: “Guidelines for Planning, Response and Recovery”—in other words the actual planning is reduced to merely one of three activities. In the section “A WORD FROM THE PROVINCIAL HEALTH OFFICER,” the document is referred to as a planning guide. Finally, in the foreword, the following appears:

> These guidelines are intended to provide a wide range of information related to pandemic influenza preparedness and response. Users should be aware that this document is not regulatory and represents guidelines only. It should not replace appropriate consultation with healthcare and other professionals. The contributors are not responsible for use or adaptation issues arising from the use of these guidelines. Adaptation of this framework is the sole responsibility of the users. (p. 1)

In the short space above, the document is referred to as a plan, guidelines, a document and a framework. Whereas a document could be a plan, guidelines or a framework, and guidelines and a framework could conceivably be the same thing, it is difficult to consider a plan (which seems definitive) as equivalent to guidelines or a framework (both of which sound much less formal and open to interpretation). The modality of phrases such as “intended to provide” in the above quote (instead of simply “provides”) and the avoiding
of responsibility should anything go wrong ("The contributors are not responsible…")
seem in conflict with the directive, command-and-control language that appears in other
parts of the document. For example, “All communications plans must be compatible with
[BC Emergency Response Management System], which outlines a common
organizational structure and control method and enhances communication between
agencies responding to an emergency or disaster” (p. 18).

Similar tension occurs in the mix of the use of the modal verb should—which
could imply a guideline (not to mention a moral obligation, as I discuss later)—and will,
which leaves no question about who must do what. For example, we read, “An overall
assessment should be undertaken” (p. 30) but “Upon notification each health authority
will activate its emergency clinical health services plan…” (p. 25). Tables in all six areas
of the three chapters are titled “Provincial Responsibilities” and “Health Authority
Responsibilities,” but elsewhere, we find “It is recommended that the provincial
guidelines be followed as closely as possible to ensure consistency among health
authorities” (p.6). The lack of the use of names and pronouns in some places seems to
indicate the authors’ unwillingness to say who should do what. For example, in the
statement about the purpose of the plan, we read that it is “to provide the information
and guidelines needed to fulfil roles and responsibilities” (p. 3) but the questions “needed
by whom?” and “roles and responsibilities of whom?” are not answered.

This tension is perhaps not surprising given a situation where the government
and the lead health agency have authority over only some aspects of pandemic flu
planning and implementation. Since successful implementation of the plan is seen to rely
on the participation of others, and this participation cannot be mandated, the use of the
partnership-empowerment-inclusiveness language is perhaps an intentional strategy to
get readers onside. The deflecting-of-responsibility language, which I have also
positioned in opposition to the command-and-control discourse, is a regular feature of
the planning genre. In this case, it works to provide the committee, the BC Centre for
Disease Control and the BC government with a great deal of protection should those
readers not play their part.

On the topic of readers, perhaps here is another clue to the discursive tension in
the document: its intended readers are not just government, health sector, community

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agency and emergency services workers, but all British Columbians. With such a wide-rangi ng audience, and that audience’s varying levels of understanding, awareness and knowledge of, concern for and interest in pandemic influenza, the document is actually much more than a plan/guide/framework. It must also function as an educational piece and even a promotional or marketing piece. Although the multi-functional nature of a document such as this is a characteristic of the government planning genre, as a text, its goals are difficult to reach. To better understand the intentions of the document, I looked to the first page, where readers find out what they are about to read and why. I review the page in the next section before presenting a full analysis of the plan.

6.1.2. Introducing the British Columbia Pandemic Influenza Preparedness Plan

The first page of the British Columbia Pandemic Influenza Preparedness Plan is an opening statement (I hesitate to call it a foreword or an introduction, as those come later in the plan) by BC’s Provincial Health Officer (see Figure 1). I saw this as an important piece of the plan, since as Hoey (2001) explains, a text gains its meaning from the reader’s interaction with it, and, excepting the cover, this is the beginning of that interaction. While readers may not read a plan from start to finish, they may look to the beginning sections of the document for a sense of its purpose.

The page is distinct from the rest of the plan in both style (it is the only piece where an identified person speaks to the reader) and physical distance (a committee list, table of contents and list of tables and figures separate it from the plan proper). However, the bar across the top of the page (with the title “BC Pandemic Influenza Preparedness Plan”) and the footer (“Version 3 August 2005”) link it to the full document. The heading “Why We Should Worry About Influenza” is a teaser: there is clearly something to worry about, but we do not know what yet. Presumably we are about to be told, indicated by the next heading: “A WORD FROM THE PROVINCIAL HEALTH OFFICER.” It seems in some ways an informal invitation (“Can I have a word?”) but in others more formal: this is not a two-way conversation, but rather a word “from” someone who is clearly an expert, given his title and affiliations and the letters after his name. He seems accessible, as demonstrated by the photo of a not-quite-smiling but definitely open face, but we do not know his first name (initials only), and the first person
Influenza pandemics represent global emergencies with catastrophic impact. During a pandemic, worldwide epidemics of influenza due to a new viral subtype occur simultaneously and with high death rates. Pandemics have been documented every ten to forty years dating back to the 1600s, and likely long before that. There were three during the last century alone. The worst was 1918 to 1919 when over 20 million people died worldwide. The last pandemic occurred in 1968. Experts agree – we are overdue for another.

Progress in medical science has enabled the medical community to identify, characterize and produce vaccines for new influenza subtypes, but the ease and speed with which people now move around the world enables rapid global dispersion of the virus. Between the onset of a pandemic and the production and dissemination of an effective vaccine lies a period of months during which medical and social resources will be stretched to the limit.

When a pandemic occurs – and it will – no time can be lost in responding. This means that we must work now to develop efficient and effective interventions. This revised planning guide is intended to help all of us anticipate, prepare and respond to the next influenza pandemic and to other new and emerging diseases. Every influenza season should be viewed as an opportunity to refine this planning.

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Figure 1. Provincial Health Officer’s Introduction to the British Columbia Pandemic Influenza Preparedness Plan

Why We Should Worry About Influenza
The Provincial Health Officer takes little time telling us why we should be worried about influenza, covering the key reasons in three short paragraphs, which, with the addition of his photograph, form a neat square in the middle of the page. The first paragraph sets up why we should worry by offering us the evidence as follows.

- Influenza pandemics represent global emergencies;
- they have catastrophic impact;
- they involve worldwide epidemics occurring simultaneously;
- they are due to a new viral subtype;
- they happen every 10 to 40 years and have done so since the 1600s—and probably before that although we did not have the capacity to record them;
- there has not been one for 50 years;
- experts agree we are overdue for another.

Given the evidence is fairly straightforward and commonsense (it has happened for hundreds of years with some regularity, therefore it will happen again), it seems that readers are supposed to come to the same conclusion as the experts who sum up this paragraph: another pandemic is imminent.

The next paragraph leads with the heroic figure of progress (in medical science), which in this case is thwarted—ironically also by progress (the ease and speed with which people now travel around the world). The latter type of progress has made it hard for the former type to enable vaccine production quickly enough to stop a pandemic. Although the problem seems to be positioned as progress, it is only very briefly so, and much downplayed at the end of the sentence. Therefore, the alternative positioning of the problem as “people travel too easily and too quickly, which allows viruses to disperse” and the solution as “therefore we need to stop travelling so much” do not arise. The blame is back on the virus, which despite our efforts and expertise, travels quickly. The solution is preparation for when it arrives.

The third paragraph, reminding us again that a pandemic flu is imminent, presents us with the solution: “we must work [as a group] now to develop efficient and effective interventions.” Presumably we will be told what these are in the remainder of the document, and further, it will be explained to us why “every influenza season should be viewed as an opportunity to refine this planning” and by whom.
The Provincial Health Officer’s statement uses what Hoey (2001) calls a culturally popular problem-resolution pattern. The problem is pandemic influenza, and since there is no one to blame (except progress, but in an offhand way that demands no actions), the solution is all of us working together to prepare for it and manage it when it gets here. I found it useful to review this statement as a set-up to the plan, but as Hoey (2001) cautions, it is never the case that an entire text is “enshrined in its beginning” (p. 43). While there was something to be learned about intended audiences and purposes from this piece, then, I moved on to the full plan (including this introductory statement), for the discourse analysis proper, as described in the following sections.

6.2. Discursive Construction of the Pandemic Flu

Following my initial content analysis described in Chapter 5, I analyzed for what I determined were three prominent characteristics: the inevitability, the significance and the manageability of pandemic influenza. The discourse analysis focused on determining how these characteristics were worked up in various ways across all 37 pages of the plan, as well as noting instances where they were not. To avoid simply choosing examples that supported my claims (a common failing of many discourse analyses, according to Antaki et al., 2003), I identified outliers and contradictions as well.

6.2.1. A Pandemic Flu Is Inevitable

In the British Columbia Pandemic Influenza Preparedness Plan, the outbreak of a pandemic flu is presented as inevitable. While there are many factors that can only be estimated—for instance its severity, how long it will last and when it will happen—one of the givens is that it will occur, as I show below.

It is more than simply the existence of the plan itself, and all the work on its development and maintenance, that “makes” a pandemic flu inevitable. Many a contingency plan is developed “just in case” something happens. Rather, it is the discursive strategies used throughout the document that are meant to leave the reader in no doubt it will happen. Some of this discourse is in the form of direct references to its inevitability. Other references are subtler.
Among the overt references is this sentence in the Provincial Health Officer’s introductory statement: “When a pandemic occurs—and it will—no time can be lost in responding.” The inevitability is literally set off in dashes, contained in a quote by the province’s lead medical health officer, who presumably should know about such things. Another such overt reference is: “Although the pandemic itself cannot be prevented, effective planning now can mitigate its impact” (p. 3).

The inevitability of a pandemic is also shown by the unambiguous language used to describe what will happen. For example: “Outbreaks will occur simultaneously across the province, preventing reallocation of human and other resources from one jurisdiction to another.” Similarly: “Because of its immense scope and broad, prolonged impact, an influenza pandemic will result in additional costs in a number of different areas” (p. 8). Another grammatical strategy signifying inevitability occurs in references to the pandemic rather than a pandemic, as in these two bullet points about the committee’s mandate, the second of which implies that more than one pandemic is inevitable:

- Providing advice related to epidemiological and related public health actions during the pandemic.
- Preparing a final report when the pandemic is over, including an assessment of the measures taken and recommendations for the future.

Similar references are found in discussions about a national antivirals initiative, whose objectives include monitoring drug resistance during the pandemic, and facilitating planning to ensure the distribution of available antiviral drugs to appropriate groups of people during the pandemic. These references occur throughout the tables, for example in the province’s responsibilities to “Use the surveillance network to determine when influenza arrives in the province, to determine the extent and distribution of the illness, and to confirm when each outbreak is over” (p. 17), and to “Alert the public, the media and healthcare officials when the pandemic is declared” (p. 21).

Another discursive strategy for making a pandemic inevitable is establishing a connection between the past and the future. “Pandemics have been documented every 10 to 40 years dating back to the 1600s, and likely long before that. There were three during the last century alone” (p. ii). The citation suggests it is common sense that there will be another pandemic, as there have been many in the past, and they have been documented, in other words verified and made factual. A similar link with the past is
made in one of the planning assumptions: “Based on the last two pandemics, it is estimated that the next pandemic virus will arrive in Canada within three months after it emerges in another part of the world” (p. 4). “It is estimated” is inserted before “will arrive,” unlike the references above, which were more direct. Still, the modality here is about when it will arrive, not if it will arrive.

I found an interesting mix of references to what is known and what is not known, which to me emphasizes what we do know: that a pandemic is inevitable.

Some time in the future, British Columbia (BC) will face an influenza pandemic—a global epidemic caused by a strain of influenza virus that spreads rapidly and causes high rates of illness and death. No one can predict exactly when this will happen but scientists say it may be imminent. (p. 3)

There is some hedging in “Some time in the future,” “No one can predict” and “May be imminent,” but there is no doubt that it will happen. Another example: “Most experts believe we will have between one and six months between the time an influenza pandemic strain is first identified globally and the time it breaks out in BC” (p. 3). There is hedging here too. We have experts, but only most of them. They believe, rather than declare. But the pandemic will definitely be identified globally and break out in BC—that is not in question. A final example of the do-know-do-not-know strategy occurs further on the page:

By working closely with groups around the world the [World Health Organization] hopes to provide early warning of the arrival of pandemic influenza activity, which will occur not just once, but in a series of waves that may strike different parts of the province at different times and with varying levels of intensity. (p. 3)

Here we find the modal may strike different parts of the province (in other words we do not know that for sure) which seems to strengthen what we do know: that the pandemic flu activity will occur, and not just once, but in a series of waves.

A strategy with the same effect as the above examples is the use of the word estimates. When introducing the Page 3 bulleted list as below, the concept of an estimate applies to the entire list, and allows for concrete, factual wording in what follows rather than further references to modals such as could or may.

According to estimates for British Columbia:
• more than three million people will be infected with the virus.
• as many as 1.8 million people will become clinically ill.
• up to 610,000 people will visit a healthcare provider.
• up to 18,500 people will need hospital care.
• as many as 6,800 people will die from influenza and related complications.

Experts and their knowledge play a central role in the plan, contributing to the construction of a pandemic as inevitable. The plan itself was developed and continues to be updated by experts, who report to another expert, the Provincial Health Officer. This committee of experts, with its wide range of titles and organizational affiliations signifying not only individual but collective, comprehensive expertise, assures readers that even more experts can be relied on if necessary.

In its dual role as a working group and ongoing advisory committee, the committee also has access to expertise as needed, from representatives of many other stakeholder organizations and specialists in areas such as clinical health services, medical ethics, media and communications. (p. 1)

Expert knowledge is referred to literally in many other areas, for example: “Experts agree—we are overdue for another” (p. ii). We do not know who these experts are, but the fact that they agree a pandemic is inevitable is meant to speak volumes (most readers will understand that experts often do not agree). The setting off of the words “Experts agree” with a dash before the phrase explaining what they agree on gives the statement more impact than if it had been written “Experts agree that we are overdue for another.” These direct references to expertise, and in many cases the grammatical construction of the sentences about experts, disincline a reader to question the inevitability of a pandemic. Where there are less bold claims made about experts—for example several pages later where “most experts believe”—the topic is not whether a pandemic will occur. In this case, it is about the timing of its arrival in the province. The discourse of expertise is often employed in the what-we-know, what-we-do-not-know strategy discussed above. For example, no one (presumably not even experts) can predict exactly when a pandemic will happen, but scientists (who can probably take the best guess) say it may be imminent. I write more about the discourse of expertise in relation to knowledge and lack of knowledge in the next section.
Finally, giving agency to the pandemic itself confers inevitability. The pandemic “will arrive” and “cannot be prevented,” rather than we will experience a pandemic and we cannot prevent it. However as I discuss in the section on significance, the agency of the flu is not consistent throughout the plan.

In summary, nothing in the *British Columbia Pandemic Influenza Preparedness Plan* suggests a pandemic flu might not occur. Perhaps developing a plan as if whatever you are planning for will happen is a good—and an obvious—thing to do. However, it is important to acknowledge that considering something inevitable leads to certain ways of thinking about and acting on it, and precludes others. For example, if something is inevitable, it seems to follow that it is no one’s fault and that nothing can be done but plan for it. When inevitability is paired with significance, which I discuss below, the ramifications increase.

### 6.2.2. A Pandemic Flu Is Significant

The introduction to the *British Columbia Pandemic Influenza Preparedness Plan* defines an influenza pandemic as “a global epidemic caused by a strain of influenza virus that spreads rapidly and causes high rates of illness and death” (p. 3). Despite this straightforward, factual description, the pandemic flu, unlike any number of other health problems we could name, has not actually been experienced by most British Columbians. Pandemic flu is probably not as meaningful as and perhaps does not evoke as much emotion or fear as something like cancer—which arguably most people have experienced, if only indirectly. Therefore, a lot of work has to be done in the plan to position a pandemic flu as a problem that British Columbians, who are defined as the audience for the plan, need to care about, pay attention to and take action on. This work has to be subtle. It needs to raise concern, but not so much concern that people will think nothing can be done—or worse, worry overly or panic (Witte, 1994).

The very existence of the plan accomplishes some of this work. A pandemic flu must be significant to warrant a 201-page document (15 pages of which comprise a glossary of terms people need to understand in order to manage an outbreak)—only one of apparently hundreds of other pandemic flu plans around the world reflecting the work of a global network of experts involved in ongoing pandemic influenza surveillance.
The significance is also established through the discursive construction of a pandemic. Whereas many constructions of disease rely to a great extent on figures of speech, though, I found very few of these in the plan. Metaphors and adjectives, often related to war and violence, predominate in media coverage of infectious diseases. There are almost no metaphors and adjectives in the pandemic flu plan, and when they are present, they are not strong. In fact, some of the metaphors are so well used in medicine as to be almost invisible (for example, a peak in illness, building immunity, or monitoring vaccine safety). Here are all the metaphors I could find in the plan. Apart from the first four, these relate to planning, not to the significance of the pandemic.

- Medical and social resources will be stretched to the limit.
- No time can be lost in responding.
- [The pandemic] will occur not just once, but in a series of waves that may strike different parts of the province at different times. (The wave reference is made four more times in the plan).
- The first peak in mortality will be 1 month after the peak in illness.
- The main body of this plan is arranged in three sections.
- The first chart in each section is a high-level summary or "snapshot" of roles and responsibilities (Snapshot is used four times).
- The federal government is a key player (The word key is used 34 times in the plan).
- Everyone has a role to play in planning for an influenza pandemic (This is mentioned twice).
- This Plan is the focal point for provincial pandemic preparedness.
- The best way to start is to stay informed and take steps…
- These existing tools… including a framework for command, control and management procedures. (Command-and-control is used three times in the document).
- Develop table-top and mock-up training scenarios (This is used three times).
- Protect target groups (This is used four times).
- Communication is the cornerstone of effective emergency management.

Attention-grabbing adjectives, also much discussed in the literature on media and infectious disease, play a minor role in the plan. Examples of adjectives, only the last of which I would consider provocative, are: global (emergencies), high (death rates), new (strain) and catastrophic (impact). Adjectives that apply to the management of a
pandemic rather than the pandemic itself include secure (storage), safe (use), acceptable (standards), proper (use), effective (infrastructure) and timely (vaccine delivery).

The language that gives a pandemic significance, then, is less single words and figures of speech than fuller explanations, such as:

Pandemics pose unique problems which distinguish them from other types of emergencies and which will require planners to adapt existing emergency response plans to address these issues. (p. 11)

It is important to remember, however, that priority groups could change with the identification and/or arrival of the pandemic strain, based on the epidemiology of the influenza strain—something that cannot be predicted in advance (p. 13)

These types of explanations, which serve almost to educate, remind the reader (quite literally: “It is important to remember”) that a pandemic is significant, unlike any other emergency, and not to be confused with the annual flu.

With regard to agency of the pandemic flu, as discussed in the previous section, it is uneven. Sometimes it is the subject of the sentence: it will occur, it cannot be prevented, it will arrive, it will be a global event, and it will result in additional costs. Its agency seems to be limited, however, to its inevitability. In other circumstances, the pandemic is not the active subject of the sentence, for example, things will happen because of or during a pandemic. People will fall ill and be unable to work due to a pandemic.

Significance is further indicated by a discursive strategy that gives the pandemic shape, making it seem real even though it is not here and we do not know what it will look like when it does arrive. For example, it has three phases. It usually has two or more waves. It can be declared here and gone by the Provincial Health Officer. As I show in the next section, this shape-giving strategy also allows the management of it.

Statistics contribute to the significance of the pandemic, but in an unusual way: through their minimization. For example although the plan cites the well-known almost overwhelming statistic of 20 million deaths during the 1918 pandemic, its own estimates are based: “not [on] a worst-case scenario, but on the impact of the 1957 and 1968 pandemics, which were relatively mild compared with the 1918 pandemic” (p.3). The
numbers that follow—three million people infected in BC; 1.8 million becoming clinically
ill; 610,000 visiting a healthcare provider; 18,500 needing hospital care; 6,800 deaths—
gain much of their significance from the reader's knowledge that these may have been
underestimated. To give narrative and rhetorical weight to the statistics, though, is the
statement (another example of a scenario construction) following those numbers, that
"Clearly, such a widespread outbreak of illness has enormous implications for every
sector of society, from front-line healthcare workers to business and industry; from social
support agencies to funeral service providers" (p. 3). Use of the word "clearly"—the only
example I found in the entire plan of what in rhetorical terms is known as boosting—
sums things up as if the reader might not do that on his or her own. If it is not obvious by
now, the message seems to be, there must be something wrong (presumably with the
reader, who does not understand).

The implication of a moral responsibility is another strategy giving the pandemic
flu significance. The Provincial Health Officer sets up this moral responsibility overtly in
the title of his column at the beginning of the plan: "Why We Should Worry About
Influenza." In a more passive sentence on the same page, we read: "Every influenza
season should be viewed as an opportunity to refine this planning." We also read that
"Everyone has a role to play in planning for an influenza pandemic" (p. 7) and: "All British
Columbians can—and should—get involved in pandemic planning and preparation"
(p. 7).

Expert knowledge allows the construction of a pandemic-to-be as significant in
ways that might not be obvious without a discourse analysis. For example, experts tell
us that a pandemic flu simply has three phases and that planning for it occurs in six
phases, rather than explaining, perhaps, that for the purposes of this plan, they suggest
a pandemic occurs in three phases and that planning takes place in six phases. Experts'
lack of knowledge also constructs a pandemic as significant since there is so much even
they do not know about it: exactly when it will occur, how to predict the severity, the
epidemiology of the virus before it occurs, exactly what will happen, and what kinds of
information will need to be exchanged. As I show in the next section, however, despite
the seeming significance of these gaps in knowledge, the reader feels somewhat
comforted by the realization that these things are unknown because they cannot be
known yet, even by experts.
The discourse relating to significance discussed so far has come from the narrative sections of the plan. In addition, though, the three main chapters on the pre-pandemic, pandemic and post-pandemic phases, consisting mostly of tables, contribute to the construction of a pandemic as significant. Although they are free of figures of speech and statistics—two well-known grammatical strategies for generating attention—the tables, with their bulleted lists of action items, each beginning with an imperative (establish, develop, operate, coordinate, identify), demonstrate how significant this event must be if it takes this much planning and execution to manage.

In summary, nothing in the *British Columbia Pandemic Influenza Preparedness Plan* suggests a pandemic flu is anything but significant. As with inevitability, it is important to acknowledge that considering something significant has ramifications. One example, on which I expand in my discussion section, is that if a pandemic flu is inevitable and significant, it follows that we should all remain on guard, constantly aware of the risk. Although the construction of a pandemic as manageable is presumably meant to alleviate any resulting anxiety, the promise is not quite realized.

### 6.2.3. A Pandemic Flu Is Manageable

The third prominent characterization of the pandemic flu—perhaps to dissuade people from throwing up their hands in despair over its inevitability and significance—is its manageability, despite the threat it presents. This characterization may seem too obvious to explore: one assumes the purpose of the plan is to describe the management of a pandemic influenza outbreak. The point of discourse analysis, though, is to explore such seemingly obvious assumptions, asking in this case how is a pandemic flu made to seem manageable, and what might be the ramifications of that construction.

As with the first two characterizations, the plan itself, and all the work that has been done to develop it and goes into to updating it, reflects its manageability: “Although the pandemic itself cannot be prevented, effective planning now can mitigate its impact” (BC Ministry of Health & BC Centre for Disease Control, 2005, p. 3). Manageability is also demonstrated through the physical organization of the document (a tight, consistent format), which in turn gives shape to the pandemic flu (making it more tangible, thus manageable). Readers are introduced to the topic personally by the Provincial Health
Officer (who is in charge of managing the planning operation), given some details about the plan and a pandemic in the short sections following, and then presented with three major chapters reflecting each of the three pandemic phases. These chapters follow a common outline, with the same six topic areas, a table for each topic area with the headings “Provincial Responsibilities” and “Health Authority Responsibilities,” and bulleted action steps (with minimal wording) under each. One is left with the impression, looking at the document, that the solution to this potentially chaotic situation is simplicity: clean lines of authority and clarity of thought and deed.

As with the characteristics of *inevitability* and *significance*, experts and their knowledge are used to construct the manageability of a pandemic. The Provincial Health Officer is profiled as leading the effort, and he is given authority to declare a pandemic here and gone. The committee members ostensibly represent the full range of expertise needed to manage pandemic preparedness and response. As mentioned, however, if it turns out these experts need more knowledge, they have access to other experts. They are also connected to a network of experts around the world who together “monitor influenza activity at all times” (p. 3). I made a list of what experts know about a pandemic situation as reflected in the plan that makes it manageable. The list is too long to replicate here, but it includes:

- What a pandemic is, how it strikes and the type of damage it does;
- the history of past pandemics;
- that we are overdue for another one;
- how to produce vaccines;
- how to estimate the impact of a pandemic flu;
- how to develop a plan, including who should do what in its execution;
- there are three pandemic phases (and what will happen during them) and six components of planning (and what needs to happen in each);
- the importance of consistency with other pandemic plans;
- immunization is the single most effective way to reduce the impact;
- a clear chain of command is essential;
- the public needs to be informed;
- it can affect different groups of people depending on its strain.
All this knowledge contributes to the sense of a pandemic flu as being manageable. As discussed earlier, however, what they do not know also contributes to its manageability. Whenever something is not known, it is because it is not possible to know at this point. What is not known, then, is actually positioned as what we do not know yet. More importantly, we know what we do not know yet (in this sense, it is almost as if we do know everything we need to know). Here are all of the things in the 37 pages of the plan that we do not know, with my notes in parentheses about why this does not matter, and why, in effect, this makes a pandemic flu manageable. We do not know:

- when it will happen  
  (No one knows this, but scientists say it may be imminent, and our participation in global surveillance systems means we will know as soon as it is possible to know.);

- how to predict the severity  
  (No one knows this, but we know how to estimate it.);

- the epidemiology of the virus  
  (It is not possible to know that until it arrives, although as soon as we do know, medical progress has ensured that we can develop a specific vaccine.);

- what exactly will happen  
  (It is impossible to know exactly what will happen, therefore the strategy is to be prepared to adapt the plan.);

- in advance, what kinds of information will need to be exchanged  
  (However, we will know as soon as we need to, and will be ready.).

Beyond the physical organization of the document and the discourse of expertise, specific language use constructs a pandemic flu as manageable. Distinct from inevitability, there are no overt references to the pandemic flu's being manageable. However the word “manage” and its variants occur frequently: as a verb (“Clear command and control structures are essential in managing any emergency,” p. 15), as an adjective (“BC’s official provincial emergency response management strategy…,” p. 22), as a noun (“Infection Control guidelines for pandemic influenza management,” p. v), and in the titles of people and systems (“Manager, Communicable Disease Prevention—Immunization,” p. iii; “The province of British Columbia has an established Emergency Response Management System, designed to ensure a coordinated, organized response to all emergencies and disasters,” p. 11).
Words normally associated with technical management are found on every page of the plan, including the Provincial Health Officer’s statement, which refers to efficient and effective interventions and the identification, characterization and production of vaccines. Other examples are “training”, “operational procedures”, “implementation protocol”, “provincial surveillance infrastructure”, “strategy” and “deployment”. The manageability aspect of the pandemic flu is perhaps where adjectives have their greatest impact, unlike in other discourse analyses of emerging infectious diseases, where description of the disease itself—not the response to it—involves the use of descriptive modifiers. In the British Columbia Pandemic Influenza Preparedness Plan, frequent use of adjectives such as “timely”, “clear”, “effective”, “efficient” and “central” demonstrate the qualities needed in a response to a pandemic flu outbreak. Modality in this case is used not to hedge or create distance, but to demonstrate clarity about the management response (for example “Planning efforts need to focus on three things,” p. 9, rather than “Planning efforts could focus on three things”). Every bullet point in the tables—and many outside the tables—begins with an imperative, suggesting that without doubt, these are the steps, individual and collective, to be taken to manage a pandemic. Examples:

- estimate the provincial impacts of pandemic influenza (p. 11);
- revise plans to respond to shortcomings identified in training scenarios (p. 12);
- define priority groups based on national guidelines (p. 13);
- determine documentation requirements for recall and record keeping (p. 14).

The directive nature of these bullet points is not consistent, though—probably because if it were, it would conflict with another very strong discursive strategy used to construct manageability of a pandemic flu outbreak: the interweaving of the theme of collaboration and partnership throughout the plan. On the first page, there is a reference to “the medical community.” The committee list on the next page features people across a wide range of organizations working together, with access to others with whom they can collaborate if needed. The foreword again refers to the many agencies represented in this endeavour, and the introduction stresses the link with the World Health Organization and “groups around the world” (p. 3). The plan is linked to other plans in many countries, and its success seems dependent on “[Working] closely with a variety of international
and national organizations to monitor influenza activity at all times” (p. 3). Actions outlined in the bullet points that reflect this collegiality include:

- participate in surveillance re: vaccine and antiviral effectiveness and safety (p. 10);
- coordinate planning with other government agencies—such as the Ministry of Children and Family Development, Ministry of Education and the Ministry of the Attorney General—to ensure vaccine delivery for clients in residential care (p. 14);
- participate in surveillance re: vaccine and antiviral effectiveness and safety (p. 17);
- liaise with health authorities and the Provincial Emergency Program to coordinate the dissemination of information to the public and media at the provincial level (p. 27).

The management-by-partnership-and-collaboration theme extends beyond expert groups, referring at times—although not always overtly—to the public. The purpose of the plan is stated as “to inform British Columbians” (p. 3). At the beginning of the document, the Provincial Health Officer’s statement brings us all onto the same page quite literally by introducing why “we” should worry about the influenza (because “we” are overdue for another), and stressing that “we” must work now to develop efficient and effective interventions, aided of course by the plan, which is intended to help “all of us.” Presumably because we will face this problem together:

everyone has a role to play in planning for an influenza pandemic. In order to optimize the province’s readiness, all British Columbians should be involved in the planning process no matter where they live or what they do for a living. (p. 7)

Two tensions arise in the document related to this discourse of collaboration and partnership. The first is the conflict between this type of language and the command and control nature of some parts of the plan, which is an equally strong discursive strategy for constructing manageability. The second is related to the assumption that British Columbians will see themselves in this plan. Below I discuss each of these in turn.

6.2.3.1. Collaboration vs. Command and Control

This tension is perhaps most obvious in sentences such as: “We must work now to develop efficient and effective interventions” (p ii), with its reference to everyone all together with the auxiliary verb must, whose modality indicates a moral obligation as well
as a direct order. Another example is “Monitoring vaccine safety and effectiveness will be a coordinated effort” (p. 13), leaving the impression that there is no choice here: everyone will work together. An example, using a much more passive sentence construction but still indicating a moral obligation to work together, is: “Every influenza season should be viewed as an opportunity to refine this planning” (p. ii). Other examples show the conflict at a full document level rather than within a single sentence; for example compare the partnership and collaboration language I cite above with the following literal reference to authority, in bold text: “under provincial legislation, the Ministry of Health Services (MOHS), led by the Provincial Health Officer (PHO), has the lead authority in all three phases of this plan” (p. 7).

Readers are told: “The Provincial Health Officer (PHO) will declare when it is time to activate plans for the pandemic phase” (p. 20). Other references to authority are implicit, for example in the tables dealing with roles and responsibilities of government and health authorities, which presumably the authors of the plan have the right to describe.

The clash between the command and control and the partnership and collaboration discourses is not surprising. I think of the term we in the partnership discourse as referring to several communities, some of which overlap. There is the national and international pandemic flu community (all those involved in surveillance, monitoring and preparation), a subset of which is the BC pandemic flu community. This BC pandemic flu community is a subset of the community of “all British Columbians,” which in turn has another subset of members of what I have called the pandemic response community, including healthcare professionals, community service workers, police officers and so on. This pandemic response community is not fully subsumed by the BC pandemic flu community, however, because they have other primary responsibilities (healthcare, police work, fire prevention and so on). As I mentioned earlier, the plan attempts to be relevant to, to motivate, and to answer to a wide variety of individuals and groups. Since its authority extends only so far, though, it employs what seems like a commonsense discursive strategy of referencing and appealing to collective action. In any case, the analysis is not meant to suggest that collaboration and partnerships are unimportant or detrimental in planning and managing a pandemic flu outbreak, or that authority is unnecessary—or even that authority and partnership cannot
or should not coexist. Rather, the analysis is meant to interrogate the text to see how and why it works as it does, and what are some of its underlying assumptions.

6.2.3.2. British Columbians in the Pandemic Flu Plan

The second tension arising in relation to the partnership and collaboration discourse relates to one of these underlying assumptions: that British Columbians will see themselves reflected in this document. However while we (the public) are positioned as (a) facing an imminent pandemic, and (b) able to respond (in fact morally obligated to respond) as individuals and collectively, on closer inspection the public does not play a meaningful role in the plan at all. It is clear that the public is included in many of the “we” references. In most of the active sentences where the public has agency, though, these actions relate only to moral responsibility, referenced sometimes with subtlety and other times explicitly. Examples of the more subtle references are that: “Everyone has a role to play in planning for an influenza pandemic” (p. 7), and even the fact that we “should” worry about influenza (p. ii). Less subtle, with the moral responsibility set off in dashes, is “all British Columbians can—and should—get involved in pandemic planning and preparation” (p. 7).

Beyond worrying and “being involved” in a general sense, the only other active construction of the public in the entire plan relates (although only in a vague way) to how we should be involved “the best way to start is to stay informed and take steps—like annual immunization—to protect against influenza” (p. 7).

Apart from these responsibilities (the latter of which—getting immunized annually to protect against influenza—is somewhat confusing given the care taken at one point to distinguish a pandemic flu from the annual flu), the British Columbian keen to get involved in provincial pandemic influenza planning will not find much to do here. Quite the opposite is true: the public has things done to them. There is no public representative on the committee. In fact, one of the responsibilities of the committee is to assess the impact of the pandemic on the public. We are on the receiving end of many things, including information, interventions and effects of the flu. Some of these are active constructions.

- We will face a pandemic;
• we will be infected;
• we will become clinically ill;
• we will die;
• we will need hospital care and/or visit a healthcare provider;
• we will probably not be able to work for some time;
• some of us may refuse or be unable to have a vaccine or antiviral;
• we may need help dealing with grief and loss.

Even though the grammatical construction above is active, though, the effect is still one of events happening to us. Many other sentences position the public as the receivers of the action.

• The purpose of the plan is to inform us;
• strategies will be developed to engage us;
• our awareness will be increased;
• messages will be developed for us;
• education strategies will be developed for us;
• appropriate, timely and accurate information will be developed and given to us;
• the authorities will alert us when the pandemic is here and when it is gone;
• officials will make sure we know about provincial response plans, and respond to our concerns.

The reason for this tension—including the public as an audience for the plan and reiterating the importance of their being involved, but on the other hand not engaging them in any way—is not completely clear. It may be that the strategy for the document was not thought through. In any case, my intention here is not to comment on the plan from a strategic communications perspective, but to demonstrate that the way a plan discursively constructs its topic may have important ramifications. In this case, we have an inevitable, significant event made manageable such that money, time and attention are spent in certain ways, people are expected to take on certain roles, and others may be blamed for not following through with certain responsibilities. Unfortunately, sometimes those responsibilities are only implied, offering little guidance.
6.3. Summary

The foregoing chapter was an exploration of how the British Columbia Pandemic Influenza Preparedness Plan works as a plan on this topic. By how it works, I do not mean how it operates, but rather how it successfully accomplishes “being a pandemic flu plan.” As the analysis shows, the plan works because it characterizes the pandemic flu as inevitable, significant and manageable. Some of the discursive strategies contributing to these characterizations relate to the genre of planning itself. Like other plans, this one collapses and generalizes. By employing technical language and using design strategies such as bullet points, an assumption section and tables, it conveys an aura of manageability and control. The very limited use of metaphors and adjectives, and the modest nature of those that are used, also provide the reader with a sense that things are calm, manageable and controllable—as long as everyone plays his or her part.

Other strategies characterizing a pandemic flu as inevitable, significant and manageable are more closely linked to larger discourses of health and illness. Pandemic influenza is made inevitable, significant and manageable through reference to public health experts, their expert knowledge and—as demonstrated—even their lack of knowledge (because they know what they do not know). Because this document has been written by a committee of experts, readers are inclined to believe that: “When a pandemic occurs—and it will—no time can be lost in responding” (p. ii). We might also be inclined to agree that we should worry about influenza, a concept that highlights another discursive strategy in the plan: conferring moral responsibility. Other strategies include demonstrating authority and command and control and—sometimes in conflict with this latter strategy—encouraging partnership and collaboration.

In accomplishing its goals, however, like other plans, the British Columbia Pandemic Influenza Preparedness Plan defines the problem it is addressing such that only certain solutions make sense and in fact are possible. By outlining assumptions as well as actions to be taken and by whom, plans also deflect responsibility from others, usually the writers of the document. This one is no exception, and in this case, by attempting to address all British Columbians, it is an important social control document.
Discourse analysis explores strategies such as those described in this analysis chapter in order to explain how they construct texts such that they make sense and their contents seem obvious. The next two chapters, which look at the context in which the plan was written, form the interpretation phase of the analysis.

7. Interpretation Part 1

7.1. Introduction

In this and the following chapter, I present the second phase of the study: an interpretation of the analysis discussed in Chapter 6. The interpretation stage involves bringing context to bear on the analysis to help account for it (Barker, 2001). Discourse analysts in the ethnomethodological camp would stop at the discovery of how a pandemic influenza plan “does” planning—would in fact dispute the idea that further context has anything to offer the analysis. I agree with Barker, though, that an exploration of context can add value, in this case showing the extent to which the discourse in the plan reflects and perpetuates broader societal discourses. The plan, after all, is not a thing in isolation. Like all texts, it has a dynamic relationship with the context in which it is produced: texts are constitutive of and, in turn, constructed by their context (Cheek, 2004). Most texts, argues Hoey (2001), begin in media res, replicating and building on established social and cultural narratives, or metanarratives (theories or stories that pass as truths without exception, such as all priests are pure, all people in a certain country think a certain way, science is the best approach to solving all human problems, and so on).

I begin the exploration of this context by adding to what I discovered in the plan (Chapter 6) what is not in the plan. Of course, since a great many things are not in the plan, and for good reason, I delimited these absences. I related them to assumptions that seem to have been made about what needs to be in the plan as opposed to what does not need to be in the plan, presumably because it is obvious or given, and does not need stating.
Since the plan and the literature I reviewed in Chapter 2 are only two settings in which pandemic flu is defined and discussed—or perhaps more appropriately, negotiated—I also present information from another setting: provincial (BC) media coverage. This coverage provides another view on pandemic flu by exploring its representation in print media. While I cannot cover everything that is said or written about pandemic flu, showing similarities and variability across another setting can add depth to an analysis by demonstrating how discourses are reflected, or perhaps contradicted.

In Part 2 of the interpretation stage, Chapter 8, I take this context piece and the Chapter 6 analysis and discuss them further under the headings of heathism, risk, expertise and surveillance. As discussed in Chapter 5, these were identified through an analysis of the underlying storyline of the plan and media coverage. I suggest these concepts account for why the pandemic flu and actions to manage it make sense in the British Columbia Pandemic Influenza Preparedness Plan. However, based on the tensions within the plan and between the plan and the media coverage, I also suggest that there is some opportunity for reflection on the extent to which these discourses may be revisited in light of contemporary health issues and healthcare.

7.2. Some Absences and Assumptions

As discussed earlier, sometimes as interesting as what is found in a text is what is not found. For the most part, these absences exist because assumptions are made about what needs to be mentioned as opposed to what is a given. I noted assumptions and absences overall in my initial readings of the plan, as well as devoting one reading of the plan solely to noting these absences and assumptions page-by-page. This was an interesting exercise given that this plan, like most plans, presents its own assumptions as part of the introduction. Here are the assumptions presented in their own section (1.1. Planning Assumptions) on Page 4 of the British Columbia Pandemic Influenza Preparedness Plan.

- Based on the last two pandemics it is estimated that the next pandemic virus will arrive in Canada within 3 months after it emerges in another part of the world. This time could be much shorter due to increases in the volume and speed of air travel.
• The first peak of illness in Canada will occur within 2 to 4 months after the virus arrives in Canada.
• The first peak in mortality will be 1 month after the peak in illness.
• If the pandemic virus arrives close to the usual annual influenza season, the time interval between emergence, arrival and/or peak illness and mortality will be shortened.
• A pandemic usually has two or more waves, either in the same year or in successive influenza seasons.
• A second wave will occur within 3 to 9 months of the initial outbreak wave and may cause more serious illnesses and deaths than the first.
• Each wave of illness will last 6 to 8 weeks.
• Vaccine will be the primary means of pandemic influenza prevention. The supply will be limited during the early stages of the pandemic, therefore, plans for the first wave should assume lack of influenza vaccine and priorities for vaccination will need to be established.
• A substantial proportion of the workforce will not be able to work for some period of time due to illness in themselves or in their family members.
• Healthcare workers are likely to be at higher risk of illness due to their exposures.
• Effective preventive and therapeutic resources will be in short supply.
• Essential community services are likely to be disrupted.

These assumptions justify what follows in the plan, but they also position the authors as accountable (they have done their research and considered the evidence), and protect them should something not go as planned. Assumptions also allow organizations, individuals or groups of people to provide a satisfactory account for themselves if called on externally (O’Reilly et al., 2009).

Beyond the list of assumptions explicitly stated in the plan, however, there are many others, noticeable by an absence of their mention. I created a list based on the method of looking for exnomination, as discussed in Chapter 5. The full list, overall and page-by-page, is presented in Appendix B. The overall list, which I developed from an initial reading, is replicated here, with the first three expanded on subsequently, to demonstrate some of the ramifications of the assumptions.

• A pandemic will not originate in Canada.
• A pandemic is no one’s fault.
There is little or no controversy involved in pandemic flu planning and response.

There are values involved in some elements of pandemic flu planning, but not the scientific and clinical elements.

No one has anything to gain in planning for and responding to a pandemic: we are all equally at risk (despite our differences in socio-economic and demographic status) and all in this together.

Pandemic flu planning is important enough that resources are put toward it above other issues.

With a few exceptions, people will agree to vaccinations and antiviral medication, and to other control strategies (prioritizing vaccines for certain groups, quarantine).

With a few exceptions, the public is generalizable, and it is clear what types of information and education we need.

Health authorities and hospitals have the time and resources to plan for and respond to a pandemic.

The meanings of efficient, effective, timely and appropriate are obvious and shared.

Investing in surveillance is important and pays off.

An outbreak will be able to be declared here and gone—and those terms and that declaration will be meaningful.

Straight lines of communication between and among large groups of people will be possible, with no interference or “noise.”

Awareness-seeking and vigilance are important qualities of responsible citizens.

Below I expand on the first three of these assumptions to demonstrate potential implications.

7.2.1. A Pandemic from Elsewhere

Even within the list of planning assumptions it is noted that the pandemic will not originate in Canada, although as written in that list, the assumption relates to the timing:

Based on the last pandemic, it is estimated that the next pandemic virus will arrive in Canada within 3 months after it emerges in another part of the world. This time could be much shorter due to increases in the volume and speed of air travel. (p. 4)
As I mentioned earlier, until the emergence of the H1N1 virus, it was widely believed that the next pandemic would originate in Asia. With this most recent virus originating in Mexico, much closer to home, one wonders if this assumption has been challenged. I found the following posted on a website before the H1N1 outbreak:

While a new pandemic strain of the flu virus could first emerge anywhere, including the UK, it is most likely to emerge in China and the Far East, as most previous pandemics appear to have done. In this part of the world, dense human populations, domestic pigs and wild and domestic birds live in close proximity, facilitating the mingling of human and animal viruses through co-infecting and the consequent genetic exchange that could give rise to a pandemic strain. The circulating HPAI H5N1 virus that is of current concern arose in South East Asia. (Health Protection Agency, 2008, ¶9)

This comment was the only one I could find that acknowledged that a new pandemic strain might arise anywhere. All other definitions and discussions about pandemics suggest the outbreak will begin in Asia. One sees how stigma can arise: because of the wide publicity about circumstances in which avian flu cases have arisen, for example, the assumption could be that although a pandemic could easily spread to Canada, it would never arise in a country where people do not live in such close proximity to their animals. Implications of this othering (Chiang & Duann, 2007; Eichelberger, 2007) were demonstrated in the SARS outbreak, as I discuss later in the section on controversy.

7.2.2. Us against the Pandemic

A closely related assumption is that a pandemic will be no one’s fault. In my analysis chapter, I noted the sentence: “During a pandemic, worldwide epidemics of influenza due to a new viral subtype occur simultaneously and with high death rates” (p. ii). When a pandemic inevitably and simply occurs, it is positioned as the only enemy. No one is making it occur and we are certainly not bringing it on ourselves. To be fair, there is a hint that progress—in the form of the volume and speed of air travel—might be to blame for the spread of a pandemic. However, in the very same sentence where this is hinted at, progress—medical, in this case—is positioned as our saviour, allowing us to learn how to develop vaccines quickly. Progress is both the villain (in a minor way, referenced only twice in the whole plan—and not in any way that we will act on)—and our saviour (throughout). Of course, not being able to blame anyone for the pandemic
itself does not mean that no blame will be attributed if things go wrong during an outbreak. Selgelid (2005) wonders why so little attention has been paid to emerging infectious diseases by bioethicists—especially when potential public health measures such as surveillance, isolation and quarantine may infringe on widely accepted human rights. He discusses reasons for the lack of attention, which include:

- bioethics itself came into being as a result of advances in biological science and technology, on which ethical issues it tends to focus to the exclusion of other health issues;
- there is a mistaken impression that infectious diseases are almost eradicated;
- infectious disease problems have been relegated to “other people” (for example AIDS affecting homosexuals, poor black Africans and intravenous drug users);
- the issues involved are complex.

I would add to his list, at least in terms of a pandemic influenza, that the problem and solution seem so straightforward, there does not seem to be a need for bioethical attention. The urgency and immediacy of a pandemic flu, which is positioned as our only enemy, seem to lead naturally to actions for managing it. If it is not well managed, the implication seems to be, something must have gone wrong in following the plan.

7.2.3. No Controversy

Another assumption—noticeable by the absence of discussion about it—is that there will be little or no controversy during a pandemic flu outbreak. To be fair, there are eight statements in the plan that hint at the possibility of some fallout, as follows.

- Health authorities are encouraged to “Develop strategies for situations where people refuse to be vaccinated or cannot be vaccinated” (p. 14) and “Develop strategies for dealing with cases where people refuse antiviral drugs, or where antivirals cannot be used because of medical contraindications” (p. 15).
- There is a reference to “[mobilizing] additional police or security forces as needed” (p. 22).
- The province will “Implement security measures for stored vaccine” (p. 23) and health authorities are also asked to “Implement the immunization plan developed during the pre-pandemic stage, including security measures for stored vaccine” (p. 23).
• The province has a responsibility to “Respond to public and media concerns about the immunization program” (p. 23).

• Both the province and health authorities are charged with implementing security measures for antivirals (p. 24).

Many of these references to potential controversy are buried within longer sentences, and the strategies are not prefaced with an explanation of why they might be needed. They also seem directly related (and perhaps downplayed because of this) to irrational members of the public who may have concerns, may refuse vaccination, or may try to steal antiviral medications. For these reasons, it is hard to attribute these references in the plan to anticipated controversy on a large scale.

The lack of controversy assumption is closely related to the absence of blame for the pandemic discussed above. It follows that if a pandemic is inevitable, it is no one’s fault. Since it is significant, though, we need to manage it—and since “it” is the only enemy, we are united in our quest against it and therefore clear on, and agreed on, what must be done and by whom. However, we know from other experiences with disease and disaster that:

• some people will fare better than others, in this case, people with greater socio-economic status and those in certain demographic groups (young children, pregnant women and the elderly are at more risk of disease);

• only certain people are in a position to make decisions, and those decisions often affect many people;

• information is not always shared, and even when it is, misunderstandings can arise;

• different groups of people and individuals will try to gain personally from the situation.

All of these things and more can easily lead to controversy. Some of the articles reviewed in Section 5.3 allude to such controversy. Another large literature, on SARS, also reveals how controversy can occur during a disease outbreak, as follows:

• Maunder (2004) reviewed qualitative and quantitative studies of the SARS outbreak in Toronto to find out what contributed to healthcare workers’ experience of it as traumatic (a high degree of distress was experienced by up to 35% of hospital workers, says Maunder). Trauma was particularly prevalent, not surprisingly, in healthcare workers—especially those who had direct contact with SARS patients. Healthcare workers who were parents showed
more stress than those who were not, since they worried about infecting their children. Healthcare workers also experienced stigma, scrutiny and job stress (for example, being assigned to unfamiliar tasks). Among the lessons learned were that effort is required to mitigate the psychological impact of infection control measures, effective risk communication is a priority early in an outbreak, and healthcare workers benefit from practical interventions that demonstrate tangible support from institutions.

- Menon (2008) discussed the “knee-jerk reaction of most governments to conceal information about a disease outbreak from the public” (p. 527). Even though open and honest communication is touted and planned for, when it comes down to it, says Menon, “There is always the earnest hope that the disease will fizzle out sooner than later, and concerns about causing panic and prompting trade and travel restrictions have to be weighed against any benefit in calling for international assistance” (p. 527).

- Person, Sy, Holton, Govert, and Lang (2004) say that in the US, Asian-American communities were particularly affected with stigmatization during SARS. They suggest that fear and discrimination directed at those infected with a disease can prevent them from seeking care, in turn leading to further transmission of the disease. The authors cite studies that show that during an infectious disease outbreak, there is usually a sub-group of the general population—those likely to experience stigmatization and discrimination—who will need special attention from public health officials.

- Smith (2006) discusses what he calls the “pronounced psychological impact of SARS” (p. 3,117), attributing it in part to the rapid transmission of information through mass media and communication technologies. Clearly it is not possible to stop this rapid spread of information, but consideration should be given to communication in such an environment, says Smith. He also suggests that public health interventions during SARS, including isolation and quarantine, may conflict with human rights and could have caused controversy if the disease had not been contained or if it had spread faster and such measures needed to be implemented.

- Blendon, Benson, DesRoches, Raleigh, and Taylor-Clark (2004) say that even at a relatively low level of spread, the SARS outbreak had a significant psychological and economic impact in Toronto and Ontario as a whole, and to a lesser extent, in other Canadian provinces and the US. Efforts to educate the public about the risk of SARS and appropriate precautions were mixed, say the authors. They also point out that media coverage of an outbreak can be a double-edged sword, on the positive side informing people how a disease spreads, but on the other hand alarming people who are far away and prompting them to take unnecessary precautions.

- Eichelberger’s (2007) study on SARS in New York’s Chinatown involved 6 weeks participant observation and 37 interviews with Chinese community members. Although not one person in New York came down with SARS, Eichelberger says the public “had become infected with an epidemic of fear, not disease” (p. 1,285). Using the example of the SARS outbreak, she demonstrates the controversy that can arise when people are stigmatized within their own community. Such “othering,” she suggests, “hampers the
containment of contagion during an emerging infectious epidemic by compelling people to reject public health instructions” (p. 1,293). Further, certain groups are blamed for their own infection.

- In an article on media portrayals of nursing in Toronto during the SARS outbreak, McGillis-Hall, Angus, Peter, Obrien-Pallas, Wynn, and Donner (2003) discuss the public stigmatization of nurses that took place. Media reports indicated that nurses’ children were not allowed on school trips, families were shunned by their neighbours, nurses’ husbands were sent home from work, and nurses who were single mothers were not able to get babysitters.

- Drache and Feldman (2003) examined media coverage of the Toronto SARS outbreak, illustrating how competing stakeholder groups worked to capture the attention of the media in order to further their own interests. They show how the public health message (that SARS was a serious threat) competed with the economic recovery message (it is safe to visit Toronto), confusing the public by warning them away from tourist sites and Asian businesses on one hand, and suggesting that there was little need for precautionary behaviour on the other.

Two other articles indicate that almost no controversy arose during the SARS outbreak in Singapore, whose Tan Tock Seng Hospital won the 2004 International Public Relations Society’s gold award for its communication efforts during the outbreak (Chong, 2006) and whose government received “glowing praise from international health experts and agencies” (p. 6) for its handling of the crisis. In an article titled “Emerging victorious against an outbreak: Integrated communication management of SARS in Singapore,” Kavita, Lee and Leng (2007) suggest that that the Singaporean government’s handling of the SARS crisis is a model of health management that could be successfully “adapted by other countries as their systematic approach to reduce uncertainties and better manage crises” (p. 383). The authors link success to inculcating socially responsible behaviours and imposing strict preventive measures and penalties on those who disobey the law, an approach that perhaps would not work in many other countries. Chong (2006) acknowledges that Singapore is perhaps uniquely placed to realize—or perhaps to claim—complete success in managing a crisis, given its strict controls over and cooperation from the public and media (although Chong does acknowledge that during the outbreak there were nine articles in the media that quoted a dissenting opinion). A uniqueness in the SARS situation, says Chong, was the unexpected call for public participation, given that Singapore:
has not traditionally had a political system that values dialogue with the public. However, the novelty and mysteriousness of the disease—there was still much that the health professionals and authorities didn’t know about the disease and the progression of the outbreak—made it all the more critical for the Ministry of Health ...to acknowledge that they had little control over the external situation and to engage citizens as “sentries” in a system of surveillance. (pp. 8-9)

As discussed in the analysis chapter, the idea of engagement of citizens in preparing for a pandemic influenza outbreak is very much present in the British Columbia Pandemic Influenza Preparedness Plan. Unlike Singapore, though, the likelihood of sceptical media coverage is quite high in BC. I discuss this coverage in the next section.

7.3. Media Coverage of Pandemic Influenza

While I could never analyze all the settings in which pandemic flu is written and talked about, examining how definitions and representations vary from text to text can reveal the “contested field of possible ideas, images, and metaphors that structure the ways in which people understand diseases” (Eichelberger, 2007, p. 1,285). In this case, I explore BC media coverage. This is not a discourse analysis proper, but a description of the coverage (in the form of a narrative overview, some content analysis and discourse analytic comparisons where warranted) to add context to the analysis in Chapter 6. I am not suggesting British Columbians get all their information from mass media. Especially in high profile news such as an emerging infectious diseases, however, it is not hard to see how the press plays a proactive role in defining the nature of the crisis (Drache & Feldman, 2003) and contributing to public understandings (Blakely, 2006; Stephenson & Jamieson, 2009). In general, media are well-recognized as contributing to the longer term framing of issues, even for those who do not read, view or listen to their messages directly. As Hodgetts, Bolam, and Stephens (2005) say:

people do not have directly to consume specific media disseminated information for it to enter their lives. People often hear about new lifestyle products second hand from friends, partners and colleagues, Like ripples in a pool, once entering social dialogue fragments of media representations take on a life of their own. (p. 126)

As mentioned in my methods chapter, I searched the Canadian Newsstand Database for all articles in the Vancouver Sun in the year 2005 that included the term
pandemic in the title or the abstract. Initially I had 71 articles; when I excluded duplicates and articles that were not relevant, I was left with 54. The article types are categorized by the Vancouver Sun as follows: 31 of the 54 are news stories, nine are business stories, four are columns (all by the same columnist), four are letters to the editor, three are editorials, two are special reports, and one is an opinion piece. Before focusing on the articles themselves, I tracked the number of articles in all Canadian newspapers that mentioned the word pandemic in either the title or abstract over a period of 10 years up until the end of 2008. The results are shown in the figure and table below compared with Vancouver Sun coverage.

Figure 2. Media Coverage of Pandemic Flu in Vancouver Sun and All Canadian Newsstand Database Newspapers, 1999-2008

Table 3. Number of Media Articles in Vancouver Sun and All Canadian Newsstand Database Newspapers, 1999-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Van. Sun</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>22</td>
<td>71</td>
<td>30</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>All papers</td>
<td>71</td>
<td>104</td>
<td>93</td>
<td>81</td>
<td>98</td>
<td>433</td>
<td>1290</td>
<td>902</td>
<td>345</td>
<td>217</td>
</tr>
</tbody>
</table>
The graph shows that the provincial and national coverage for the most part parallel each other over the period. Although media attention was limited for the first few years, there is clearly a peak in 2005, the year in which the BC plan and presumably other provincial plans were released, when there would have been publicity about pandemic flu planning. The coverage dropped dramatically the next year, although not to the level it had been before (except the Vancouver Sun in 2008, which dipped lower than the 2004 coverage). Any differences between the two sets of data, as well as ebbs and flows within each, no doubt reflect other events that took place or breaking news about a pandemic, causing a spike from time to time.

In the following section, I present an overview of what a Vancouver Sun reader would encounter in the way of pandemic flu stories over the course of 1 year. This chronology is presented to show the ebb and flow of ideas and the different levels of alarm as opposed to periods of complacency over time. Such an analysis challenges the view presented in many media analyses, where the phenomenon of interest is presented solely through a thematic analysis as a static entity with unchanging characteristics.

After the chronology, in Section 7.3.2, I present an analysis of the media coverage overall based on the method described in Chapter 5 and the findings in Appendix D.

### 7.3.1. Media Coverage: The Presentation and Negotiation of Ideas over 1 Year

Readers were told in January 2005 via a headline that the “World is on the brink of avian flu pandemic, experts warn” (Van. Sun, Jan. 25, 2005). The subheading is “The WHO says the planet is unprepared for a mutated virus that could kill millions.” After this somewhat alarming introduction, the rest of the copy is fairly low key, about the World Health Organization urging all countries to prepare for a pandemic, including some statistics about how devastating a flu outbreak could be. Only in the last sentence is it mentioned that Canada has developed an influenza plan. A story the next day starts out similarly discussing a “looming flu pandemic” (Van. Sun, Jan. 26, 2005), but continues in the same vein as the one above, quoting Canadian officials who pronounce on the
country’s readiness. Canada’s preparedness plan, say the officials, which was built on lessons learned from the SARS outbreak, could be a model for the world. Although the head of Canada’s Public Health Agency is reassuring in the story, also quoted are doctors at several hospitals, who do not agree that the country is prepared, and say the lack of funding and low numbers of healthcare providers are critical problems. The article seems to attempt to refute some of the arguments in the previous day’s story, since it quotes Canada’s Public Health Officer as saying the country is indeed prepared. It is not entirely successful in this regard, however, as it notes scepticism from others.

Five days later, February’s stories begin with a piece about a research study in which two Cornell University scientists say they have found a key to producing a universal flu vaccine. The story functions as an education piece about how viruses work. Four articles over the next few days cover Canada’s plans to stockpile antiviral drugs to combat a pandemic. The first demonstrates inter-textuality nicely, as it contains phrases from other media articles as well as from the influenza plan, especially about how a pandemic develops. Political posturing is in evidence here, as government officials are quick to assure Canadians of their plans to ensure antivirals are available. Another of the four is an editorial questioning why we should trust experts when they have been predicting the sky will fall for ages. The question turns out to be rhetorical—the experts might be right, says the editorial, and it is a good thing that Canada is purchasing antiviral drugs in case they are (the headline mistakenly says vaccines are being stockpiled, but the article refers to drugs). A breaking news-type story comes next, about a young man who contracted avian flu in Vietnam and an international conference whose attendees urge support for affected countries to help contain the outbreak. Needed, says a spokesperson, are more money, more rapid and reliable reporting systems, and an overhaul of the poultry sector to “control the disease in birds and stamp out infections in humans.” The story mentions the Vietnamese man’s consumption of raw duck blood, a traditional Vietnamese dish. Through this reference to a custom unusual in Canada, it is possible to see why *Vancouver Sun* readers may not feel at risk from pandemic flu, and also how stigma may arise in relation to people from other countries who drink bird blood. This is the first article of the year to discuss a person who has been infected by the virus, but there are no details about how that person has been affected. It is also the first questioning of the inevitability of a pandemic, by the journalist, but the question is a rhetorical one, and is quickly refuted.
A new type of article arises in March, by a Vancouver Sun columnist who questions whether BC is ready for a pandemic, and criticizes the government for being too busy preparing for an election to spend money on an ailing healthcare system that could not possible withstand a pandemic influenza outbreak:

We’re told BC has plans that range from self-imposed quarantines like those used during the SARS crisis to school and public transit closures to the setting up of mobile triage hospitals. But plans are just that—plans. Any reader of history knows how often they go awry when the action begins. (Van. Sun, Mar. 5, 2005, p. C5)

Another breaking news story follows, about the Vietnamese nurse who cared for the man in the earlier story who has tested positive for the H5N1 virus. This is the first story to demonstrate some taming of the message by experts, rather than alarmism. This could be because the risk of spread may have increased, and they do not want to incite fear.

The next day, unrelated to these breaking news pieces, is a long feature, by a regular Vancouver Sun journalist, introduced as follows:

There are frightening similarities between the bird flu virus raging in southeast Asia that threatens to spark a global human influenza pandemic and the devastating “Spanish flu” outbreak of 1918, which killed tens of millions of people. How dangerous could the next pandemic be? Part 1 of a special three-part series begins today. (Van. Sun, Mar. 9, 2005, p. A1)

The article describes pandemics of the past and suggests the world is “dangerously unprepared.” Potential problems related to public confidence are cited, including references to people staying away from their neighbours and off public transit for fear of being infected. Solutions put forward are research on how to produce a vaccine more rapidly; production and mass distribution of antivirals; and preparation of national contingency plans. This story brings in the public, but only in terms of the potential for us to lose confidence in the system to protect us from pandemic influenza. There is no mention of public participation in planning to date in the news coverage.

Two days later, the same journalist writes that it is somewhat comforting that Canada has a preparedness plan, but that the plan is not good enough. This article functions almost as an argument, with senior officials at the Public Health Agency of
Canada saying the country is well prepared, and others, among them “senior public health experts,” challenging those officials. Political posturing is again in evidence, with references to Canada’s being a world leader in pandemic planning and needing to maintain that lead. In many of the stories to date, government is pitted against medical experts.

The next piece is a news story about a potential case of human-to-human transmission of avian influenza in Vietnam. This is the first article approaching a human interest story, although the people are not named and there are no details about them. This is the second article to downplay the risk of a pandemic somewhat, perhaps because the possibility of human-to-human transmission seems to have increased. Experts reassure the reporter that the situation is being monitored closely, and other experts caution against reading anything into this event. The journalist who wrote the earlier column wonders, 6 days after the human-to-human transmission piece, whether the death rate from a pandemic might be vastly underestimated. He writes about the importance of boosting the healthcare system, which is not even robust enough to take care of sick people in its current state. This is the first piece to suggest that public discussion about pandemic preparedness is warranted. Three days later, a letter from a Sun reader in response to the columnist says we are “brooding over the wrong batch of eggs”—we should not be worrying about a pandemic flu when there is so much chronic debilitating disease that deserves attention.

The next story is 1 month later. It is a “breaking news” piece that describes how bird flu is showing signs of adapting to human hosts in Vietnam. In the same story, it is noted that tens of thousands of people raise poultry in their back yards in that country. It is not clear, though, whether the point is that tens of thousands of people raise poultry and have always raised poultry but hardly any of them get sick, or tens of thousands of people raise poultry so we had better be prepared for a massive outbreak. It is almost as if there is a need to keep the potential-pandemic story alive (although by whom, I am not sure) since there has been no coverage for a month. The story does not have much to add over previous stories, but rather seems aimed at reminding readers that it is “more likely than not” that a pandemic will occur and will kill millions.
A few days later, there is a short article about a Vancouver-based vaccine company that hopes to get the contract for a publicly funded vaccine project to be launched by the Canadian government. It is the first piece that overtly ties a disease outbreak to a business venture. One month after that—which is the next time an article on pandemic flu appears and the only one in May—another piece in the business section covers the annual general meeting of that company, which received the contract and aims to be one of the first vaccine responders in the event of a flu pandemic.

There are two pieces in June: a short one prompted by a special issue of the magazine *Foreign Affairs* on how a pandemic flu could spark a global crisis, and another on how shameful it is that we are spending so little on pandemic preparedness compared to our spending on the 2010 Olympics. The former begins with a reference to the importance of planning, but does not mention planning thereafter. In one of the only references to date on inequality in terms of who will be affected by an outbreak, journalist Laurie Garrett is quoted as raising concerns about the ability of poor countries and immuno-compromised people to withstand a pandemic. The latter article is by the writer of the previous columns, and reiterates the “we are not prepared” message.

The next set of stories—six over a 4-day period—appears in late August. The first of them is about the Vancouver firm with the federal contract to develop a vaccine, describing how its shares “skyrocketed” after a speech by Tennessee doctor and Republican presidential nominee Bill Frist on the topic of a potential pandemic flu and its ability to kill 50 million people. This piece raises again the concept of profitability related to a disease outbreak. The next day, there are two more articles: one in the business section titled “Firms race to develop avian flu vaccine,” about the various companies around the world getting involved in vaccine development, and the other about how borders will not be able to stop the spread of a pandemic. The next 3 days in a row feature:

- an article about Canadian experts warning of a devastating economic impact during a pandemic flu. This is the first article to focus fully on the economy and one that raises another topic for the public to worry about besides getting sick: the ability of their financial situation to withstand a pandemic;
- an editorial about government preparedness being underway but not to the extent needed. Although it is one of several to date on the theme of “lack of preparedness,” none has mentioned how we should in fact be preparing;
• a letter from a reader in response to the economic impact piece of 2 days earlier, saying how a pandemic would overwhelm BC hospitals, which cannot provide appropriate care even in their current state.

There are two articles in September. The first is about an international summit to be held in Canada so that health ministers can prepare for “the threat of a flu pandemic that experts say could kill millions of people.” The political positioning is in evidence here, as Canada’s health minister refers to our country as a leader in pandemic flu planning and emphasizes the need to be seen as such. “Preparing” for a pandemic in this article comes down to sharing information and being transparent. The other story bears the grim headline “Next pandemic flu looms,” and even grimmer subheading “Millions are expected to die and bodies may have to be stored in ice rinks and refrigerated trucks.” After this lead, the article goes on to discuss the Canadian pandemic flu plan and its controversial guidelines for priority groups for vaccines and antiviral drugs. This is the first article to say what pandemic planning might actually involve. It is also the first to confer moral responsibility on the public for being prepared.

There is a spate of media coverage—17 articles—in October. The first is about US President Bush’s announcement that he will use the military to enforce quarantine in the event of a pandemic. A medical expert is quoted as saying Bush’s plan is “draconian” and would not prevent a pandemic from entering North America. Next comes news of a study, written up in two medical journals, in which researchers reconstructed genetic material from the lungs of Spanish flu victims and found it to be a type of avian flu. A concern is raised by another scientist about the possibility of the virus being inadvertently released, but this concern is downplayed with a “good outweighs the bad” response from the authors of the study. The next story also involves a piece from a medical journal, this time an editorial in The Lancet. The editorial says that “all countries urgently need to prepare for a looming flu pandemic that could kill as many people as the Spanish flu.” Controversy is hinted at in this story through reference to the government’s creation of the Public Health Agency of Canada after the SARS outbreak, and the fact that this does not go far enough: legislation must be enacted so that the agency has the authority to direct provinces. The next story, the same day, functions as a question and answer piece about avian influenza. It is seemingly aimed at dispelling some myths (for example, that one can get avian flu from eating chicken), perhaps in an attempt to prevent people from worrying unduly about a potential outbreak, given all the
alarmist coverage. This is another article whose copy (about the rarity of human to human transmission in avian flu) is at odds with its headline (“A deadly virus jumps species and spreads”). I found it interesting that the last question—Can a pandemic be averted?—is not directly answered. The response is “The first priority is to reduce opportunities for human exposure to infected poultry. Computer modelling has suggested that a human pandemic could be stopped with concerted action and enough antiviral drugs for three million people.”

The following day, there is a breaking news story about the avian flu spreading to Turkey, referring to news which would be reported more fully in the journal, Nature, the following week. Quite different from the previous day’s story that attempted to calm readers down, this piece positions the avian flu virus as smarter than humans: we have developed a prophylactic drug, but it might not work. The Nature article is based on the case of a young Vietnamese girl developing a strain of the virus that may be resistant to the antiviral medication Tamiflu.

Two days later, there are three stories on the same day. An editorial discusses the importance of using common sense in response to the news about avian influenza. “You should be very afraid of avian influenza—if you happen to be a chicken,” says the writer, whose final advice is that we need to take the potential of a pandemic seriously, but not panic. This is the first article to suggest that a pandemic today would be much less devastating than the one in 1918, given the developments in medicine since then. Unlike many of the other articles, this one suggests that governments are well prepared, and calls for “vigilance and common sense” as the appropriate responses to the pandemic influenza threat. Another article that day quotes Canadian Health Minister Ujjal Dosanjh, who says Canada is not immune to a pandemic flu but is prepared. Canada is positioned as a leader in this area once again, and recognized as such: the US has asked us for advice on pandemic planning. The last article that day quotes England’s Chief Medical Officer, who says a pandemic would kill about 50,000 people if it broke out in that country.

A few days later, readers are told that Liberal Members of Parliament do not believe the federal government is prepared for a pandemic, and that one of them is advising any of his constituents who may have visited South Asian farms to burn their
clothes when they return. This is the first article to suggest that, even within government, there is debate about the extent to which the country is prepared for a pandemic.

Perhaps in response to being challenged about not helping poor countries prepare, Canada’s Health Minister says Canada will endorse a proposal that all wealthy countries should donate 10% of their flu drug stockpiles to the World Health Organization to help other nations. The next article is about a recently produced report summarizing human infections with the H5N1 virus. We do not find out that the article is about this report until we have read the dramatic introduction to the story, though:

The most likely source today of the world’s next flu pandemic can take as few as 6 days, and as many as 30, to kill. It can cause bleeding from the nose and gums. Watery diarrhea, vomiting, abdominal pain and sharp, knife-like pain in the chest have also been reported “early in the course of illness of some patients. (Van. Sun, Oct. 21, 2005, p. A4)

The next article reports on a gathering of scientists who aim to add “concrete data” to the “shrill and growing debate over whether the globe is on the brink of a new flu pandemic.” I found this interesting, as to me there has not seemed much of a debate to date on whether a pandemic will happen or not. This research is happening just as international health ministers meet in Ottawa for 2 days of talks on how to boost global cooperation on pandemic flu planning. It could be interpreted that scientists are frustrated by what they see as “just talk” by politicians, and want to position themselves as active in response. The piece is followed by a story about the need for rich countries to concentrate not just on stockpiling drugs for their own citizens but to support Asian farmers who are already poor and getting poorer as a result of having to slaughter their chickens. There are not many stories to refer to the current effects of a potential pandemic, as opposed to the effects of an actual outbreak. The next day, the Sun columnist referred to above evaluates the British Columbia Pandemic Influenza Preparedness Plan (this is the first article to mention the provincial plan), finding it “rich in medical bureaucratisé, planner lingo, check lists, organizational flow charts, acronyms and links to other websites.” He questions why we are not “talking about this as a community and asking hard questions of the authorities…” Still in October, a letter in the Sun chides all of us for paying too much attention to the “avian flu scare.” The writer recommends, though, that Canada should stop exporting and importing birds.
There are three news stories at the end of the month:

- one reiterating the call for pandemic preparedness (the *Vancouver Sun* columnist who has written the other articles about the importance of preparing);
- one warning the public that dead wild birds could be a sign of avian flu;
- one reacting to the first of these three articles saying BC is indeed prepared for a pandemic (this is a letter from BC’s Provincial Health Officer). To refute the columnist, the writer refers to “public health researchers agreeing” and “international consensus” to defend provincial planning. It is interesting that the Provincial Health Officer says the plan was created for leaders and other planners, when the plan itself positions itself as created for all British Columbians.

In November, we read that an H5 flu virus has been found in Manitoba and Quebec birds. The subheading tells us, though, that officials say this virus is unlikely to be pathogenic. The rest of the article consists mainly of quotes from experts telling readers they should not be concerned. Next, the columnist weighs in again, claiming that Victoria (the seat of BC’s provincial government) is in a fog about a potential pandemic. He decries the lack of public engagement in pandemic preparedness, but has been the only writer to date to do so. Following this is a piece about tests that have found bird flu in BC’s interior. Again, the subheading says this strain does not appear to be the deadly one that has spread across Asia and into Europe. Increasingly, the stories are about avian influenza as it is, rather than as "a potential pandemic."

The next piece is about a research study showing that the H5N1 virus causes 10 times as much inflammation in human lung cells as regular flu. I find it interesting that on the heels of several columns about the importance of the public and the health sector being engaged in pandemic preparedness, this story takes us back to the importance of scientific research and its potential to solve the pandemic problem. This piece is followed by an opinion piece by a highly credentialed medical expert, the former President of the Ottawa Academy of Medicine. He challenges the assumption that healthcare providers will be able to care for people during a pandemic, and urges the government to consider their needs. The last article in November is about a report that claims the public is not being involved enough in discussions about pandemic flu preparation, and that ethical guidelines need to be developed. This is the first piece to mention the possibility that the public may not comply with government advice during a pandemic.
Four articles in December round out the year’s coverage. The first is about Vancouver’s Chief Medical Officer and his denouncing of the federal government’s purchase of Tamiflu in pill form instead of powder form, which has a longer shelf life. The officer is quoted as saying he is sceptical that a worldwide epidemic is imminent. This is the only story that involves a difference of opinion between medical experts on the likelihood or severity of a pandemic. This officer is also the only source to raise so far the idea that “the only reason we are seeing so much avian flu in birds is because we are looking for it.” The second piece is about the fragility of BC’s economy should a pandemic occur; and the third is about how businesses should prepare for a pandemic. Finally, there is a short news item about US customs officials seizing 50 shipments of counterfeit Tamiflu. This is the only piece to associate criminal activity with a potential pandemic.

The above description of articles as published over the course of 1 year adds context to the analysis in Chapter 6 by showing the ebb and flow of ideas and the negotiation that goes into defining and redefining any issue over time. As much as a plan collapses and contains, media coverage expands and lets loose, allowing the expression of a broader range of views and opinions than is presented in the plan. We see claims, refutations, reiterations and perspectives from different individuals and groups in the media coverage, whereas the pandemic flu plan has one author, albeit a committee. Reflecting the genre of media coverage, especially over time, there is almost a conversation taking place. The foregoing chronology maps this conversation: experts worry a pandemic is imminent; governments claim they are prepared; columnists, Vancouver Sun newspaper readers and healthcare professionals challenge governments; public health representatives refute the challenge; a member of the public reproaches her fellow members for panicking; an editorial writer urges calm and caution, and so on. Rather than a static entity to which stable attributes can be accorded, a pandemic is shown to be constantly renegotiated.

An overall analysis of the media coverage in addition to a chronology demonstrates that despite the differences between the plan and the media coverage, the underpinning narrative is similar: our health is at risk from a potential pandemic that we should be worried about and for which we need to prepare. The following section explores these differences and similarities in more detail, presenting an analysis based
on my findings in Appendix D. The intent is to demonstrate how the discourse in the British Columbia Pandemic Influenza Preparedness Plan reflects and perpetuates—or potentially conflicts with—the discourse in the media coverage.

### 7.3.2. Reflecting and Challenging Discourse

There are some obvious contrasts between the media coverage and the British Columbia Pandemic Influenza Preparedness Plan. The latter, despite being written by a committee, is meant to represent a unified voice on a unified theme. Media coverage, in comparison, is oriented to reflecting a range of views about and covering widely different aspects of a topic, both within an article and across articles overall.\(^\text{12}\)

Despite the differences between media coverage and government planning documents, though, it is clear that the British Columbia Pandemic Influenza Preparedness Plan makes sense within the context of the media coverage since both reflect a narrative of societal concerns about illness, especially widespread illness that can affect anyone, and the importance of preparing for it and of managing it when it is here, under the guidance of experts.

Below the level of narrative to the specifics of how a pandemic is constructed in the media coverage, like the plan, it is largely positioned as an inevitable event, of great significance, that needs to be managed. As far as inevitability, in some stories there is no reference to it, but perhaps more important, there are no stories that challenge the inevitability either, as if it is not in question. There are a few direct references to a pandemic's inevitability, but more inferences. For example, a source will be quoted on what will happen "in the face of what's coming" (Van. Sun, Jan. 25, 2005) rather than what might be coming, or sources may be said to be worried that the virus “will inevitably mutate” (Van. Sun, Feb. 4, 2005) rather than that it may mutate. Another discursive

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\(^{12}\) Even within this set of articles, there is diversity in terms of its sub-genres, demonstrated by authorship (e.g., journalist, columnist, member of the public, editor); the opinions expressed within the articles through those quoted; the framing of the topic (e.g., business, human interest, breaking news); and the extent to which the piece is meant to be objective (e.g., a news story) vs. subjective (e.g., a letter or editorial). While differences in these articles is discussed in the chronological and thematic analyses, however, a sub-generic media analysis is beyond the scope of this study.
strategy for creating this sense of inevitability, beyond direct references and grammatical inferences, is similar to that used in the plan: the use of experts and their expert knowledge. In 24 of the 54 articles, the general term experts is used; in nine others, the general term scientists is used; in one, public health researchers is the term. In 14 stories, at least one specific, named expert is quoted. Only six stories do not rely on quotes from scientific or medical experts either generally or specifically. They are:

- a business story quoting “authorities” from the US Customs and Borders Protection Agency;
- a news story about elected officials and what they are telling their constituents about a potential pandemic;
- an opinion piece, one column and two letters limited to the opinions of the writers.

Expertise is also used to position a pandemic as significant in the media coverage—but in a somewhat different way from the plan. While like the plan, experts in the media coverage doubtless carry a lot of weight, in the media coverage they are very worried. In 21 of the articles, experts are “increasingly worried,” “concerned” or “anxious,” or they “warn” or “fear.” This portrait of experts supports Alcabes (2009) claim that sometimes the very people who are responsible for extending our knowledge of the world—scientists, that is—assist in portraying epidemics as constantly, bewilderingly threatening (p. 219). Experts in the media, though, are positioned as quite different in this regard from experts in the plan, where it would not do well to have experts worry, but it seems to contribute to the sense in the media coverage that a pandemic is indeed significant. Whereas significance is sometimes called into play by understatement in the plan, it is dramatic language and bold statements that make a pandemic significant in the media coverage. Even in the more measured pieces, where there is no breaking news, we read about “a pandemic that experts warn could soon plunge the world into chaos” (Van. Sun, Feb. 4, 2005) or one that will “dwarf the terrific toll of the recent tsunami in Southeast Asia” (Van. Sun, Feb. 14, 2005) and that has the “potential to change the course of human history” (Van. Sun, Mar. 9, 2005). The headlines and subheadings similarly speak to the significance of a pandemic. One story (Van. Sun, Sep. 16, 2005) bears the stark sub-heading “ Millions are expected to die and bodies may have to be stored in ice rinks and refrigerated trucks”; another story (Van. Sun, Mar. 9, 2005) is headed “A world of pain: Scientists brace for an unstoppable virus.
Pandemic: How Bad—and When?” As discussed in the section above, headlines sometimes do not reflect the copy contained in the story (see Appendix C for a list of headlines and subheadings to all the stories). Even the experts are sometimes not just experts, but “top” experts (e.g., Van. Sun, Jun. 13, 2005) or the “world’s leading virologists and epidemiologists” (e.g., Van. Sun, Jan. 25, 2005). In the media coverage, it seems that the significance of a potential pandemic overshadows and negates the fear over inevitability to some extent: if it is this significant, does it matter that it is inevitable as opposed to simply likely?

The biggest difference between the plan and the media coverage is in the characteristic of manageability. While both data sources refer to the need for management (given the event is probably inevitable and definitely significant), in the media coverage, the manageability of a pandemic is contested. Up for debate seems to be the extent to which it is possible to manage a pandemic given current circumstances, as well as who is responsible for managing it. This debate is at the heart of another difference between the plan and the media coverage: in the former, it is assumed there will be little or no controversy, in the latter, the controversy is already apparent even before an outbreak. This situation is due to the fact that there is a new—or at least newly named—audience in the media coverage: government. In the plan, the expertise of the public health sector is conflated with the expertise of government, since they are one and the same. In the media coverage, while the public health sector is sometimes seen as government, more often it is not. General medical or scientific “experts”—the ones who are worried about a pandemic flu—are independent of government in terms of the general bureaucratic or political sphere, which is separately referred to in 41 of the articles. The former (medical and scientific experts) are not challenged in the media coverage, with the exception of one story in which a medical expert challenges other medical experts. While one would not expect experts to be challenged in the plan (experts are the authors), it seems sensible that they could be challenged in the media, which sees as part of its job to question everything. That they are not, reflects western contemporary society’s reliance on and embracing of scientific expertise, particularly when it comes to our health.

An interesting situation arises, then, about expertise as opposed to authority. While experts have authority in many settings, here is one situation at least—pandemic
influenza coverage in newspapers—where they have credibility, but not authority. Government has the authority here, even though in some cases it is public health experts who are employed by government that have the authority. Authority in the form of government, unlike scientific experts, is challenged in much of the media coverage. One story (Van. Sun, Feb. 26, 2005) covers an international conference where veterinarians and human health experts are frustrated with the lack of support for poor countries from more wealthy ones. Another (Van. Sun, Mar. 5, 2005) has a columnist wondering what BC’s “bean counting politicians have done to reduce [the health system’s] capacity, even as the ominous thunderclouds of bird flu or whatever follows it gather on the horizon.” Several other stories (e.g., Van. Sun, Mar. 11, 2005; Van. Sun, Sep. 15, 2005; Van. Sun, Sep. 15 2005; Van. Sun, Oct. 17, 2005) feature politicians either defending government pandemic preparedness plans in response to criticism from others quoted, or seemingly attempting to pre-empt such comments. This government vs. expert situation leads to another difference between the plan and the media coverage, but interestingly, it highlights the same tension. The authority that is challenged in the media coverage (government) is a different type from the authority referred to in the authority-empowerment theme in the plan. In the plan, the authority was of the writers directing people what to do in preparing for and managing a pandemic, while simultaneously downplaying that authority by empowering the public to somehow “be involved.” In the media coverage, the authorities are challenged not for directing us what to do, but for not taking responsibility for citizens’ welfare.

As for the public, although in the plan “we” are referred to but substantively absent, in the media coverage, “we” are not really present at all—an interesting absence, since so much media coverage, especially when it is related to health, relies on human interest stories. As a collective or as individuals, the public is referred as actors (the subject of sentences) in only 21 of the 54 articles. In 11 of these, it is as victims or potential victims of the disease, and the remaining 10 occurrences are for the most part editorials, columns or letters that refer to the collective “we” as follows.

- “We are” or “the public is” being told (Van. Sun, Feb. 26, 2005; Van. Sun, Mar. 5, 2005);
- we are positioned as not having long to wait before a pandemic hits (Van. Sun, Jun. 15, 2005);
• we are referred to generally by a columnist who says: “we need to conduct large-scale tests to see if we are really prepared” (Van. Sun, Aug. 26, 2005);

• a letter-writer refers generally to us (society) as being unable to provide adequate healthcare currently (Van. Sun, Aug. 27, 2005);

• we are divided into groups for the purposes of pandemic planning (Van. Sun, Sep. 16, 2005);

• we can be reasonable confident (Van. Sun, Oct. 17, 2005);

• we all know (the fable about the boy and the wolf) (Van. Sun, Oct. 26. 2005);

• people are urged to be vigilant for dead wild birds (Van. Sun, Oct. 29, 2005);

• Canadians have a right to expect concrete action (Van. Sun, Nov. 24, 2005).

The notion of empowerment—in the sense of the public being engaged in preparing for a pandemic—is mentioned in only a few articles, all by the same columnist. Other than the letters, we never hear from any member of the public and have no idea of their opinions, concerns or beliefs about a potential pandemic. Unlike in the plan, where the public is simultaneously present (referred to as part of the “we”) and absent (not given any responsibility), the public is primarily absent from media coverage.

In conclusion, it is possible to see how the British Columbia Pandemic Influenza Preparedness Plan seems like a commonsense document within the societal context of concern about health and illness, recognition of the risk of a significant event such as pandemic flu, and acceptance of the need to plan and manage it, with expert guidance. This context is reflected in the media coverage as well. However, the differences between the plan and the coverage raise the question of who is responsible for preparing for a pandemic and managing an outbreak. In the plan, the government in the form of health experts is directive (although not often explicitly) but the public is morally obligated to somehow play a role; in the media coverage, the government is positioned as responsible for protecting the public but challenged as not doing so adequately. The public in the media coverage is rarely mentioned, and when we are, it is for the most part as collective victims of a potential pandemic. The broader narrative (“our health is at risk from a potential pandemic and expert surveillance is required to manage the threat”) is consistent between the plan and the media coverage, but the “who is responsible for what?” question emerges as a tension.
7.4. Summary

The purpose of this chapter has been to add context to the Chapter 6 analysis of the British Columbia Pandemic Influenza Preparedness Plan. I have shown that there is much to learn from what is not in a text as well as what is in it. In this case, the assumptions that a pandemic influenza will arise elsewhere, will be no one’s fault and involves little or no controversy may not stand up to scrutiny. The latter in particular is challenged in the media coverage, which alludes to potential controversy over the responsibility for managing a pandemic. The 1-year’s Vancouver Sun media coverage related to pandemic influenza reveals the negotiation involved in defining and redefining an issue. There are similarities between the discursive strategies of the media coverage and those of the plan: the high regard for and lack of questioning of medical and scientific expertise, for example, and the presumed significance of a probably imminent pandemic flu outbreak. Not surprisingly, given the difference between the genres, there are also differences in the discursive strategies used, including rhetorical strategies, acknowledgement of potential controversy and challenges to authority. I argue that the similarities, which reflect larger discourses at work in western contemporary society, account for why the British Columbia Pandemic Influenza Preparedness Plan works. The differences between the discourse of the plan and the media coverage, while not great in terms of the larger discourses, reveal tension in terms of the responsibility for protecting the public’s health, and the public’s involvement in healthcare. In the next section, Part 2 of the interpretation stage of the analysis, I review the larger discourses at work in the plan.

8. Interpretation Part 2

The context discussed in the previous chapter, along with the discursive strategies characterizing a pandemic flu as inevitable, significant and manageable as presented in Chapter 6, form the foundation of this chapter. As discussed in my methods chapter, I looked at the larger narrative of the plan within the context of its assumptions and the media coverage and identified four interrelated discourses that work as the broad, macro-level framing on which the more specific language use rests. These discourses account for why the British Columbia Pandemic Influenza Preparedness Plan
is successful at “being a plan”—why it makes sense as it presents the problem of pandemic flu and the solutions in this way.

The first is discourse is healthism, a term coined in the 1980s to encompass two ideas: the increasing tendency to relate all mental, social and physical phenomena to health; and the controversy over who—individual or state—is responsible for our health. The second discourse is risk, which in the case of pandemic flu, sometimes borders on a discourse of fear. Health is intrinsically and inevitably associated with risk (Flynn, 2009), which accounts for the very existence, as well as the tenor, of the British Columbia Pandemic Influenza Preparedness Plan. The third discourse is expertise. Despite some discussion in the literature of the notion of expertise having increasingly less traction with the public (Crossley, 2002b), it is very much at work in the pandemic plan and in the media coverage, and I argue still strong in healthcare and society generally. The final discourse is surveillance; in particular, its increasing acceptance as a natural and necessary part of life. Surveillance is seen as important not only to protect us and our property and belongings, but also to generate knowledge that will enable prediction and control—especially in healthcare. I discuss each of these discourses in turn, including how they account for the characterization of the pandemic flu as inevitable, significant and manageable, and in that way contribute to the plan’s common sense.

8.1. Healthism

The term healthism seems to have first been used by political economist Robert Crawford, whose much-cited article “Healthism and the medicalization of everyday life” was published in 1980 in the International Journal of Health Services. In this article, on a theme similar to that discussed in the surveillance section below, Crawford describes how a new political ideology that emerged in the US during the 1970s shifted responsibility for health from the state to the individual (Cheek, 2008). A similar movement took place in Canada under the umbrella of the population health movement (Bercovitz, 2000), where the focus was taken off the health system and put onto health-in-general:

Under the guise of ‘lifestyle’, ‘empowerment’, ‘emancipation’, ‘the community’, and ‘population health’, the responsibility for one’s health and fitness is now
returned to the individual and the community, and is less a state responsibility. (p. 11)

According to Cheek, since then we have seen the “rise of refracted and mutated forms of...healthism” (p. 974). Health is now is “one of the guiding mantras of both governments and individuals, paradoxically and simultaneously both a collective and individual responsibility and desire” (p. 974). Individuals are addressed on the assumption that they want to be healthy, and are enjoined to seek out ways to promote their own health. This assumption is very evident in the plan, as the Chapter 6 analysis demonstrated.

Healthism is what Foucault would call one of the technologies of the self, practices used by individuals that enable governmentality (the mechanism through which citizens are governed and govern themselves). Foucault used this term to describe how power was exercised in the 18th Century to manage the growing populations of Europe through training, self-surveillance, normalization and examinations, all of which allowed for administration of life. Later, he referred to governmentality as biopower (Foucault, 1990), describing how it strengthens the cycle in which teaching people to take care of themselves also teaches people to occupy themselves with the state, through “processes of endless self-examination, self-care and self-improvement” (Petersen, 1997, p. 194). Also involved in governmentality, according to Foucault, are other forms of social control such as schools and hospitals—even self-help groups, workplaces, exercise classes and gyms. Governmentality has been particularly successful in areas related to health. Although our concern with health is not new, it has never been so omnipresent, says Gwyn (2002). “We are saturated with health issues, an era obsessed with health and fitness, in which ‘perfect health’ is seen to have its corollary in ‘total fitness’” (p. 6). According to Cheek (2008), we are living in an era where:

health and understandings of what it is have mutated and been transformed such that health is now a central focus of all parts of our lives, not just when we are experiencing the absence of disease or illness, attempting to prevent illness and disease, or interacting with what traditionally we would have considered the healthcare system or healthcare practice realm. Being healthy does not mean not being ill. This idea of course is not new. However, what is new or refracted is that being healthy increasingly means embracing a range of lifestyle choices and
technologies that once would have been considered at the periphery of health, if indeed part of it at all. (pp. 974-975)

We work on ourselves as body projects, monitoring our intake of food, supplementing our diets, working out physically, and even pursuing optimal mental health through self-help books and expert advice. As “health consumers” (Armstrong, Armstrong, & Coburn, 2001) we demand choice and freedom in what we consume, seeking good health as if it were a commodity. In addition to this quest for even better fitness by already healthy people, those who are at risk for or suffer from certain conditions can monitor their health—and even download the results of their self-tests to doctors’ offices—through what Bauer and Olsen (2009) refer to as “healthwear” technologies, portable pieces of equipment that allow the monitoring of health, made possible by “digitalisation, miniaturization and mediation” (p. 120).

It is in great part because everything is about health that the British Columbia Pandemic Influenza Preparedness Plan makes sense. Healthism perpetuates the idea that everything is, or can be, under our control—even things that have not happened yet. Since disease must be avoided at all costs (especially inevitable and significant disease), the activities outlined in the plan are justified. In the service of health, surveillance—of diseases, of ourselves, our communities and the world—is a “taken for granted and widely accepted if not desired practice” (Bauer & Olsen, 2009, p. 117). Specific examples from the analysis that demonstrate healthism are the references to medical progress and its successes, the seemingly commonsense notion that British Columbians would see every influenza season as an opportunity to prepare for a pandemic, and the frequent use of moral imperatives to engage British Columbians in planning. The latter is found in such titles as “Why we should worry about influenza” (p. ii) and “All British Columbians can—and should—get involved in pandemic planning and preparation” (p. 7).

The notion of healthism as I have described it above paints an optimistic picture of people in control of how they feel and look, how healthy they are, how long they live, and so on. There is another side to healthism, however, more aligned with the heightened, imminent risk I discuss in more detail in the next section. That is, despite daily news about the advancements of modern medicine, and despite taking advantage of and participating in these advancements ourselves, westerners are “creatures marked
by a uniquely unstable relationship to our health” (Morris, 1998, p. 2), always on the lookout for signals that we are ill or about to become ill. This concern is for ourselves and our families, but increasingly, in line with a risk society thesis, also at a population and global level. We are wary of the water we drink, the air we breathe and the food we eat. When it comes to potential disasters, Durodie (in Menon, 2008) suggests: “there is…a contemporary cultural proclivity to speculate wildly as to the likelihood of adverse events and to demand high-profile responses and capabilities based on worst-case scenarios” (p. 527).

Cheek (2008) argues that in contemporary forms of healthism, the closer certainty seems to be, the more it seems to recede into the background. “We live in a state of heightened awareness and understanding of health but at the same time experience the feeling of never having enough of, or knowledge about, health” (p. 976).

The more knowledge we have, the more concerned we become about what might happen, and the more resources and attention governments and individuals put towards systems and processes—which often involve the development of more knowledge—to prevent and control certain circumstances. The irony is that despite the sophisticated technologies of global surveillance and epidemiology and virology discussed in the British Columbia Pandemic Influenza Preparedness Plan and in infectious disease discourse generally, much of the knowledge needed, or at least asked of from individuals, relates to basic hygiene. For example, a key provincial responsibility in the plan is to “provide information to the public and the media about basic infection control measures, such as washing hands” (p. 27). The situation is similar to the one discussed by Koteyko et al. (2008) in their study of MRSA in the UK media, where two discourses competed for attention: a common sense one suggesting MRSA is not rocket science, and a scientific or expert one suggesting it is much more complicated than people realize and there is no silver bullet. In that case, because the disease had broken out, it was possible to see how through these discourses, blame was attributed to some individuals, and others were vindicated. With a pandemic, which has not occurred, both the big science and the common sense hygiene themes make sense within the larger discourse of healthism described here. On the one hand, we value good health and all of us should be taking steps to protect our health and the health of others through understanding and practicing good hygiene. (The extent to which this knowledge is
valued is seen in social science research intent on determining what the public knows and does not know about pandemic flu and how to avoid it, with a view to filling the gap.)

On the other hand, we value good health and it is under threat by a global virus, which is not a simple matter and justifies high-tech, expert solutions. As discussed in the analysis, though, it is not as straightforward as “experts have the responsibility for surveillance” and “the public has responsibility for good hygiene.” Many roles and responsibilities are described at a high level in the plan, but there seems to be an unwillingness to ascribe full authority to some groups for fear of disempowering others. Similarly, in the media coverage, the government comes regularly under attack from a range of experts (and some journalists) for not taking enough responsibility for and control over pandemic flu preparation. It seems that the prevailing lifestyle/empowerment/emancipation discourse (Bercovitz, 2000) may not serve us well in all situations, especially post-SARS.

8.2. Risk

As I demonstrated in the discourse analysis, engaging people in preparation for a pandemic flu rests on an assumption that people will feel at risk for it. The social sciences and humanities literature shows, though, that it is not as straightforward as that. Unless people are directly involved in activities related to pandemic influenza preparedness, it appears most of them do not spend a lot of time thinking about the possibility of an outbreak. This situation is the bane of many a health promoter's existence, since his or her work depends on people’s feeling at risk for or threatened by certain health conditions, in order that their behaviour may be changed or they may be convinced to undertake specific actions, for example, screening for breast or colon cancer.

In general, it seems to be well accepted that one should make oneself aware of risks and act in accordance with expert advice to prevent them or lessen their impact, says Lupton (1999). In discussing the pervasive nature of risk in contemporary western societies, she suggests the idea that personal responsibility for the control of risk “appears to be acculturated very early in life” (p.107). The problem is, however, that as more and more risks are discovered (or as Powers (2003) would say, discoverable) and
elucidated by science, it is increasingly difficult and stressful to worry about them all. They are everywhere—or perhaps more appropriately, information about them is everywhere. Reading the paper one morning recently, I learned that I should be afraid of bath toys (“Toying with our safety,” Van. Sun, Jun. 8, 2009, p. D1). The article is a review of a book by Rick Smith and Bruce Lourie called Slow Death by Rubber Duck: How the Toxic Chemistry of Everyday Life Affects our Health. In it, the authors apparently expose “the toxic makeup of everyday items ranging from bed sheets to toothpaste to antibacterial hand cleansers.” The review provokes two almost simultaneous responses in me, and probably in many people: nothing is safe and I should pay more attention to what I have in my house; and nothing is safe and I may as well give up trying to control it all. If I look at the paper over the entire week, here are some other things I could worry about for the sake of my health.

- An individual infected with tuberculosis may have infected others with whom he came into contact on a Greyhound bus. Tuberculosis, which spreads through coughing and sneezing, can be very serious. I might worry about tuberculosis itself, or, since I take public transport, I might be concerned about any number of other infections I cannot see but which I could contract. (Van. Sun, May 29, 2009)
- Unhealthy processed and packaged foods have become a diet mainstay for North Americans, who have forgotten how to eat healthily. (Van. Sun, Jun. 1, 2009)
- A young man went into a BC community hospital for a simple hernia operation and contracted flesh-eating disease, which occurs in situations where infection control systems are not optimal, as is often the case in busy hospitals. (Van. Sun, May 28, 2009)
- Women who gain too much weight during pregnancy risk keeping the weight on, but more importantly, may end up with high blood pressure and gestational diabetes; if one diets while pregnant, one the other hand, one endangers the baby. (Van. Sun, May 29, 2009)
- I should be eating 10 servings of fruit and vegetables per day in order to lower my risk for a huge range of diseases—and I am not. (Van. Sun, May 30, 2009)
- US health officials have confirmed 20 deaths in that country from the H1N1 virus. (There are three more articles on the H1N1 virus in other countries.) (Van. Sun, Jun. 4, 2009)
- An increasing number of behaviours are being recognized—or at least proposed to be classified—as mental illnesses, including apathy, Internet

13 See Appendix E for references for the articles.
addition, chronic fighting with one’s spouse, and post-traumatic embitterment disorder. (Van. Sun, Jun. 1, 2009)

- On the positive side, scientists are close to developing an anti-aging medication that has the same effect as caloric restriction (shown to reduce the aging process) without the attendant deprivation. In the meantime, I might worry about eating too much, or spend time thinking about how to reduce my caloric intake. (Van. Sun, Jun. 4, 2009)

There are many other risks in the newspaper: plane crashes, car crashes, financial crashes, etcetera. Lupton (1999) says there are at least six major categories of risk currently predominating in western societies: environmental, lifestyle, medical, interpersonal, economic, and criminal. It is not difficult to understand why people choose very carefully what risks will occupy their attention, especially since most risks are calculated on an aggregate level, and it is hard to relate them to individual or personal risk (Lauritzen & Sachs, 2001).

Like healthism, and closely tied to it, risk is a major topic in the social sciences, accounting for many books, dedicated journals, and articles. Two major perspectives on risk described by Lupton (2006) are governmentality (associated with Michel Foucault) and the risk society (associated with Ulrich Beck). Foucault did not discuss risk explicitly, but his work on “how modern societies are controlled and organized in ways which invite voluntary participation from their citizens” (Lupton, 2006, p. 13) is very relevant to risk studies, and his influence in the sociology of health and illness has been profound (Turner, 1997). Beck’s work, on the other hand, focuses specifically on risks, which he describes as follows: “By nature…risks have something to do with anticipation, with destruction that has not yet happened but is threatening, and of course in that sense risks are already real today” (Beck, 1992, p. 33). Although advances in healthcare and medicine have reduced risks to a level lower than any time in history, Beck suggests there is a significant difference between the risks of today and those of the past. Along with Bauman (2007), Beck (2006) suggests that in the past, risks—which Bauman calls dangers—were more exactly located. One could take measures to avert or resist them; they came and went and were external to what we do. Risks of today, on the other hand, are endemic features of our own actions, present in and arising from human activities (Beck, 1996). This argument can be demonstrated in medicine, for example, when the relief of one health problem through a new medication causes other health problems through side effects, or when elimination of risks for some people has an adverse affect.
on others (National Research Council, 1989). For Beck, scientific and industrial developments comprise a set of risks such as we have never faced. As is the case with a pandemic influenza, risks are not bound in time, nor are they bound geographically. In many cases, no one can be held accountable for them. They are also difficult to anticipate and to manage, despite—or perhaps because of—the sophistication of our technology: “Along with the growing capacity of technical options grows the incalculability of their consequences” (Beck, 1992, p. 22).

Beck’s work on the macro-social processes characteristic of late modern societies and their relation to concepts of risk has been criticized for being too realist (Lupton, 1999; Lupton, 2006; Petersen, 1997): for suggesting that there are “real” risks—worse today than the real risks of the past—that exist independently of our definition and discussion of them. On the other hand, Foucauldian approaches have been criticized for suggesting that nothing should be seen as a risk in itself, but rather that events are constructed as risks only through discourse. This debate is similar to the one I discussed in Chapter 4 between Hammersley and Potter and the extent to which individuals’ characteristics and views should be considered inherent traits, or as constructed only in discourse settings. My reaction to the risk debate is similar: I think those on each side might be talking past each other. I find acknowledgement in Beck’s writing of the social and cultural processes involved in constructing risk. Indeed, in World Risk Society (Beck, 1999), he writes about the realism-constructivism debate and does not himself find the ideas mutually exclusive. Similarly, although some governmentality scholars may approach risks only as social constructions, the focus of most articles I have read, especially on healthcare topics, is the way in which risks are constructed (and therefore gain attention, or are ignored), not whether they are real or not. I am sympathetic to the view that the consequences of human actions are greater than in the past and, much more so than previously, are now of our own making (for example, with a pandemic flu, it is clear that air travel results in increased transmission of infection). However, it is important not to lose sight of the constructed element of risk: that our ability to conceive of risk in certain ways drives how the risk is defined and how we respond to it. As an example, in Birth of the Clinic, Foucault suggests that physicians did not simply begin to see what they did not have the expertise to see before, but rather that the very possibility of seeing such things arose. Following from this idea, we can ask: are we really at risk
for more and worse illnesses than we were in the past, or has our capacity to find and
categorize them simply increased?

Turner (1997) compares Foucault's analysis of power, knowledge and discipline
(in one word, governmentality) and Beck’s risk society. He sees them as different
paradigms, and wonders about their compatibility: one view suggests we are
experiencing deregulation at the macro-global level (risk society); the other suggests a
micro-politics of surveillance and control is in effect (Foucault). Despite Foucault’s
insights and impact, Turner questions how relevant his theories are in a new social
environment that is seen to be “postmodern, deregulated and risky” (p. xvii). He wonders
how the Foucauldian language of discipline and control fit with the profound changes in
healthcare, and society in general.

The very notion of ‘security’ sits oddly with the contemporary enthusiasm for a
discourse of entrepreneurish, just-in-time management systems and the culture
of risk. These changes in bureaucratic structures have occurred alongside major
epidemiological changes which in a sinister fashion appear to mimic the
contingency of the market place; namely the spread of AIDS and other infectious
diseases, the deterioration of the food supply, the dangers of inter-species
disease such as ‘mad cow disease’ and the associated risks of Creutzfeld
Jacob’s disease. (p. xviii)

I agree there is a new, heightened urgency to the discourse about the risk of emerging
infectious diseases—for example in the influenza preparedness plan—that reflects the
ideas of risk society scholars. For example, we read that “Influenza pandemics represent
global emergencies with catastrophic impact” (p. ii), and “Some time in the future, British
Columbia (BC) will face an influenza pandemic—a global epidemic caused by a strain of
influenza virus that spreads rapidly and causes high rates of disease and death” (p. 3).
The public may not express much concern, as measured in studies, but it is evident in
the preparation and management activities undertaken worldwide by public health
agencies and governments. On the other hand, I do not see these ideas in conflict with
those of governmentality scholars. We see the incitement, through documents such as
the British Columbia Pandemic Influenza Preparedness Plan, for everyone to become
involved in preparing for a pandemic, to practice good hygiene, and to get an annual flu
shot for their own protection as well as that of society. As discussed in the analysis,
there are many moral responsibilities implied in the plan, and these are very much a BC
Mental Health and Addiction Services topic of interest for governmentality scholars. The
moral responsibilities include not only specific activities such as getting an annual flu vaccine and reading information about pandemic influenza, but joining the global preparation effort and generally (and somewhat vaguely) “being prepared.”

In the end, Turner also allows that risk society and governmentality theses may be reconcilable. His five possibilities for reconciliation:

- Uncertainty at the global level through financial deregulation heightens the need for micro-surveillance and discipline within each industrial society;
- A risk society based on regulation and devolution often requires more subtle and systematic forms of control (for example, regulatory control where public utilities have been privatized);
- Governments often have to intervene, despite their ideological commitment to privatization and deregulation, to save major companies and public institutions that have fallen into debt;
- Modern societies are structured by two apparently contradictory processes: the growth of risk cultures and the application of Fordist production methods and rational managerialism (the latter a response to the uncertainty of the former);
- The notion of generalized risk in the environment may lead to greater surveillance and control through the promotion of preventive medicine.

Except for the last point, Turner was referring to the global economy. Were he writing now, there would be even more weight to his argument that reconciliation of governmentality and risk society theories is possible and even desirable. A potential pandemic offers a good example, where travel, international relations, lack of government support for farmers resulting in unsafe production processes in order that they make a living—all things reflective of a risk society thesis—result in risks that require re-regulation and control. These risks also require that individuals internalize them and act on them personally, for their own protection and that of the population. In fact, using the example of a pandemic flu, it is possible to elaborate on both these theories in a way that accounts for the discourse in the plan. With the risk society, it may no longer be the case that minimum intervention on the part of the state, and self-responsibility, self-surveillance and individual autonomy, as noted by Fusco (2006), are the norm. We could easily see a return to measures such as quarantine, and immigration and travel restrictions. With governmentality, the monitoring of risks and behaviours and conditions is not focused only on oneself or within physically defined
areas such as prisons and hospitals, it is also global—something that Foucault would not have experienced in his lifetime to the extent that it exists now.

8.3. Expertise

As I demonstrated in my analysis, the British Columbia Pandemic Influenza Preparedness Plan draws heavily on the concept of expertise to characterize the pandemic flu as inevitable, significant and manageable. For example, experts wrote the document, connect with other experts as needed, and quote other experts to establish truth claims. We read that “Experts agree—we are overdue for another [pandemic]” (p. ii). Indeed, as Hatty and Hatty (1999) note, epidemics have always created conditions conducive to the enhancement of medical authority. In the plan, experts are called upon to define a potential pandemic, set up systems to anticipate its arrival, estimate its impact, and develop strategies to manage it when it gets here. Experts are similarly used in the media coverage to establish truth claims, illustrated by phrases such as “top international flu experts warn” (Van. Sun, Jan. 25, 2005) and “an international conference of bird flu experts is urging” (Van. Sun, Feb. 26, 2005). This view of expertise as able to predict and control through specialized knowledge reflects a broader social discourse of expertise, which in turn—or perhaps because of this—is a much-debated topic in social scientific studies of health and healthcare.

Recently, it has been argued that trust in and credibility of medical expertise is waning (Crossley, 2002b) as people take more control over their own health and healthcare. Joining the ranks of the experts, according to some, are patients themselves. Candlin and Candlin (2002) claim that “contrasts between expert knowledge and lay knowledge...are themselves breaking down in the field of healthcare as the focus of authority shifts more to a partnership model of care provider and patient or client” (p. 120). Certainly, this was the idea of the self-management movement, which arose in relation to chronic diseases that could not be cured and therefore were best monitored and dealt with on a daily basis by the patient him- or herself. Self-management is closely related to the concept of empowerment, which is “the notion of people having power to take action to control and enhance their own lives, and the processes of enabling them to do so” (Grace, V.1991, p. 330).
However, as pointed out by others, professionals are still required to guide and ultimately assess the effectiveness of whatever it is the empowered are doing. As Lord and McKillop Farlow note (in Powers, 2003), it is a mistake to talk about empowerment as something one person does to another (people must empower themselves), but this in fact is the tenor of much empowerment discourse. In a clinician-patient relationship, the more dichotomous the professional-lay relationship is considered to be, the more the former can proceed to empower the latter (Lhussier & Carr, 2008). Relationships of empowerment, says Cruikshank (in Orsini, 2006), include four features:

- They are established by expertise, by practitioners in the field;
- they involve some democratic exercise of power, with one party attempting to empower another;
- they rely upon a knowledge concerning those to be empowered;
- they are both voluntary and coercive.

Powers (2003) quite bluntly says “the concept of empowerment is used by health professionals as an intervention to produce compliance” (p. 227). Although I think Powers attributes more intent to health professionals than is warranted, her sentiment is nicely illustrated by the results of an interview study my colleagues and I conducted on how public health officials communicate with the public about health emergencies (Holmes, Henrich, Hancock, & Lestou, 2009). When we asked participants to describe or define effective communications during a health crisis, most of them answered: “it empowers.” When we asked them subsequently what is the outcome of effective communication, many of the same people said “compliance.” It is almost as if communicating in a non-authoritative way, providing what is seen as unbiased, sensible information from which people are empowered to make their own decisions, will naturally lead to accordance with expert views, and compliance with the desired actions. An example from the plan is “Everyone has a role to play in preparing for a pandemic. You can start by: Staying informed; Ensuring you are immunized on a yearly basis” (p. 3).

I was never convinced of the decline of expertise. Even the idea of healthism, where individuals pursue their own fitness and healthcare, assigns experts a key role. They are the ones who tell us how to conduct ourselves in terms of safe, precise techniques to improve our health (Sanford & Harris-Ali, 2005). The influenza preparedness plan makes sense because it is replete with such experts. They will watch
for signs of the mutation and re-assortment of a virus in ways a layperson could never conceive of. They will develop a vaccine specifically aimed at killing that virus. Their surveillance systems will anticipate it before it gets here and track its progress around the world—something I could never do. These experts are so skilled, as I mentioned earlier, that they can identify a knowledge gap and estimate when they will be able to fill it (an observation made also by Candlin and Candlin (2002), who note the clinically and therapeutically motivated expression of uncertainty can itself be evidence of expertise).

Despite its continued presence, however, I do note a shift in contemporary medical expertise since the era of the all-knowing physician. These days, an increasing number of specialists and sub-specialists know more and more about smaller and smaller parts of the body, parts we cannot even see. Even family practitioners often specialize due to the vast amount of knowledge available and required on specific conditions. Although they maintain a general practice, these physicians choose a focus, for example, obstetrics, mental health, chronic disease or care of the elderly. The fragmented nature of expertise—which somehow makes it seem more specialized—is reflected in the British Columbia Pandemic Influenza Preparedness Plan, even a quick scan of which reveals a myriad of experts ready to plan for and manage an outbreak. Many of these professions (bio-informaticians, sentinel physicians, virologists, mathematical modellers) would have been unheard of some years ago.

We see attempts in the plan, through the many references to partnership and collegiality, at involving the public in pandemic influenza preparedness. However, experts still define the terms of that partnership, for example telling us what we need to know, and arranging to inform us in timely ways so that we can all prepare for and manage an outbreak. As I discussed in my analysis, the public’s responsibilities in the plan are for the most part moral ones, even when they relate to behaviour change. The public is to worry, to generally “be involved” in planning, to stay informed and to get vaccinated (not only for themselves, but for the health of others too). We are either passive (waiting to be engaged) or problematic and irrational (refusing vaccinations). We are all patients in waiting (Armstrong, 1995; Giddens, 1991; Lupton, 1995). Despite self-management and other democratic movements in healthcare, a pandemic seems out of the public’s hands (except for our responsibility to wash them often) and firmly in those of the experts.
8.4. Surveillance

Surveillance of people and of disease is a fundamental element of the British Columbia Pandemic Influenza Preparedness Plan, at the global, national, municipal, community and individual levels. It allows us to anticipate a new virus, track its progress, and generally manage and control an outbreak. The notion of surveillance has positive connotations (in relation to keeping populations healthy), but also negative ones (the continuous monitoring of those same populations). “Surveillance scholars” (Bauer & Olsen, 2009) are in no short supply of material, especially since the beginning of this century with the heightened fear over global terrorism and the resulting security measures put in place.

Interest in the concept of surveillance is not new, however. For example, it has always been present in the work of Foucault, whose writings on governmentality—organized practices (both techniques and ways of thinking) through which citizens are governed and govern themselves (Lupton, 2006)—perhaps best express his ideas related to surveillance. Of relevance to this discussion is his Birth of the Clinic (Foucault, 1973), in which he describes two myths he saw as arising in the late 18th Century.

- The myth of a nationalized medical profession, with a power over the individual body similar to the power the clergy formerly held over the soul;
- the myth of a disease-free society, restored to its original state of health.

These myths, in which the doctor was so wise that he (and a doctor would indeed have been “he” at that point) could lead the community to utopia, are at the heart of the Foucauldian concept of the clinical gaze. This gaze, sometimes called the medical gaze, redefined disease from something the patient told the doctor about (elicited through the doctor’s question “What is wrong with you?”) to something seen by physicians (aided by the question “Where does it hurt?”). Despite its name, the clinical gaze was not just about sight: it referred to the “sight/touch/hearing trinity” through which “inaccessible illness is tracked down by markers, gauged in depth, drawn to the surface, and projected virtually…” (Foucault, 1973, p.164). The clinical gaze emerged with the advent of clinics and hospitals as sites of medical intervention:
The clinic—constantly praised for its empiricism, the modesty of its attention, and the care with which it silently lets things surface to the observing gaze without disturbing them with discourse—owes its real importance to the fact that it is a reorganization in depth, not only of medical discourse, but of the very real possibility of a discourse about disease. (Foucault, 1973, p. xix)

The clinical gaze, then, did not just come about because we developed the expertise to see what we could not see before, but because a shift in knowledge defined what could be seen at all. In this way, knowledge is not objective truth, but rather socially constructed discourse about entities and processes that were assumed to have an objective existence (Powers, 2003).

Writing at about the same time as Foucault and on the same period in history, was Jewson (1976). In “The Disappearance of the Sick-Man from Medical Cosmology, 1770-1870,” he describes three modes of medicine: bedside, hospital and laboratory. Similar to Foucault, Jewson is interested in the ways in which:

medical cosmologies...enable their adherents to make sense of and to act within the world. They provide an overall definition of the field and a preliminary affirmation of its form. Hence cosmologies are not only ways of seeing, but also ways of not seeing. (p. 226)

According to Jewson, the patient in the era of bedside medicine exercised significant power. Not only did the physician rely on him for a diagnosis (as Foucault suggests is elicited by the question “how are you feeling?”), he relied on the patient for his livelihood (patients paid fees directly to physicians). About 1800, bedside medicine shifted to hospital medicine, which equates with Foucault’s conception of the clinical gaze. Here, the patient was no longer a person, but was instead a diseased body to be diagnosed and classified—through which processes the field of medical knowledge overall could be furthered. Foucault’s object of study was the clinic, but Jewson went further to describe laboratory medicine, arising in the mid-19th Century. Laboratory medicine in effect took diseases right out of bodies, exploring the bio-chemical processes at work by highlighting technical processes of chemistry and physics. Instead of caring for a patient, the medical professional’s role in laboratory medicine was to analyze and explain. Here, the medical professional (a laboratory technician) had no contact with the patient at all. One of the most important ways for physicians to demonstrate to the public that their profession was both legitimate and forward-looking
was to embrace laboratory science (Alcabes, 2009). Faith grew in this new mode of scientific investigation: microscopes and test tubes “provided a new kind of divination into the fundamental nature of disease” (Tomes, 1998, p. 28).

Armstrong (1995) built on the exploration of changing medical cosmologies (which can be understood as worldviews, or as paradigms), particularly the idea of Foucault’s clinical gaze. In his theory of surveillance medicine, he describes a shift in the 20th Century from hospital medicine, which he says predominated from about 1800 until well into the 1900s (but has not disappeared, he acknowledges). In hospital medicine, as discussed by Foucault, a disease was diagnosed in a patient by an all-seeing physician. With the shift to surveillance medicine, the individual became responsible for watching for disease him or herself through self-surveillance. Armstrong argues that surveillance medicine changed the nature of illness dramatically. Whereas hospital medicine was concerned with patients in whom a lesion could be identified, surveillance medicine related to everyone. Patients became indistinguishable from people, because all people were also patients.

According to Armstrong (1995), the 20th Century child was the first target of surveillance medicine. Due to a perceived constant threat to a child’s development at certain stages, there emerged baby clinics, immunizations, and height and weight charts. Other groups such as pregnant women and middle-aged people also began to be targeted, with the purpose of sorting out the individuals in danger of not being healthy at some point in their lives (Lauritzen & Sachs, 2001). Increasingly, medical surveillance left the hospital and penetrated the wider society, taking screening programs—initially for diseases and later, for risk factors for diseases—to new and broader population groups. As Armstrong (1995) points out, however, screening techniques have always met with some resistance. Therefore, “a strategy of health promotion [that] could potentially circumvent the problems inherent in illness screening” (p. 399) was employed: responsibility for surveillance was given to patients. The strategy soon took hold in a number of areas of life, from exercise to diet to stress management, signalling the ultimate triumph of surveillance medicine: “internalization by all the population” (p. 400). Evidence of surveillance medicine can be seen in the recent emphasis in healthcare on the self-management movement as discussed, in which individuals are encouraged to take responsibility for more and more aspects of their healthcare. The “active patient” is
now the locus of health promotion strategies that have moved from “the communitarian ideological assumption of the state protecting the health of the body of the population” (Pryce, 2005, p. 157). Observation and the increased surveillance of our bodies by medicine—through individuals acting as active patients—is key to this development. We have tacitly agreed to observe and measure ourselves, and to be observed and measured, for the “advancement of civilization and scientific knowledge” (Powers, 2003, p. 230).

Others have expanded on Armstrong’s (1995) theory. In an article on what is popularly referred to as the obesity epidemic (Holmes, 2009), I showed that this shift of responsibility from the state to the individual is not one-way or static: control and responsibility can swing back and forth, if it serves specific needs such as flouting of responsibility or gaining of control. While obesity was once positioned as a risk factor, and thus presented a threat to an individual, in the late 20th and early 21st centuries it became an epidemic, presenting a threat to a population, and justifying action at a national level. I used an analysis of Canadian media coverage to demonstrate how obesity, when it became an epidemic, was positioned as a political hindrance, impeding national progress and interfering with the perceived Canadian status of good health. By creating a groundswell of concern that justified action and called for immediate solutions, then, the obesity epidemic benefited—and continues to benefit—many levels of enterprise, from scientific and epidemiological research, to medicine, to public health, to government, to private industry. Even now in obesity medicine and research circles, new evidence is leading to new research directions and new areas of expertise, as well as to new policies and programs, which in turn need evaluating. In this way, the state takes back control when it benefits the nation, and surveillance medicine exists at a national and population level as well as an individual level (since of course people are still expected to eat well, get enough exercise and maintain a healthy weight).

Bauer and Olsen (2009) also draw on Foucault’s and Armstrong’s ideas in their discussion of clinical diagnostics (of individual patients) and health surveillance (at a population level)—what they refer to as both poles of Foucault’s notion of biopower. They suggest there has recently been a reconfiguration of the clinical gaze in western biomedicine. The clinical gaze is being delocalized, say Bauer and Olsen, in part through the impact of computing and electronic networks on contemporary medicine, which allow
viewing of images of a patient’s body rather than the former practices of invasive scrutiny:

Because non-invasive medicine stresses the necessity to disrupt the body as little as possible during diagnosis and medical treatment, physicians are compelled to find new ways of gaining access to the bodily interior. This is mainly done by means of visualization. Through sophisticated vision systems, multiplex images of the body interior are projected on computer screens and video monitors. (p. 118)

The resulting medical images, say Bauer and Olsen (2009), are transmitted back and forth through the digital networks of hospitals, clinics and laboratories, “[subjecting] the body to new forms of surveillance” (p. 118). At a population level, the medical panopticon, which the authors suggest was previously confined to the physical parameters of a hospital, is diffused, via a grid of information networks, throughout society. In turn, Bauer and Olsen see a shift in medical knowledge from the physician’s experience and interaction with individual patients to “the level of large patient collectives evaluated with a statistical paradigm” (p. 122), hence the population health strategies enabled by what they refer to as the “data hunger of quality management” (p. 123).

French (2009) also develops the theory of surveillance medicine, arguing that contemporary concerns with emerging infectious diseases such as HIV/AIDS move the discourse of public health surveillance away from individuals into a new frame of reference, one involving disease and its pathogens, that is both more expansive and increasingly superficial: “simultaneously totalizing and reductionist” (p.102). The reason for this move, says French, is the strong link between public health surveillance and war, made originally by Alexander Langmuir, who popularized the term public health surveillance in the 1950s. Langmuir capitalized on fears of biological warfare, getting money and buy-in to build a public health infrastructure that could withstand what he saw as the imminent dangers of infectious material launched on the public by their enemies. The term has never escaped its association with war, says French. Like war (although more so now, in western societies), disease exists everywhere as a potential: “Humanity itself is held to be at stake, and this calls for a globalization of surveillance. At the same time, since the enemy is microbial, this globalized surveillance also attempts a molecular level gaze” (p. 109). By molecular level gaze, French means sub-cellular surveillance, which is increasingly computerized and automated. Like Bauer and Olsen, French
seems to be discussing the micro-level and the global-level as two poles of biopower: genomics and proteomics research has geared medical attention away from the macro-anatomical body towards a micro, sub-optical, yet at the same time, global political level (Thacker, in Bauer & Olsen, 2009). The result, according to French, is a surveillance so focused on the all or nothing eradication of disease that the broader determinants of health are forgotten.

These articles build on Armstrong’s (1995) theory of surveillance medicine fruitfully, applying it to the contemporary situation in which “the digital revolution has taken mass surveillance from a possibility to a reality” (Earle, Foley, Komaromy, & Lloyd, 2009). I agree with French, and with Bauer and Olsen, that anxieties caused by globalization leave us susceptible to arguments for an intensification of surveillance. These arguments underpin the British Columbia Pandemic Influenza Preparedness Plan, accounting for its common sense. A pandemic flu is both inevitable and significant, and those characteristics, coupled with the knowledge that the virus will probably emerge elsewhere in the world, justify the massive resources being poured into looking out for it through sophisticated surveillance systems—which in turn make it manageable. We read several times sentences such as “A surveillance network provides early warning of the arrival of influenza” (p. 17).

There is something else at work in the pandemic flu plan, though. Alongside these highly sophisticated global surveillance mechanisms, there co-exist some very simple, “back to basics” ones focused on the doctor-patient relationship and the individual. A flu virus demands that the physician ask about and observe obvious symptoms such as fever, coughing and respiratory congestion. It also demands that people monitor themselves for such symptoms. It is true that French’s “molecular level gaze” (p. 109) exists in the identification of viruses that have mutated and recombined into new viral subtypes—but the physician does not identify these viral subtypes, a laboratory technician does. With pandemic flu, the face-to-face clinician-patient gaze, rather than replaced by “extensive networks of electronic communication” (p. 118), is firmly re-established. Rather than two poles of bio-power, pandemic influenza control involves a web of surveillance: global, national and provincial systems and networks; and “sentinel physicians” (BC Ministry of Health & BC Centre for Disease Control, 2005, p. 26), who monitor their communities and report outbreaks of illness to provincial
authorities. The full range of health professionals, from physicians in their clinics, to professionals in health authorities and hospitals and public health units, are also engaged in the lookout for signs of influenza, reactions to vaccines, and compliance with public health directives. In the media coverage, we read about environmental health officers observing pig farms, poultry farms, and wild avian gathering places. The public remains vigilant for symptoms in our own bodies. We watch others, as well—for signs of disease but also for adherence to the preventive practices of handwashing, sneezing into our elbows and staying home from work if we feel unwell. As discussed in Chapter 7, in one media story the public is even urged to be vigilant for dead wild birds (Van. Sun, Oct. 9, 2005).

Because a pandemic is constructed in the plan as an equal opportunity disease in that it can affect anyone, regardless, for example, of age, socioeconomic status, race and so on (Garoon & Duggan, 2008), this web of surveillance makes sense. We are in a collective a state of uncertainty, the only answer for which is constant vigilance of the most sophisticated as well as the most fundamental type.

8.5. Summary

In this chapter, I discussed the discourses of healthism, risk, expertise and surveillance as underpinning the construction of a pandemic flu in the British Columbia Pandemic Influenza Preparedness Plan. This construction makes sense to us because it is based on these discourses that circulate in western contemporary society. They weave a familiar story: good health is a personal and societal responsibility and thanks to modern medicine is increasingly achievable; however, a number of risks exist, at a number of levels, from the personal to the global; and expert surveillance and guidance are required to protect us.

In my concluding chapter, I summarize the study and discuss some of the implications of this construction, which stem from the interests and values at play in the construction of knowledge about pandemic flu and the responses to it.
9. Conclusion

This study has demonstrated how the *British Columbia Pandemic Influenza Preparedness Plan* works to construct a pandemic flu such that planning to manage it in very specific ways makes sense. It has shown the pandemic flu to be discursively constructed as inevitable, significant and manageable, and explained how these characterizations make sense because they reflect several larger discourses in western society: healthism, risk, expertise and surveillance. The study has also suggested, though, that when things make common sense, they tend not to be questioned. A lack of questioning in turn can lead to a failure to:

- notice the interests at play in defining something in certain ways through the various “risk narratives” promoted by individuals and groups (Petersen, 1997, p. 201);
- consider the values underlying a particular description or construction.

I discuss these interests and values and their implications in the next section, before closing with some thoughts on the relevance of discourse analysis to this study.

9.1. Interests and Values

When a pandemic flu is presented as inevitable, significant and manageable, the seemingly obvious urgency precludes challenging it in the way we might challenge other, more overtly controversial, health issues. When we look beneath the surface, though, there are intimations—as shown in some of the literature reviewed in this study, the media coverage, the broader discourses, and even the plan itself—of the interests and values at play. Everyone involved has something to gain from positioning a pandemic as urgent and important—or conversely, from downplaying its urgency and importance.

Two scenarios will illustrate the negotiation involved in this positioning, one from the literature and one a personal experience. First, Menon (2008) discusses the reaction to comments made by Dr. David Nabarro when he was appointed United Nations coordinator for avian influenza in 2005, and declared that 150 million people could soon be afflicted with this little understood virus. Meetings were held all over the world, says
Menon, causing some, themselves infectious disease experts, to comment on the lack of evidence that a pandemic would be devastating, and to criticize what they saw as excessive spending on preparation efforts. One expert said, “you hear about the 100 or more people that have caught bird flu but you don’t hear about the 20 million people that have been living surrounded by contaminated duck secretions that haven’t” (p. 526). Another scientist wryly observed that the ratio of international conferences and meetings on avian influenza to actual patients was probably 10 to 1.

The second scenario involves two separate conversations I had in the space of several hours with two prominent BC infectious disease experts. It was in May 2009, soon after the H1N1 virus outbreak. My first conversation was with the head of a proposed provincial surveillance project who was seeking funding from one an agency with which I was working. At the close of our discussion, he emphasized the importance of paying immediate attention to the outbreak (although I noted he did not present it as a personal opinion). His closing words, with the appropriate pauses for effect, were: “Make no mistake, Bev—this…is the big one.” Later that day, another infectious disease expert, who works with HIV/AIDS patients in the Vancouver’s downtown Eastside, expressed frustration at what he described as the hype over a potential pandemic, resulting in, among other things, a frenzy of handwash-station installations beside office building elevators: “It is absolutely ridiculous,” he said. “And I blame the media entirely.”

There is no right or wrong in the above illustrations; they simply demonstrate, as does the media coverage explored in Chapter 7, the ongoing negotiation involved in defining a situation, and the interests of various people in having the story told in a particular way. With every health issue, a range of people and professionals compete for attention, resources, agreement and endorsement. Viewed from this angle, the *British Columbia Pandemic Influenza Preparedness Plan* is not simply an attempt to protect the public from an inevitable outbreak, but an effort, also, to have certain views adopted and actions taken. It is also a means of demonstrating accountability (the government and health officials are doing their jobs) and perhaps seeking early buy-in for measures that might be taken in future. Certainly, we can see it as an attempt to keep pandemic flu top of mind with the public. The plan is overt about that, with its reference to the need to “ensure pandemic planning stays on the public agenda” (p. 18), but the message is implicitly woven throughout the entire plan.
A recognition of the interests discussed above leads to a discussion of the values inherent in all healthcare activities. Crossley (2002a) suggests that many attempts to promote and protect—and to educate or inform the public about—health are rooted in simplistic models that present the issues as black and white, neutral, and objective. In this case, values are not immediately obvious in something that is inevitable and significant, and that is also manageable in ways that apparently relate directly to those characteristics. When it is everyone against a medical emergency such as a pandemic, it makes sense that we would do everything we can to avoid it. The problem is, though, there is not much for the public to do in this plan. Although we see attempts to address the public as more than simply “vectors of disease” (French, 2009, p. 103), our role is primarily confined to sitting back and waiting to be engaged. Even being engaged consists of being on the receiving end of timely information and advice from experts.

As discussed previously, lack of consideration to values in decision-making can result in unintended consequences. These consequences include inappropriate resource allocation, undue anxiety (or the opposite: complacency), blaming, social norming and more. Choi (2007) discusses issues within the scientific community that result from viewing science and evidence as value-free. Among them:

- Fashionable issues get funded and generate a certain volume of research, which in turn attracts a group of experts whose interest in the topic influences future decisions;
- scientific journals, researchers, the media and the public are particularly interested in new risk factors, research for which gets funded more easily than for existing conditions and risk factors;
- the findings from unpopular or politically incorrect studies do not get published or followed up (Choi gives as an example modern obstetric anaesthesia as a possible risk factor for autism).

I will leave a more in-depth discussion of these and other implications for a future study. Also beyond the scope of this work, which has kept its focus on how discourse makes things happen, is an exploration of opportunities hinted at by its findings. They include the potential to look beyond single-issue risk communication and management to a situation in which communities prepare for emergencies in general; and the possibility of acknowledging the limitations of (and questioning the definition of) expert knowledge and indeed of surveillance itself—and discussing alternatives.
9.2. Summary: 
Challenging Discourse Analysis

Ironstone-Catterall (2007) reviewed books on pandemic influenza for an article she was writing, noting their remarkably similar approach. They all started with the history of past pandemics (spending a lot of time on the 1918 Spanish flu), followed by the explanation of a virus and how it spreads. Next came discussions on how a pandemic is different from the seasonal flu and how antiviral drugs and vaccines work. Finally, they wrapped up with a description of the emergency preparedness plans in place, and information on how readers should prepare. According to all these books, says Ironstone-Catterall, a virus is simply an object of neutral biomedical concern.

A recent news item illustrates in one paragraph how flawed that description is, at the same time demonstrating the importance of discourse. The item was about the World Health Organization’s decision to begin referring to the H1N1 virus as such, instead of as the swine flu. In the article, Canadian Prime Minister Stephen Harper is quoted as follows:

“This is obviously a medical condition so it makes sense to refer to it that way and I gather that’s a standard that the World Health Organization is now trying to encourage,” Harper said.

“The health risks here are to humans; that’s the concern…It is not the health of the hog industry in any way that is at stake here, so we will encourage that terminology.” (Canadian Press, 2009, ¶16-17)

In an instant the swine flu is not the swine flu, it is the H1N1 virus (although we can only imagine how much negotiation and key messaging took place on the issue before Harper responded). Pressure from the hog industry, as Harper calls it, in effect changed the name of the virus to one that better represents its status as “obviously a medical condition.” Harper’s explanation that the health of the hog industry is not at stake makes little sense. The disease was being referred to as the swine flu, not the swine industry flu. Using this reasoning, we should perhaps change how we refer to avian flu, since the concern of public health officials is not for birds but for humans.

The point of the anecdote is not to discover what Harper “really” meant or to challenge him on the logic of his argument, but to demonstrate the complex, ongoing
processes involved in the definition of issues and the development of knowledge about them. As I have shown in this thesis, discourse analysis enables an exploration of these processes, revealing the assumptions, values and moral judgements involved—even in something that is presented as uncontroversial like a potential pandemic influenza. The dynamic nature of a pandemic does not justify, from a social science perspective, viewing it as a three-phased entity as described in the plan. It is more appropriate to conceive of it as a set of epidemiological, biological, social and political processes.

With regard to methodology, discourse analysis suggests that the notion of a final position such as that gleaned from, say, surveys (for example x% of Canadians believe such and such), does not always do justice to the open-ended and interactive constitution of entities, attitudes and opinions. Finally, the methodology of discourse analysis, less concerned with what the content of a text means than what it does (Fusco, 2006), has facilitated the study of how a plan works as a plan. In the process, it has demonstrated that making an issue important and significant does not always involve the use of dramatic rhetorical devices such as those explored in many media studies on health and illness.

In closing, my analysis does not seek to downplay the importance of preparing for a potential pandemic flu outbreak, or to suggest the plan itself is not a good one. As Foucault (1988) says:

A critique is not a matter of saying that things are not right as they are. It is a matter of pointing out on what kinds of assumptions, what kinds of familiar, unchallenged, unconsidered modes of thought the practices that we accept rest. (p. 154)

Through discourse analysis, I have simply highlighted some of these assumptions and modes of thought, and shown how they account for the common sense of the British Columbia Pandemic Influenza Preparedness Plan.
References


Van. *Sun.* [Please refer to Appendix C for the list of Vancouver Sun articles on pandemic influenza and, also, Vancouver Sun articles specific to Section 8.2 are referenced in Appendix E.]


Appendices
Appendix A.

Methods Notes

Task: review the plan thoroughly, making notes on the genre and the narrative. Read the plan again several times, analyzing each time for one of the following: transitivity, vocabulary, mood, metalanguage, modality, forms of address, cohesion, hyperbole, pun, neologism, metaphor and metonym.

- The genre is business or operational plan, and there is a problem/resolution pattern, with the problem being a pandemic and the solution being the plan to manage it. The pattern does not have the “evaluation” piece as is sometimes included, as the plan has not been implemented yet.

- If viewed as a narrative, the story is not over yet. If read like a story, the problem is that we are at risk for pandemic flu. Why is it a problem? We don’t like getting sick, and do everything we can to minimize the risk of getting sick—and in fact to reduce risk factors so we will not get sick. Quite apart from working as a society to conquer disease, and even to maintain health, we work to get healthier and prolong life—and have made great strides in this area. The flu will make us sick and even kill some of us, not to mention create social and economic upheaval (although that type of upheaval is secondary in the plan). However, we have the potential to minimize this risk through surveillance, which works to our advantage in a number of other health-related areas. Surveillance will give us early warning for what is about to happen, and is a major part of planning. The other important part of planning is working together to ready ourselves and our health system for what will happen during a pandemic.

Transitivity

(what happens or is the case [process] to and by whom? [participant])

- A pandemic itself is active at times, followed by verbs such as represent, occurred, spreads (rapidly), causes (high rates of illness and death), will arrive, has (two or more waves), are (global events), will result in (additional costs), pose (unique problems), will arise, could last, is like (no other emergency), will add (extreme pressure to an already stressed health system). Interesting lack of dramatic verbs associated with the pandemic. Not as much agency as I would have thought as I am used to analyzing media coverage, where diseases are active. This is quite different –has things done to it.

- Experts perform a great many actions in the plan. They agree among each other; assess the expected impact of the pandemic; prepare the plan; detail actions and steps to be taken; provide advice and recommendations; and work closely with other experts and expert groups. They are positioned at the beginning of the plan as the collective author. The provincial health officer decides when it is time to declare the pandemic here and gone.

- “We” are referred to not as “doing” but as “should be doing.” The “we” is not identified but presumably means all British Columbians, for whom the plan is
ostensibly written. We should worry, we are overdue for another pandemic, we must work now to develop efficient and effective interventions.

- Progress has agency, as it has enabled the medical community to identify, characterize and produce new vaccines.
- Surveillance has agency, as it provides early warning of the arrival of influenza. Experts and expert groups also perform the surveillance, monitoring influenza activity at all times.
- Vaccine has agency: it will be the primary means of pandemic influenza preparedness. It is the single most effective way to reduce the impact of influenza.
- The plan itself, and planning. Effective planning can mitigate the impact of the pandemic. Planning efforts need to focus on three things. Tables in the plan have agency: they provide a snapshot, they outline roles and responsibilities.
- Health authorities, municipal governments, hospitals and other organizations are responsible for developing their own plans. In the section of the document dealing with the three pandemic phases, provincial responsibilities and health authorities' responsibilities are very clearly spelled out, with active words.
- In general, there is lots of passivity: the document was prepared (by whom?), it is estimated (by whom?), provincial and health authority roles are responsibilities are outlined (by whom?), priority groups for vaccine should be determined (by whom?). This is perhaps partly due to the genre—business/operational plan. Even when the sentence construction is not passive, though, there is not always a human actor. The goal of this planning process is; an overall assessment…should be undertaken.
- The public is very passive, having things done to them. We do not sit on the committee, rather the committee will assess the impact of the pandemic on us. British Columbians will face an influenza pandemic. Things will happen to us—we will be infected, become ill, die, need hospital care. The purpose of the plan is to inform us. As the process evolves, others will develop strategies to inform and engage us. We should get involved (but how?). The public doesn’t seem to have many responsibilities. We are to be informed and educated and our awareness is to be increased—sometimes with no agent, sometimes by health authorities. The province and health authorities have a lot of responsibilities towards the public, developing education materials for us about the proper use of antivirals, alerting us of milestones such as when the pandemic is declared. There is a mixed message here as it seemed at the beginning that “we” were all in this together, but now only certain people are actors in this scenario.
- Thought: who is doing what to whom? Ultimately, what is being described in the plan is not what is being done or has been done in terms of actions, but rather what actions should take place. In general, the plan (the committee? But nameless) is conferring literal and moral responsibility on various individuals and groups.
- Big mix of taking charge as well as seemingly deflecting responsibility.
Vocabulary
(choice of words)

- Pandemic—interesting how it is used very factually in the plan...is this how it is used in the media? Some of the literature discusses how this word is not understood by the public.

- Experts—used without qualification as it is understood, but I would guess used here much less than in media coverage. One place that expertise comes across that is named is in the members of the committee and their titles.

- One of the most interesting words in the plan to me is we, as it is used in a variety of instances, sometimes meaning all British Columbians, sometimes seeming to refer to the committee that wrote the document, sometimes seeming to refer to the health sector overall. Perhaps is used to demonstrate or encourage inclusiveness?

- In general, the plan is written at quite a high level and is very formal, for example, disseminate instead of send; writing of the abatement of pandemic influenza activity rather than when it stops. There are only two instances of informality:

  - We can’t anticipate what exactly will happen during an influenza pandemic (p.20) (elsewhere we cannot or it is not possible to estimate. The second reference here also demonstrates the use of we as referred to above);

  - The Provincial Health Officer decides when it is time to activate pandemic plans (p. 21). (elsewhere the officer declares the pandemic here and over).

- Another interesting word is plan, which is not consistent as sometimes it is guidelines, sometimes document, sometimes planning guide, sometimes even planning process...seems to imply different levels of authority or perhaps deflect responsibility?

- Verbs are not dramatic: is, does, will, should. Although modality of them contributes to tension between partnership and authority (see modality notes).

- Adjectives and adverbs: also not dramatic or seeming to have a rhetorical purpose, unlike much media coverage!

- Many words consistent with business or operational plan, for example, roles, responsibilities, assumptions, as well as use of straightforward verbs (is) and few adjectives and adverbs.

- Surveillance...sometimes perceived as negative (being spied upon) but in the plan positioned as positive, and as vital to the anticipation of and response to a pandemic.

- Other notes about vocabulary are picked up under other headings, for example, experts agree instead of experts claim; experts believe instead of experts know.
Mood
(grammatical characteristic of a sentence—declarative, interrogative, imperative)

- Except for in the tables of provincial and health authority responsibilities (where the mood is imperative), the document is overwhelmingly declarative.
- Apart from the tables, only seven instances of imperative:
  - One on the cover (“Hope for the Best—Prepare for the Worst”);
  - Four in the text boxes at the bottom of pages (“Be prepared to document any extra costs incurred during a pandemic” [p. 8]; “Be prepared!” [p. 12]; “Plan for triage and alternate care sites” [p. 16]; and “Post Pandemic—review, evaluate, revise the plan” [p. 30]);
  - Two, soft imperatives rather than very directive, in the narrative (“Please note the list of stakeholders will expand as the planning process evolves” [p. 7]; “For further information, visit the Provincial Emergency Program website at www.pep.bc.ca) [p. 11]).
- Even within the tables, where the mood is imperative, it is softened by virtue of being in a table, where the sentences are set up as lists under “Provincial Responsibilities” and “Health Authority Responsibilities.” While it is softened, however, it is interesting to note that some of the provincial responsibilities, which are all contained in the left hand column, confer responsibility indirectly to the right hand column of health authority responsibilities. For example, a provincial responsibility is to “coordinate planning with other government agencies” (p. 14) which indicates those other government agencies have a responsibility to be involved.
- Only one instance of interrogative, in the p. 14 text box, when the question posed is actually answered by the authors! “Why get immunized?—to protect your health, to protect the health of others, to build the vaccine production, supply and distribution capacity we will need during a pandemic.” Seems to function as a set up to educate. But the third part of the answer needs more information than is given to make immediate sense.

Metalanguage
(the act of retelling a narrative that involves the speaker or writer’s control of what is being retold and how that retelling is structured and organized)

- Very few instances of metalanguage, probably due to genre which gives authority for the authors to declare, rather than comment on. Only instances are:
  - “Experts agree” (p. ii), not saying whether they are right or simply stating the case directly, but letting the experts speak for themselves. Very different for instance from “experts claim”;
  - “Scientists say it may be imminent” (p. 3);
  - “Most experts believe” (p. 3);
• “By working closely with groups around the world, the WHO hopes to provide early warning of the arrival of pandemic influenza activity…” (p. 3).

Modality
(the expression of speakers’ attitudes towards the proposition(s) that they render in their utterances)

• Lots of instances, but still a more or less even mix between declarative (is, will) and modal (must, might, could). Underpins the authority/partnership tension, and also serves to imply literal and moral obligation as well as to deflect responsibility, or at least make clear what is not the authors’ responsibility. Interesting that it often relates to the responsibility of others. Examples:
  • “We must work now to develop efficient and effective interventions…” (p. 11);
  • “This revised planning guide is intended to help us all…” (p. ii);
  • “Every influenza season must be viewed…” (p. ii);
  • “Clearly, such a widespread outbreak of illness…” (p. 3);
  • “A pandemic usually has two or more waves” (p. 4);
  • “All British Columbians should be involved” (p. 7);
  • “…May be eligible…” (p. 8);
  • “Yearly immunization also helps build…” (p. 13);
  • “Health authorities should consider…” (p. 16);
  • “It is expected to take several months…” (p. 23);
  • “Clear lines of communication should be established…” (p. 27);
  • “…An overall assessment of the clinical, societal and healthcare impact…should be undertaken” (p. 30).

Forms of Address
(how speakers or writers address others)

• Doesn’t seem to be relevant here. Committee members are named, with titles, up front. But otherwise referred to as “the committee.” Very few people referred to here, which I find interesting, since it is clearly people who will need to take action. But it is more about agencies and organizations. The only person who is mentioned, and not by name except in his introduction, is the Provincial Health Officer.
Cohesion
(that which enables a text to stick together)

- This is a good genre to demonstrate cohesion in—plans will often start by directly stating their purpose and discussing the organization of the plan. This one is no exception, explicitly stating its purpose, and including a section on organization. Very consistent in terms of the graphical layout of the plan.
- Cohesion is also demonstrated through other grammatical and rhetorical and discursive devices, as per notes under other headings.
- Cohesion weak in some places as demonstrated by the tension between the authority and partnership language.
- Often in organizational documents such as plans, text boxes are used to tell a story across the document. This is not the case here. They are used to sum up the content of the page it is on but could not be used as a summary of the document if read in order. They read:
  - “One of the best ways to prepare for a pandemic is to make better use of existing prevention and control measures between pandemics” (p. 3);
  - “Everyone has a role to play in preparing for a pandemic. You can start by: staying informed; ensuring you are immunized on a yearly basis” (p. 7);
  - “Be prepared to document any extra costs incurred during a pandemic. You may be eligible for compensation under the Disaster Financial Assistance Program” (p. 8);
  - “During the pre-pandemic phase, we need to build three things: capacity, cooperation, communication networks” (p. 10);
  - “An influenza pandemic is like no other emergency. Be prepared!” (p. 12);
  - “Why get immunized? To protect your health, to protect the health of others, to build the vaccine production, supply and distribution capacity we will need during a pandemic” (p. 14);
  - “Anti-viral drugs can be used in three ways: to prevent, to control, to treat” (p. 15);
  - “Plan for triage and alternate care sites” (p. 16);
  - “A surveillance network provides early warning of the arrival of influenza” (p. 17);
  - “Communication is the cornerstone of effective emergency management” (p. 19);
  - “The Provincial Health Officer decides when it is time to activate pandemic plans” (p. 21);
  - “Clear command and control structures are essential in managing any emergency” (p. 22);
  - “Timely vaccine delivery is critical to minimize the impact of influenza” (p. 23);
  - “During a pandemic, antiviral drugs are used in the following ways: to protect essential service providers until a vaccine becomes available, for infection control, for influenza treatment” (p. 24);
• “Pandemic influenza will add extreme pressure to an already stressed health system” (p. 25);
• “A strong surveillance network will provide early warning of the arrival of the influenza pandemic” (p. 26);
• “Clear, consistent and concise communication is the key to effective crisis management” (p. 27);
• “Post Pandemic—Review—Evaluate—Revise the plan” (p. 30).
• Cohesion relates to coherence, which is the “Why does this make sense?” question, which relates to larger discourses and forms the basis of the interpretation section.

Rhetorical Tropes:
Hyperbole, Pun, Neologism, Metaphor, Metonym

Hyperbole
(excessive exaggeration used for rhetorical effect)

• No hyperbole.
• Different from discourse media studies!

Pun
(related to wordplay)

• No puns.

Neologism
(recently created or coined word, or an existing word or phrase that has been assigned a new meaning)

• The only neologism I noticed, which might not be explicitly defined as such, was sentinel physician, which is not explained but seems to refer to a physician responsible for surveillance in his or her geographic area, as part of an overall surveillance network.

Metaphor
(perceiving one thing in terms of another)

• Very little, compared to speech and other forms of writing.
• True to the genre of planning, though.

Metonym
(a form of substitution—denotes one thing but refers to a related thing. Differs from metaphor, which operates through similar characteristics, whereas metonym is linked with more direct forms of association)
• There does not seem to be much metonym, true to the genre of planning where there is an attempt as much as possible to position things “as they are.”

• “Such a widespread outbreak of illness” (p. 3) is used for pandemic, but for the most part, the word pandemic itself is used, or influenza, or virus.

• There is some inconsistency in the words used to describe the document itself—plan, guidelines, framework, planning process, document. This could be seen as being cautions about the authority the document is taking. A plan seems more “set in stone” than guidelines, which seem more like recommendations.

• The use of we throughout the document is also perhaps an example of metonym, and is quite confusing, as noted above (in vocabulary), in that it is not always clear who “we” are.

• “The province of BC” (p. 11) seems to stand in for government, but that is not clear.

• In general, there are no individuals named, only organizations. So health authorities will do this, even though it is agents within health authorities that need to act.

• There is reference to an assessment being coordinated “at the national and provincial levels” (p. 30) which perhaps stands in for who coordinates this assessment?
Appendix B.

Absences and Assumptions

Method: Look for underlying assumptions: ideas, concepts and events that do not seem to need naming because they are so obvious. Look for absences, what is not in the text. Look for “what do I have to think, believe or feel in order to understand this text?”

Overall

- a pandemic will not originate in Canada
- a pandemic is no one’s fault
- there is little or no controversy involved in pandemic flu planning and response
- there are values involved in some elements of pandemic flu planning, but not the scientific and clinical elements
- no one has anything to gain in planning for and responding to a pandemic: we are all equally at risk and all in this together
- pandemic flu planning is important enough that resources are put toward it above other issues
- with a few exceptions, people will agree to vaccinations and antiviral medication, and to other control strategies (prioritizing vaccines for certain groups, quarantine)
- with a few exceptions, the public is generalizable, and it is clear what types of information and education we need
- health authorities and hospitals have the time and resources to plan for and respond to a pandemic
- the meanings of efficient, effective, timely and appropriate are obvious and shared
- investing in surveillance is important and pays off
- an outbreak will be able to be declared here and gone—and those terms and that declaration will be meaningful
- straight lines of communication between and among large groups of people will be possible, with no interference or “noise”
- awareness-seeking and vigilance are important qualities of responsible citizens
- pandemic influenza will occur and will be devastating, but that preparation can mitigate the devastation
- surveillance will allow us to pinpoint the emergence and track the progress of a new virus
- I am personally at risk and my community/province/the world is at risk
• everything possible must be done to maintain good health—being ill is a bad thing, and potentially avoidable (with good practice)
• surveillance is vital to management, enabling us see who and where the virus is affecting
• expertise is important
• I can and should play a role in preparing for a pandemic flu

Page-by-Page

Page ii

• experts agreeing on something means I should agree too
• it is helpful/important to identify, characterize and produce vaccines
• new influenza subtypes are inevitable
• efficient and effective interventions can be developed
• “all of us” makes sense
• we “all” want to and will and feel we should anticipate, prepare for and respond to the next influenza pandemic
• there will be new and emerging diseases
• planning is important

Page iii

• the people involved in the committee are important, and are appropriate to involve
• a wide range of information is needed
• there is such a thing as “appropriate” consultation and it is understood
• the organizations on the list are important and appropriate to involve
• expertise of a certain type is needed
• a wide range of expertise is needed
• people/public in general is not needed on the committee
• it is possible—and important—to assess the impact of a pandemic
• the authors can determine roles and responsibilities and people will assume them
• planning will take place at health authorities
• people will need advice (and take it)
• we will be able to assess the measures taken and they will inform the future
Page 3
- scientists know best
- experts know best
- the past is a good way to predict the future
- even though it is impossible to predict, it is important to try
- no one would argue over the potential fallout of a pandemic
- there is such a thing as effective planning, and it is distinguishable from ineffective planning
- the impact will be very bad
- British Columbians will be informed by this plan
- global risks are different from local ones

Page 4
- it is possible to estimate many things about a potential pandemic

Page 5
- it will be obvious when the plan needs to be revised
- the committee revised the plan after SARS and this was helpful
- there are three pandemic phases—no more, no less
- the province and health authorities have roles in each phase
- there are six components in pandemic planning, no more, no less
- charts are the best way to organize information
- high level summaries and snapshots are the best way to organize things—followed by detailed charts

Page 6
- consistency in planning for a pandemic is important, among health authorities, across the globe

Page 7
- everyone will understand that everyone has a role to play
- everyone does something for a living
- it is important to inform and engage the broadest possible cross-section of citizens
- “informing” and “engaging” are understood activities
- we should expect public services to be available during a pandemic
- planning is the only way to mitigate a pandemic
- things could go wrong if others don’t fulfil their responsibilities and play their part
- “appropriate stakeholders” are obvious
• someone needs to take lead authority, and the provincial health officer is the one to do so
• First Nations health authorities need to be highlighted/recognized…or else they will be lost? Not see themselves?
• certain organizations will see themselves critical to the planning process
• British Columbians should feel a moral obligation to be involved in planning and preparation
• immunization protects against the seasonal flu—and that somehow has an impact on a pandemic
• staying informed (what does that mean?) is important, and “steps to take” are obvious
• people will recognize themselves in the plan

Page 9
• the committee knows what it is talking about!
• there is an effective way to respond to a pandemic
• those in and essential to the health system are known, and will cooperate
• people will need more information (in the annexes)
• it is possible to practice—and training will be necessary
• it is possible to establish command structures
• the importance of a vaccine is a given
• not enough people get vaccinated
• there will be adverse reactions and to some extent that is ok
• there is a proper way to use a vaccine and the public and healthcare providers need to be informed about it—and it will be possible to do that

Page 10
• guidelines will be followed
• information will be received and acted on
• influenza needs to and can be monitored
• the media will cooperate
• communications roles and responsibilities will be adhered to, understood and agreed upon
• people will agree with the plan!
• information will needed—but only one-way
Page 11

- people have access to the Internet (readers)
- emergency plans already in place are good ones
- there will not be any controversy over standalone plans
- healthcare workers will be first responders
- everyone agrees on “key” areas (police, fire, etc.) and key responsibilities

Page 12

- you cannot tell people to take training (only encourage them)
- there may be shortcomings in the plan
- people will practice
- health authorities will follow guidelines and checklists (who is the agent here, though?)
- it is possible to “be prepared” even though this is like no other emergency
- other plans exist, to be coordinated with
- command, control and procedures will be followed

Page 13

- keeping healthy between pandemics, with flu shots, helps (no link made here)
- people should be immunized—for themselves, for others and for the system
- certain groups will need a vaccine more than others, and this needs to be determined

Page 14

- there will be a vaccine for the pandemic
- not enough people get vaccinated annually
- people will take the vaccine
- the public is “one thing”—and they need information and education
- there will be adverse effects
- people will be needed to give the immunizations
- some populations are hard to reach—but it is possible to identify and reach them
- some people will refuse vaccination, but strategies can be developed for this
- “timely” is understood
Page 15

- prophylaxis is understood by readers
- some kind of intervention will be needed
- there will be issues around the security of the supply
- it is possible to determine and agree on “appropriate” groups of people for antivirals
- all these experts will continue to agree once the pandemic hits
- antivirals exist—they don’t need to be developed specifically for a new strain
- there will be adverse reaction and may be some resistance
- people will take antivirals
- the public is one, homogeneous mass, and they and healthcare providers (another homogeneous group) will need to be educated about the proper use of antivirals
- antiviral and vaccine administration will be the same for everyone
- places such as long term care facilities will have more likelihood of flu transmission
- [nothing about individuals and how sick the flu might make them]
- some people will refuse antivirals, but strategies can be developed for this
- [no reference to an ethical framework]
- guidelines will be followed

Page 16

- there are ongoing healthcare system needs to take care of, but as long as we plan well, this will work
- people will still go to work
- the disease will spread easily
- other jurisdictions will provide resources if necessary
- there will be mental health impacts
- people “see” themselves in the plan
- legislation may be needed
- even healthcare providers need to be educated about the flu

Page 17

- partnership is key
- “sentinel physicians” is understood
- influenza activity can be monitored, and it is helpful to do so
- health professionals know what to do with surveillance information
- all this investment is worth it!
• it is important to detect flu early
• the surveillance network will enable us to know when flu is here, and how bad it is
• outbreaks can be declared here, and over
• there is some point at which we will know it is not regular flu
• it is a race against time (they do not use this metaphor though)
• there are illnesses like influenza that are not influenza—and these can be determined
• early warning will be helpful

Page 18
• communication is best divided into internal and the public
• some messages are essential and these are known
• the public is definable
• the public gets its information through the media
• the public cares about all this
• it is possible to define “good” communication
• the public needs to be more aware of the importance of planning
• the public does not need to be involved in planning though
• there is a “public agenda” and pandemic planning needs to stay on it
• good communication is powerful! It can increase public awareness, engage people, establish a network, keep flu on the agenda
• dissemination is important (no two-way so far)
• a detailed strategy is needed
• receipt of information for the public is a priority
• there is a well-understood definition of appropriate, timely, and accurate information

Page 19
• people will need to be convinced of the need for planning
• the media are our partners
• “timely” makes sense
• [no public involvement yet]
Page 20
- the provincial health officer declares when it is time to activate plans: assumption here is that s/he will know, and no one will argue
- even though we cannot foresee what will happen, the plan will work, and can be adapted
- circumstances and situations will arise
- there will be a vaccine supply
- preparation will have served us well
- information provision on vaccines and antivirals to the public will be necessary

Page 21
- everyone will play his or her part
- supplies and resources will need to be redistributed between health authorities, and this will be possible
- public and media will need to be informed about health services
- ways of information the public are known and understood
- healthcare providers will take “clear direction” offered
- it is obvious what kind of information people need
- the crisis will pass
- there is a time for command and control

Page 22
- the pandemic has a changing nature
- there is some subjectivity in what control measures will be necessary, but there is an assumption that everyone will be ok with this
- there is a need for leadership—but sometimes just through encouraging and supporting
- it will be obvious if additional police or security forces are needed

Page 23
- an effective vaccine will be developed
- timeliness is key in the production of a vaccine
- the public and media may have concerns, and it will be possible to address them through communication
- everyone will work together
- there will be people available to implement this plan
- it will be possible to communicate and collaborate
- it will be possible to advise healthcare workers
Page 24
• there are no ethical issues about antiviral drugs for staff and target groups [who makes the rules and will people accept them?]

Page 25
• the federal government will make funding available
• quarantine policies [first mention] will be acceptable
• guidelines developed in advance of the outbreak will carry us through the pandemic

Page 26
• it will be obvious what should be done with the surveillance information

Page 27
• areas of communication can be categorized—types of information will come later
• “appropriate” spokespeople will be obvious
• [no ethnic groups referred to so far]
• everyone will have similar concerns
• the public will need to/be able to treat flu at home

Page 28
• a pandemic will easily be declared over and accepted as such
• it is important after the pandemic is over to move right into another cycle of planning
• measures of effectiveness are clear and agreed on
• we will learn lessons

Page 29
• data are important
• when the pandemic is over, surveillance needs to continue
• counselling may be needed when the flu is over (e.g., for grieving public whose relatives may have died)

Page 30
• it matters to the public that the pandemic is officially over
• it is possible to have straight lines of communication between individuals and groups—there will be no “buzz”
Appendix C.

List of *Vancouver Sun* Articles on Pandemic Influenza, 2005

World is on brink of avian flu pandemic, experts warn.

Pandemic plan ‘model for world’: New agency learned from SARS errors.

All flu viruses invade cells at same receptor, researchers find.
   February 1, p. A4.

Canada stockpiles drugs to combat flu pandemic.
   Subheading: $24million in pills for use until vaccine developed.

Antiviral drug stockpile boosted to 16 million.
   February 5, p. B5.

Stockpiling flu vaccines is money well spent.
   Subheading: If you believe the experts, we are overdue for a deadly global flu outbreak that will dwarf the terrific toll of the recent tsunami in Southeast Asia.

Stockpiling of bird flu vaccine urged by WHO.
   Subheading: World health experts fear Asian disease could trigger a global influenza pandemic.
   February 17, p. A7.

Global flu pandemic feared.
   Subheading: Experts warn that a major effort is needed to fight the threat of bird flu.
   February 26, p. A3.

Avian flu. Subheading: Is our health system ready? In B.C. today, you may wait up to 30 hours for a hospital bed. What will happen when a pandemic swamps our hospitals with patients?
   March 5, p. C5.

Vietnamese nurse with avian flu raises fear of pandemic.

A world of pain: Scientists brace for an unstoppable virus.
   Subheading: Pandemic: How bad –and when?

We’ve got the road map, but not our bearings.

Worst-case scenario? Check the history of pandemics.
   March 12, p. E5.
Pandemic panic ignores scarier medical stories.

Risk of flu pandemic rising, expert warns:
Bird flu shows signs of adapting to human hosts.

ID hopes to get deal for avian vaccine.
April 21, p. D.2.

Prices, US market make vaccine maker confident.
Subheading: ID Biomedical to be ‘significantly profitable in 2007,’ CEO tells shareholders.

Flu could spark global crisis. Subheading: Top journal says ‘highly unpredictable’ H5N1 virus would wreak havoc on borders and economies.

Our spending priorities fail to meet threat of flu pandemic.

ID Biomedical shares take off as firm develops vaccine to combat avian flu.

Firms race to develop avian flu vaccine.
August 24, p. D5.

Closing borders won’t stop avian flu.
Subheading: Health experts say 35 per cent of Canadians could be ill during an inevitable global spread of a deadly flu virus.

Surviving the influenza pandemic.
Subheading: Canadian experts warned Wednesday of the devastating economic fallout of a long-overdue flu outbreak. The last time, 50 million people died.

There’s no time to lose in preparing to battle a devastating pandemic.
August 26, p. A12.

Even a mild epidemic will overwhelm B.C. hospitals.

Health summit set for Ottawa.
September 15, p. A7.

Next flu pandemic looms.
Subheading: Millions are expected to die and bodies may have to be stored in ice rinks and refrigerated trucks.

Bush prepared to use military against bird flu.
Subheading: Troops could enforce quarantine in any region of US hit by outbreak, president says.
October 5, p. F8.
Deadly 1918 Spanish flu a bird virus, like ‘avian.’

The global alarm sounds on flu.
Subheading: Bird flu as a ‘precursor of a new flu pandemic is no longer far-fetched speculation,’ says top British medical journal.
October 14, p. C1.

A deadly virus jumps species and spreads.
Subheading: How serious is the disease, how does it spread and can we avert a pandemic? Here are some answers.
October 14, p. C3.

Tamiflu pill may not be enough to fight bird flu.
Subheading: Researchers tell countries to stockpile other drugs, monitor resistance.

Common sense, not panic, is the antidote for avian flu.
October 17, p. A8.

Canada not immune if flu mutates.
Subheading: Dosanjh: Health minister warns it’s ‘impossible’ to prevent bird strain from spreading.

50,000 Britons would die in bird flu pandemic: expert.
October 17, p. A4.

MPs unsure of plan to fight outbreak.
Subheading: Most don’t know what to tell constituents: PM says Canada is world’s best-prepared nation.

Avian flu can kill in as little as six days.
Subheading: The species barrier may be formidable, experts say.

Canada, Vietnam to lead bird flu study.
Subheading: Scientists will gather hard evidence to inform speculation about possible pandemic.
October 24, p. A3.

Money needed to help farmers affected by bird flu, doctor says.
Subheading: Stopping virus’ spread means paying for more vets, compensating families, conference told.

Avian flu: Don’t panic, but we had better prepare.

There’s a certain malaise about avian flu scare stories.
October 27, p. A22.

Prudence suggests we prepare for a pandemic.
Public alert—dead wild birds could be a sign of avian flu.
Subheading: Virus will appear in migratory birds before poultry.

B.C. is basing its flu pandemic planning on the likeliest scenario.

H5 flu virus found in Manitoba, Quebec birds.
Subheading: But officials say this germ is unlikely to be pathogenic.

Victoria seems to be in a fog over a possible flu pandemic.
November 2, p. A17.

Tests find bird flu in waterfowl in B.C. Interior.
November 2, p. A8.

Bird flu virus fatally inflames lungs.

Paying the troops to fight a pandemic.
November 24, p. A23.

Study calls for flu-control guidelines.
Subheading: Governments must consult the public on ethical concerns surrounding pandemic containment strategy, a report says.

Health chief assails Tamiflu purchase.

B.C. economy ‘more at risk’ from bird flu.
Subheading: Pandemic threat greater here because we rely on trade with Asia, economist says.

Make a plan for avian flu pandemic, businesses told.

Internet scammers’ fake Tamiflu nabbed by customs agents.
December 19, p. A12.
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<td>1. News story about experts worried about the spread of bird flu and the likelihood it will turn into a pandemic. The planet is unprepared [says the World Health Organization] and countries are urged to prepare. Actors/speakers and actions: - Top international flu experts warn - The world's leading virologists and epidemiologists grow increasingly worried - World Health Organization (WHO) says, urges - WHO's top international flu expert Dr. Klaus Stohr argues, writes, notes - Experts say - Experts closely monitor - Virologists expect - Federal govt released [a plan]</td>
<td>Mutated virus, devastating influenza pandemic, [experts worried it's] inevitable, pandemic, frightening scenario - could kill millions - could kill tens of millions of people and wreak social and economic havoc around the globe - has taken root - [experts are worried] it will mutate into a human form of influenza that will sweep through the world - bird flu has become entrenched, crossed the species barrier, has become more virulent, has affected - H5N1 swamped Asia’s poultry industry</td>
<td>- Inevitable through direct language in expert quotes, e.g., “in the face of what’s coming” - Inevitability softened sometimes: no one can say with certainty when the pandemic will occur, but the warning signal has never been clearer since 1968 - Significant through the description and talk about what is happening in Asia - Interesting that only in the last sentence, almost as a throwaway line, it is mentioned that Canada’s federal government released an influenza pandemic plan that provides a blueprint for how governments could react to such a crisis. This doesn’t give the impression of its being manageable! The story seems like a warning call - Potential issues are highlighted, related to who gets vaccines and antivirals, travel restrictions—ethical issues, but that term not used</td>
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<td>2. News story about the new Public Health Agency of Canada (PHAC), created after SARS to deal with health emergencies. Actors/speakers and actions: - Officials say - Canada’s first chief public health office Dr. David Butler Jones boasts, said - Doctors are not so sure [that we are ready], they wonder, said - WHO says - Experts look back anxiously - Most observers agree [SARS was marked by confusion and disagreement]</td>
<td>Looming flu pandemic and its potentially vast death toll, infectious disease emergency, pandemic, feared flu pandemic, virulent bug, the next crisis, communicable disease disaster, worldwide epidemic, mutant version - H5N1 has already killed 39 of the 52 people infected</td>
<td>- Interesting that this article with the focus on Canada’s plan is one day after the warning article about the world not being prepared. It seems like a refutation but is not fully successful, as notes scepticism - Quote from Butler-Jones: “Nature is totally unpredictable. It is the greatest bioterrorist going” - Headline has very little to do with the story, which is really about PHAC - Pandemic does not seem to be inevitable in this story: several references to “if the virus to mutate it would become a pandemic” - However, indeed if it did occur, it would be significant - Issues are noted: observers says the SARS “battle” was marked by jurisdictional turf battles, doctors say that they know what to do in the event of emerging infectious disease but they are not getting the resources they need - Jones says “new alliances are being built,” which aligns with the partnership discourse in the plan</td>
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<td>3. News story about flu scientists who say they have found a method that all flu viruses use to infect cells; the finding could lead to a drug able to block the action. Actors/speakers and actions: - Flu scientists say, suggest, claim, infected [Chinese hamster cells] - World’s health experts warn - Flu experts are especially nervous</td>
<td>Lethal flu pandemics - flu viruses mutate unpredictably (not exactly about a pandemic) - able to cross oceans and continents on a single passenger airplane - flu viruses make a two-step attack (again not nec. pandemic) - [bird flu] is especially lethal to humans</td>
<td>- Less about a potential pandemic than about research that is looking into how flu “works” in the human body… starting with hamsters! - Functions somewhat like an education piece about how flu viruses infect the body - Interesting that a method is attributed to a flu virus</td>
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<td>4. News story about Canada stockpiling antiviral drugs and how antivirals work. Actors/speakers and actions:  - Federal government will spend  - CanWest news service has learned  - Front-line health-care workers would likely get [the drug]  - Leading international virologists and epidemiologists have grown increasingly alarmed, are worried  - WHO says  - Canada is purchasing  - Scientists are able to identify  - Federal government released [a plan]  - Virologists fear</td>
<td>Global influenza pandemic, pandemic, flu virus  - could plunge the world into chaos  - H5N1 has taken root and will inevitably mutate [they are worried that]  - H5N1 has killed 13 of the 14 people it has infected  - viruses tend to develop resistance  - H5N1 swamped Asia’s poultry industry  - two types of flu will mesh into a new mutant version  - could affect 30 percent to 50 percent of the planet’s population</td>
<td>- Intertextuality demonstrated nicely here, as I am recognizing some phrases and descriptions from the plan and from other media articles, e.g., how a pandemic will develop, how the H5N1 is described  - Inevitability literally used, but it is experts being worried that the virus will inevitably mutate  - Will be significant if it happens, as demonstrated with stats, adjectives, expert commentary  - Very manageable, because Canada is buying lots of antivirals and it is explained how they will work  - Noticing how worried all these experts are!  - Even though it is manageable, there is concern that a vaccine will not be developed quickly enough – but there is an answer, antivirals  - Politics and posturing here</td>
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<td>5. Business story follows by one day the one above. The Canadian government announces that with contributions from the provinces and territories, the stockpile will be much greater than announced the previous day. Actors/speakers and actions:  - Canada’s chief public health officer said  - Dr. David Butler-Jones said, cautioned  - Federal government announced  - Ottawa has [a contract]</td>
<td>Flu pandemic, pandemic, potential global flu pandemic</td>
<td>- Am noting a difference between the media coverage and the plan in that the former people are named. In the media coverage, lots of “experts” not named, but key people are named.  - Interesting placement in business section – very short piece compared to others  - Not necessarily inevitable – “should we [in case we] face a pandemic in the next few years”  - No overt references to its significance  - The theme of the piece seems to be about manageability, and Canada is prepared favourably to other countries in being prepared—perhaps appropriate for a business section  - Politics and posturing here</td>
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| 6. Editorial about stockpiling of vaccines, saying it is a good idea just in case. Actors/speakers and actions:  
- You (if you believe the experts)  
- We (are overdue for an outbreak)  
- Dr. Alison McGeer (director of infection control at Mt Sinai Hospital) said  
- WHO regional director predicted  
- Experts have been predicting, say  
- We might take comfort  
- Federal government is spending | Deadly global flu outbreak, apocalyptic influenza outbreaks, pandemic  
- will dwarf the terrific toll of the recent tsunami in Southeast Asia  
- Hong Kong flu spread out of Asia in 1968 was the mildest and hit the elderly hardest  
- Asian flu (1957) infected young people but most deaths elderly  
- Spanish flu swept the world in 1918, killing at least 20 million people worldwide, struck hardest among people 20 to 40  
- Each succeeding pandemic has been less serious (but experts say that is cold comfort)  
- Avian flu virus is scaring experts because of its potency | - For significance, the flu is compared to the terrific toll of the recent tsunami in Southeast Asia: the former will dwarf the latter  
- Inevitable in that the only things surer than another outbreak are death and taxes (says an expert)  
- This piece is different from a news story, in that we have to see the whole text as something the writer "says." In this case, s/he poses the question why we should believe the experts, who have been predicting doom for years -- but his/her conclusion is no harm is done by preparing, since flu outbreaks occur (question used for rhetorical effect) |
| 7. News story about need for governments to start producing and stockpiling vaccines. Marks a break as until now, experts have said developing a vaccine is useless before we know the virus. Now, they're agreed it will be H5N1. Actors/speakers and actions:  
- WHO is to issue [an urgent appeal]  
- UN-affiliated agencies warned  
- Food and Agriculture Organization, World Organization for Animal Health called for [funding]  
- Federal government announced  
- Front-line health-care workers would get [the drug]  
- Medical and vaccine experts and the WHO believed (note past tense)  
- WHO officials have changed their policy | Global influenza pandemic, potentially dire worldwide health threat, pandemic  
- Asian flu [experts believe] is poised to trigger a global influenza pandemic | - Interesting that there is a scientific consensus that H5N1 will be the pandemic strain  
- Here, experts have changed their views...they believed one thing, and now they believe another -- but they believe it all together...there is no controversy here  
- Some sense of inevitability and significance in the urgency of the piece  
- Also a sense of how a pandemic can be managed |
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| 8. News story about an international conference of bird flu experts and their increasing concern over a pandemic due to what is happening in Asia – and their calls for major effort to fight it. Actors/speakers and actions:  
- Experts warn, say  
- An international conference of bird flu experts is urging  
- 12 people have died [in Thailand]  
- A man was suffering [liver failure]  
- The man repeatedly drank raw duck blood, and tested positive  
- Doctors awaited [test results]  
- UN officials said  
- Health officials urge  
- The population is being told  
- Veterinarians and human health experts appear frustrated, say  
- Farmers in Vietnam receive [little compensation for birds culled]  
- Dr. Shigeru Omi of the WHO dismisses [suggestions of hype]  
- New Scientist Magazine questioned  
- Vietnam news noted | Worldwide flu pandemic, deadly virus  
- bird flu is becoming more versatile and lethal  
- swipes genes, mutates  
- H5N1 influenza virus has infected at least 43 people  
- bird flu outbreaks have already cost the Asian economy $10 billion | - We are starting to see some personal stories in terms of the people being the subject of sentences – but the people are not named  
- Preparation in this story involves more surveillance and restructuring the poultry industry  
- Lots of actors in this story  
- First questioning of inevitability, by media, but that is dismissed and the threat is positioned as real  
- Starting to see concerns over the handling of the situation by local governments...and the inequities that can occur, e.g. farmers are not fairly compensated when they kill their birds, therefore may not report them ill, governments don’t do enough to keep sick birds away from humans |
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| 9. Column questioning whether BC is ready for a pandemic. Actors/speakers and actions:  
- You may wait [up to 30 hours]  
- No one can predict  
- Sceptics say  
- We have [mass transit, air travel etc.]  
- WHO believes, says  
- Dr. Shigeru Omi of the WHO puts it bluntly  
- 55 people have been afflicted  
- I note  
- We’re told [BC has plans]  
- WHO analysis concluded  
- Any reader of history knows  
- Public health officials must rely  
- Provincial bottom-liners failed to provide  
- BC’s nurses are [over 50]  
- We rank [last]  
- Emergency ward physicians are forced  
- Nurses are working [beyond capacity]  
- Experienced people are leaving  
- I have confidence [in doctors and nurses]  
- I don’t feel [like I’m getting answers] | Pandemic, lethal pandemic, virulent form  
- [when, not if] a pandemic swamps our hospitals with patients  
- only 55 people have been afflicted with H5N1  
- a bird flu pandemic could infect anywhere from 20 to 50 percent of the world’s population and even in the best case scenario, two million to seven million people would die and tens of millions would require medical attention  
- death tolls could be much higher  
- H5N1 virus has already crossed the species barrier, is busily swapping codes with other flu viruses, possibly mutating | - This one is a column, so the author is an actor too  
- Not saying it is inevitable... unlike the plan, says no one can predict whether it will happen, not when – but some language indicates inevitability  
- Introduces the idea of sceptics (but doesn’t name them)  
- Questions the value of planning, as it is just that... and even the best laid plans...  
- Raises the possibility of lots of controversy, and seems to indicate that the planning and prep is just a lot of talk and has little relevance when applied to a healthcare system that is broken  
- Pandemic may be inevitable, but that’s not the key here. Its significance is clear. But its manageability in question – not because of the pandemic itself but due to governments not acting. A local political discourse that we saw in the last article about Asian governments, creeps in here - was not in the plan  
- Says BC government is preoccupied with the election  
- Some calling to account here |
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| 10. Special report series on the topic of the threat of a pandemic, and what experts say should be done now to prepare for it. Actors/speakers and actions:  
   - Dr. Klasu Stohr and Dr. Mike Ryan are trying to warn, said, have been employing [strong language]  
   - More than 50 people have contracted  
   - Experts are waiting, agree  
   - WHO predicts, says | Unstoppable virus, nightmarish situation, disaster; influenza pandemics, emerging pandemic threat; epidemiological equivalent of a flash flood  
   - Lies just over the horizon [experts say]  
   - H5N1 has been spreading slowly in the jungles, has crossed the species barrier, infecting a wide range of mammals, has killed more than 70 percent of its victims, [could] mutate, has demonstrated considerable pandemic potential  
   - Could for many months dramatically alter many of the things people take for granted  
   - Part of the normal cycle of nature  
   - Pandemics of the past have typically hit world populations like the epidemiological equivalent of a flash flood; started without warning, swept through populations with ferocious velocity, and left considerable damage in their wake, could not be stopped, but peaked rapidly and then subsided, tended to travel along sea lanes, taking months to travel the planet | - Very dramatic! Seems like a typical feature  
   - Experts agree another pandemic is inevitable  
   - Hints (in the last sentence) at the effect on vulnerable people, those who have AIDS and whose immune systems are weak  
   - Note that nothing to date has suggested we should not be spending less money on this and more on something else  
   - Note also that there is no mention of public involvement so far  
   - Acknowledges that there are sceptics  
   - Suggests that it will be significant but not in as direct a way as the plan or even some other articles: "If it is as virulent as some fear..."  
   - Paints a very gloomy picture of what might happen  
   - Acknowledges that pandemics are part of nature  
   - The expert quoted sees a controversy over public confidence – in work, in travel, in the normal social activities in life. Finally, here is the public, but not in terms of our being active  
   - The type of preparation urged is research on how to produce a vaccine more rapidly, cooperation between governments and private sector vaccine producers, production and mass distribution of antiviral medication, and preparation of national contingency plans  
   - First mention that pandemics are a normal part of nature  
   - I like this construction: "If it is as virulent as some fear, tens of millions of people could die, thrashing the planet into unprecedented social and economic chaos" – it’s the people who die, not the pandemic, at fault! I think that's just a clumsy sentence |
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<td>11. News story about whether Canada is in fact prepared for the pandemic. Actors/speakers and actions: - Leading public health experts say - Senior public health officials insist, point to - Dr. David Butler-Jones told - Critics question - Dr. Albert Schumaker, president of the Canadian Medical Association, says, is concerned - Dr. Alison McGeer, an infectious disease specialist, says</td>
<td>Inevitable health crisis, pandemic - will kill thousands of Canadians - will be phenomenally disruptive</td>
<td>- This article is like an argument: senior officials at PHAC saying Canada is ready, and critics, among them senior public health experts, questioning whether we are, and so on - Wonder why &quot;Canada is clearly seen as a leader and we need to maintain that&quot;? - Inevitable: once a pandemic strikes, inevitable health crisis - Significant in that it &quot;will&quot; kill thousands of Canadians - Controversy referred to seems to challenge that it will be manageable, alludes to does Butler-Jones have the clout to make provinces follow his lead, how will distribution and administering of the antivirals and vaccines take place, what will the public think of a vaccine priority list, how can the system take it, who should make decisions about things such as school closures - How will governments withstand public pressure to close borders to travellers coming from infected regions - CMA president says &quot;with the stunning advances in medical knowledge and technology in recent decades, society has grown overconfident about the dangers of infectious diseases such as influenza&quot; – seems like a key quote, as it could account for why all these experts are so worried - Noting that in most of the stories to date, seems like health experts against governments - Noting that this seems like the first article to mention in any detail (although little) what we should be doing: setting up the logistics of how we're going to respond to the pandemic and practising it (in the last sentence though)</td>
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| 12. News story about a case of bird flu that might be a human to human transmission and what that might signify Actors/speakers and actions:  
- A Canadian influenza expert warns  
- A 26-year old male nurse has tested positive  
- The man reportedly visited  
- A WHO spokesman said  
- Public health officials have warned  
- Virologist Earl Brown cautioned, said, added  
- Peter Horby, a WHO epidemiologist, said  
- PHAC’s Dr. Arlene King said | Lethal virus, global influenza pandemic  
- H5N1 could be changing to become more easily spread  
- the virus began its sweep | - First article approaching a human interest story, although the people are not named  
- Interesting title: “Vietnamese nurse with avian flu raises fear of pandemic,” indicating she personally is raising fears, when actually it is the fact that she has avian flu that is raising fears  
- This is the first article that shows some taming of the message by experts. The story starts with a Canadian influenza expert warning, but that expert doesn’t come back! The story proceeds with details of the nurse contracting avian flu. Experts again assure the reporter that the situation is being closely monitored, and then other experts caution against being too worried, it’s too soon to tell, we shouldn’t worry until we start to see clusters, etc.  
- Makes me think of Ungar’s “hot crises and containment” |
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| 13. Column that suggests we have underestimated the effect of a pandemic, based on the history of pandemics. Actors/speakers and actions:  
- I understand [the reluctance to speculate]  
- I recognize [why the discussion stays cautious]  
- Nobody wishes to be accused  
- I'd prefer  
- I've read  
- I don't diminish  
- I know  
- I say  
- Thucydides records  
- Historian William McNeill writes  
- Archeologist journalist David Keys lays out [evidence]  
- I haven't yet arrived  
- First Nations are only now recovering  
- None of us is [more than an hour from expert medical advice]  
- I'll argue  
- I'm calculating  
- Most of the people who get sick and die  
- Authorities might do us the favour | Avian flu pandemic, pandemic  
- Spanish flu killed from 20 to 50 million people  
- pandemics with high mortality rates have been associated with major reconfigurations of entire civilizations  
- a pandemic [could] quickly overwhelm the resources we take for granted | - Doesn't deal with inevitability  
- However paints a pandemic as very significant, by recounting history of pandemics  
- Does not use dramatic terms for pandemic itself – uses numbers of ill and dead  
- First article to say there should be public discussion about preparing  
- Dismisses earlier news reports as "media chatter"  
- note the uses of "I" – very much an opinion piece, although he later draws on experts  
- A strong theme here is that we've been able to control so much in terms of our health, we are just "not getting" how devastating a pandemic could be  
- Introduces a very different type of expert!  
- Pulls on logic to suggest that 21st century medical science and technology will not be much help, and that most of us will be cared for at home by loved ones  
- "It strikes me that the authorities might do us the favour of not tippy-toeing around this issue and begin treating us like adults. That is, engaging us in a serious dialogue through which people who might well find themselves relying on their own resources in a crisis can determine what they might face and what steps they might have to prepare..." It's in the last para though  
- Story raises the idea, like the medical doc who said we're complacent, that our sense of security is illusory  
- By same columnist as last |
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<td>14. Letter in response to above article, challenging the columnist’s claims, suggesting that there are bigger health issues to worry about. Actors/speakers and actions:  - Stephen Hume (previous story’s columnist) must have caught [a fever]  - Epidemiologist Peter Horby doubts  - Hume worries, is brooding  - WHO is brooding</td>
<td>Flu pandemic</td>
<td>- Interesting that she pulls on experts to refute columnist’s claims, even as she is dismissing the inevitability and significance of a pandemic: “Even epidemiologist Peter Horby of the pandemic-hyping World Health Organization doubts…”  - Questions modern medicine: “given the huge epidemic of chronic debilitating disease that’s been ballooning for decades under the care of modern medical science, do we really care about the possibilities of a flu pandemic?”  - Not inevitable, not significant, and manageability doesn’t come into question</td>
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<td>15. News story about how the pandemic threat is increasing. Actors/speakers and actions:  - WHO warned  - More than 50 people have died  - WHO epidemiologist Peter Horby said, estimated  - WHO global influenza program chief Dr. Klaus Short reported, said</td>
<td>Killer flu pandemic, global epidemic, pandemic  - avian influenza is still spreading; if it changes its genetic make-up, it could spread rapidly, appears to be adapting to human hosts  - global epidemic could kill millions  - [avian and human flu] could shuffle their genes to create a deadly mix  - would kill between two million and 7.4 million people within 12 months</td>
<td>- Not inevitable: quoted expert estimated the probability of a pandemic at more than 50 percent.  - One month after the last story—an attempt to keep it in the media with no news arising?  - Almost like the first story, as if it’s starting over  - Seems significant (statistics, naming of the flu) but does not seem manageable: the virus is still spreading despite countermeasures</td>
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<td>16. Business story about vaccine company hoping to get the contract for a pandemic vaccine. Actors/speakers and actions: - PHAC’s Dr. Arlene King said - ID Biomedical representative Dean Linden said</td>
<td>Flu pandemic - H5N1 has claimed the lives of at least 51 people</td>
<td>- Very much a business story, about a Vancouver based vaccine maker - Does not deal with inevitability, and the only reference to significance is that the H5N1 virus has claimed the lives of at least 51 people in Cambodia, Thailand, and Vietnam since December of 2003 - Testing a vaccine indicates manageability – or at least attempts to manage - Emphasizes profitability, progress, action</td>
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<td>17. Business story about Vancouver-based company ID Biomedical and its role as one of the first vaccine responders in the event of a pandemic. Actors/speakers and actions: - ID Biomedical CEO Tony Holter told, pointed to, said, suggested - The company dominates - A group of infectious disease experts told - Experts are concerned - At least 11 companies are developing - Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, testified, said</td>
<td>Flu pandemic - [experts are concerned that] bird flu may spread and spark the next pandemic - pandemic influenza is a proven threat</td>
<td>- Six weeks after last pandemic story, and again a business one, about the same company - Pandemic news is slow! - Brings up the idea of profitability from a pandemic - Does not really deal with inevitability (“in the event of”) or significance of a pandemic – is about a CEO assuring shareholders that the company will be very profitable this year - Interesting term to describe pandemic influenza “a proven threat”</td>
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<td>18. News story sparked by a special issue of <em>Foreign Affairs</em> devoted to pandemics. Story is about the increasing threat of a pandemic and the need to prepare. Actors/speakers and actions: - An international public health expert says - Pulitzer Prize winning author Laurie Garrett notes, writes - Centres for Disease Control (CDC) says - A top WHO official, Shigeru Omi, added, said - Experts fear</td>
<td>Unprecedented viral carnage, catastrophe, contagion, pandemic, superflu - catastrophe that would jeopardize global security and create economic devastation - contagion spreads throughout the world - H5N1 is highly unpredictable, may explode into a pandemic - H5N1 has killed millions of birds - experts fear it is slowly mutating and could easily be transformed - is evolving quickly, appears to have increased in virulence - remains unstable, unpredictable and very versatile</td>
<td>- The lead says preparation should take place immediately, but there is nothing in the article about preparing - The lead also says nothing about health, but rather about global security and the economy - Not inevitable, but definitely significant - Garrett (not the journalist writing the story) raises the issue of immuno-compromised people and poor countries being more affected than others</td>
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<td>19. Column saying we are not prepared for a pandemic. Actors/speakers and actions: - New Scientist reported - <em>New York Times</em> ties [the report] - China officially denies - One hopes - We might not have long to wait - The Influenza Vaccine Supply International Task Force warns - I first wrote - Canada has been [a trend setter]</td>
<td>Deadly avian influenza pandemic, lethal pandemic, pandemic - pandemics have been spreading worldwide in shortening time spans - may diseminate from its point source with extreme rapidity</td>
<td>- Points out that preparations are said to be well underway in Canada, which is a trendsetter, but that is plans. Healthcare system is not prepared - Same columnist - Raises controversy related to spending: not much on pandemic preparedness, lots on Olympics; in the US, lots on eliminating weapons of mass destruction relative to pandemic flu preparation - Brings up the idea of how developing countries will not be able to withstand a pandemic, and what are we doing to help?</td>
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| 20. Business column about ID Biomedical and how its shares rose dramatically in response to a speech by a US politician about how avian influenza could kill millions of Americans and devastate the US economy. Actors/speakers and actions:  
- Tennessee doctor Bill Frist told, wants, reminded, asked  
- ID Biomedical is working on  
- Donald Coxe, chief market strategist of BMO’s Chicago Harris Bank, and Sherry Cooper, the bank’s chief economist, wrote | Flu pandemic  
- avian influenza could potentially kill millions of Americans and devastate the U.S. economy  
- has already killed 140 million birds in 11 countries in Asia, jumping to humans in four countries | - Demonstrates what can happen to the market even through one speech!  
- Does not have much to say about inevitability literally, but pulls on the doctor/politician’s speech to call up a scenario in which 50 million might be dead – very significant in terms of death toll and the economy  
- Does not spend any time on manageability  
- Again, a theme of profitability during or because of a pandemic |
| 21. Business opinion piece one day after the above article, on how governments and vaccine and drug manufacturers are preparing for a pandemic. Actors/speakers and actions:  
- A European conference of veterinary experts will meet  
- The European Commission banned  
- Russia called for  
- Glaxo Smith Kline (GSK) and Roche have been hit (with litigation)  
- The Toronto Star reported  
- Don Coxe (Nesbitt Burns global portfolio strategies) is [of the opinion]  
- A host of companies are [busily at work]  
- WHO has made it clear  
- GSK is gearing up  
- The Vancouver Sun reports | Pandemic  
- the bird flu is spreading fast through Siberia and Kazakhstan, but only bird infections and deaths so far | - Opinion piece written for the business market  
- About the measures countries are taking, and that pharmaceutical companies are taking  
- Notes controversy among pharma companies, arguing over who developed what first – hints at profit to be made  
- Does not deal much with inevitability, hints at significance and manageability through discussion of the ramping up of activity in the business world  
- Am noting that even if an article does not directly reference significance and inevitability, unless it specifically refutes those characteristics, they are to some extent inherent based on the media coverage that has preceded it as a whole |
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<td>22. News story about how if a pandemic occurs, it will not be stoppable by closing borders. Actors/speakers and actions. - Authorities wouldn’t be able to - US and Canadian officials said, suggested - Dr. Ron St. John of the Canadian Health Department said, added - Analysts have produced - Experts believe, see - Dr. Karen Becker of the US Emergency Preparedness Department said - Dr. Scott Dowell of the CDC added - Officials said</td>
<td>Inevitably global pandemic, pandemic - H5N1 has re-emerged since its appearance in 2003 - Avian flu is a potential culprit that could mutate</td>
<td>- Experts believe a pandemic is inevitable - If it occurs, it will be inevitably global - It could be significant socially and economically - The pandemic will travel much faster than we can control it, but we can try to manage it - Last line: &quot;officials said they’re making plans to deal with a shortage&quot; – interesting attempt to address in some way the rest of the story, which is that we are not ready?</td>
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<td>23. News story about the effect on the economy of a flu pandemic. Actors/speakers and actions. - Canadian experts warned - Don Coxe and Sherry Cooper (of BMC) forecast, said, urged, stated - Experts say - BC public health office Dr. Perry Kendall has said</td>
<td>Flu outbreak, worldwide influenza pandemic, global flu outbreak, flu pandemic - [if avian flu develops] the capacity to jump from human to human and start killing clusters of people - could result in borders being shut, quarantines imposed and fear gripping populations - pandemic would be a test of how far societies have evolved in helping each other and having systems in place to do it - will be by far the biggest before the modern economy emerged [if it is 1918-style] I think they meant since the modern economy emerged</td>
<td>- First article to focus fully on the economy: a global economic disruption unprecedented in modern history would follow a worldwide pandemic - Focuses partly on individuals and the fact that they should have investment strategies prepared in the event of a pandemic - Perhaps inevitable, and definitely significant – on the economy - Am noting that in the articles, the inevitability seems to be implied by the significance, but if you look for direct references to a pandemic’s being inevitable, there are not a lot – and always attributed to experts and their beliefs or what they say - Something else for the public to worry about – not only getting sick, but the finances that would be needed to carry them through such a situation</td>
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<td>24. Editorial about the threat of a pandemic and although some steps have been taken, we are not really prepared. Actors/speakers and actions: - Scientists believe - Some fear - Ottawa is finalizing, has budgeted - Vancouver Coastal Health has held [a seminar] - We have [a real life example with SARS] - We need to conduct [tests] - Roche has committed - Many other countries have [poor health infrastructures] - Developed countries need to offer [support]</td>
<td>Plague, pandemic - [some fear] avian flu could mutate and become the overdue plague</td>
<td>- Acknowledging it sounds like a bad science fiction movie but then saying it could come - Significance invoked through statistics about the number of ill and dead - Economy mentioned – could fall into ruin - Preparation in this case means testing our flu plans, stepping up our surveillance - Note that to date other than the above, in all the criticism that we’re not prepared, there is not much commentary on how we could or should prepare - For the second time, noting that $58 million for pandemic planning is much less than the government spends on much less important projects - Noting that to date, no one except the letter writer has said we’re spending too much time and attention and money on this - Not necessarily inevitable, but definitely significant, and somewhat manageable – if we choose to prepare</td>
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<td>25. Letter in response to article number 23, arguing its claim that a pandemic will be unprecedented in human history, but acknowledging we are not prepared. Actors/speakers and actions: - Nobody [who spends time in hospital] believes the province is prepared - The current government has cut - We are unable [to provide care now]</td>
<td>Influenza epidemic, pandemic - 1918 pandemic followed a period of frantic prosperity - was followed by a mid pandemic and then another more virulent one</td>
<td>- Written by a historian of epidemic disease - Notes that polio and AIDS were also pandemics...are they usually noted as such? - Blames the government for cutting healthcare services – if we can’t provide efficient and timely care now, what will happen in even a mild epidemic outbreak - Doesn’t comment on inevitability or significance, but definitely suggests a pandemic will not be manageable in current circumstances - Am noting that experts are never criticized</td>
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<td>26. News story about Canada hosting an international summit of health ministers to discuss preparations for a worldwide pandemic. Actors/speakers and actions: - Canada will host - Federal Health Minister Ujjal Dosanjh said, noted - Health ministers from around the world will be invited - Experts fear - WHO warned - Senior WHO officials are increasingly worried - WHO director general Dr. Lee Jong-Wook said - No one is sure - Health Canada says</td>
<td>Major flu outbreak, flu pandemic, health disaster, global issue, pandemic - could kill millions of people - is a global issue and therefore warrants a global plan and response - knows no borders - 1918 pandemic killed up to 50 million people with a mortality rate of only five percent (indicates this one could be much higher) - H5N1 has killed millions of birds and crossed the species barrier to infect humans, has moved beyond Southeast Asia, is the most serious known health threat the world is facing today - a “medium-level epidemic” could kill up to 207,000 Americans; anywhere from 11,000 to 58,000 Canadians could die</td>
<td>- Inevitable: “we don’t know when it will happen” (not if) - Very significant – experts say it could kill millions - first article that strongly seems to position collaboration as the key to management - Canada positioned as taking the lead – international politics creeps in here, cf my comment earlier about Perry Kendall saying Canada has to stay in the lead, we’re inviting people and hosting - But what does preparing actually mean? Sharing information…being transparent - Dosanjh notes the need to raise preparedness as a political priority</td>
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<td>Special report column about how devastating a pandemic could be, and about the contents of the Canadian influenza plan – which is positioned as highly controversial. Actors/speakers and actions: - Millions are expected [to die] - Bodies may have to be stored - Influenza experts say - WHO confirms - BC’s chief medical officer Dr. Perry Kendall said, sees - We are divided [into groups] - BC has [its own plan] - Families and neighbourhoods have a responsibility - The BC Ministry of Health is stockpiling - Paul Gully, Canada’s deputy chief public health officer, said - BC is expecting - Planners suggest - Vancouver Coastal Health (VCH) has developed [a plan], suggests - Shelagh Weatherill, director of communicable diseases for VCH, says</td>
<td>New and highly contagious strain of the flu, pandemic - will trigger a multi-million dollar response program aimed at keeping our society functioning and providing vaccines and antiviral drugs in a highly controversial plan aimed initially at protecting only people on a prioritized federal list - H5N1 has already been identified as the potential precursor to a pandemic, already infected people in Southeast Asia, kills 50 percent of the people it infects, can go through genetic shifts - H5N1 looks like it’s developing capacities to jump from human to human</td>
<td>- Quote from Perry Kendall: “There is a really big consensus among the experts that this is going to happen” - Here we start to see information on what the public “should” be doing and can do – perhaps linked to timing of the plans? - First article to mention ethical issues associated with planning – and links them to money - Created as inevitable through experts - Created as significant through experts – and for the first time through descriptions of how it will be managed (e.g. bodies in refrigerated trucks) - Created as manageable, but not without significant controversy, difficult decision-making - First article to confer moral responsibility on the public - Interesting that here, much of the action of the flu is to spur political issues! - PHAC spokesperson Indicates that if the public feels it is important to spend more money on pandemic planning, his organization and elected representatives would listen (he must have been asked that question) - Also one of few articles to say what preparedness “looks like”: in the health authorities, outbreak teams would kick into gear at the onset of a pandemic, evaluating all lab reports and increasing surveillance to find clusters. Ports of entry would be screened and passengers on planes would be given forms to fill out – note that prep is not about caring for people but about surveillance</td>
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<td><strong>26. News story about President George Bush’s plans to use military to implement a quarantine to stop the spread of disease.</strong> Actors/speakers and actions: - George W Bush signalled, said, appears to have taken [a significant interest] - Scientists...have grown increasingly concerned - WHO warned - Dr. Paul Glezen, a professor of molecular virology at Baylor College of Medicine, said</td>
<td>Deadly avian flu pandemic, pandemic, global flu pandemic - avian flu may soon mutate and develop the ability to be spread easily, has infected 112 humans - pandemic could kill between two million and seven million people</td>
<td>- Reporter makes a connection between Bush’s activeness in this area and accusations that his administration handled Hurricane Katrina badly - Not literally inevitable, but scientists are worried that the avian flu may soon mutate - Significant, through numbers of people who could be affected - Some suggestion that quarantine can potentially contain an outbreak, but not by military imposing quarantine - Suggests that we are not ready – and should have felt the urgency 5 years ago</td>
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<td><strong>29. News story about two new journal articles that tell of scientists reconstructing the 1918 flu virus and showing it to be quite like avian flu.</strong> Actors/speakers and actions: - Scientists believe - Scientist Jeffery Taubenberger said, pieced together - US Centers for Disease Control (CDC) is holding [the virus] - University of Ottawa virologist Earl Brown said - CDC director Dr. Julie Gerberding said - CDC senior microbiologist Dr. Terence Tumpey said</td>
<td>- Pandemic, 1918, deadly 1918 Spanish flu (worst pandemic in the history of mankind), Asian flu, Hong Kong flu - Avian flu: acquiring changes needed to spread human to human, has so far killed at least 60 people, is now circulating, could become a pandemic, could ultimately completely adapt - Spanish flu – nothing is known to have killed more people in less time, swept both hemispheres, killing as many as 50 million mostly healthy people, contains eight gene segments - Bird flu – believed to have swapped genes with a human flu - 1918 virus was an entirely avian like virus - Current bird flus appear to be more efficient killers</td>
<td>- Almost a history piece – learning from the past will enable us to manage the present (or the imminent) - A concern raised by a scientist that the virus could be replicated (and presumably let loose) – seems to indicate that perhaps it should not have been reconstructed. But the concern is downplayed in the middle of the story, and addressed by a scientist who says the good outweighs the bad - Reference to the study being published simultaneously by two prestigious journals – does this add to the importance of the study or indicate research competitiveness? - This story definitely research-focused more than focused on the flu being inevitable and significant - Manageability indicated though, in that if scientists understand it, they can develop vaccines and drug targets. They are getting to know it: “contains eight gene segments” etc.</td>
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<td>30. News story about a Lancet editorial expressing concern over the spread of H5N1 to Turkey from Southeast Asia – and all countries need to prepare. Actors/speakers and actions: - Top British medical journal says - WHO said, says - Lancet says - American researchers reconstructed, reported - University of Ottawa virologist Earl Brown says - US President George Bush asked - Federal government released [a plan] - Canada created, ignored - Critics worry</td>
<td>New flu pandemic, looming flu pandemic - no longer far-fetched speculation - could kill as many people as the Spanish flu - H5N1, which has infected at least 117 people and killed 60, has spread to Turkey - H5N1 has led to the slaughter of millions of chickens, ducks and geese in Southeast Asia, is acquiring some of the changes it needs to morph, might adapt further, might be the precursor of a new influenza pandemic</td>
<td>&quot;May be&quot; inevitable, says the Lancet - What is &quot;looking like&quot; an inevitable pandemic - References information from last article on researchers reconstructing the Spanish flu, and also references the Canadian summit - Hints at controversy in the last paragraph...Canada went so far as to create the post of a chief public health officer after SARS, when no one appeared to be in charge, but the Canadian Medical Association feels legislation needs to be passed to give the post clear power, and &quot;critics&quot; fear the post will not be able to tell provinces what to do - This one positioned as new knowledge and makes clear the unfolding story of the &quot;H5N1 as potential pandemic&quot; – even though all articles to date have talked about the potential devastating effects of a pandemic, this one says the possibility of a pandemic is &quot;no longer far-fetched speculation&quot; due to the discovery that H5N1 has gone to Turkey - A new call for countries to prepare - Controversy indicated – who is in charge? The gap, according to the editorial, is strong national and regional leadership, unrestricted transparency in surveillance, and preparedness plans, as well as renewed research efforts - Arguments seen: WHO says there’s no evidence the virus is mutating. Lancet says such a scenario may be inevitable. This may be the journalist putting these two things together, not necessarily the Lancet responding to the WHO - Lancet also says it is not clear how effective any drugs and vaccines may be - Noting not much public yet, even in response to articles</td>
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<td>News piece that functions as an education piece as it is positioned as a Q and A, addressing how serious bird flu is, how it spreads, and how we can avert a pandemic. Actors/speakers and actions: - WHO says - Scientists know - Most experts agree</td>
<td>Pandemic - H5N1 does not usually infect humans [but did in 1997 and since then has caused other cases and deaths] - [WHO says there is mounting evidence that] H5N1 strain has a unique capacity to jump species and cause severe disease, with high mortality, in people - [no evidence yet that] H5N1 has acquired the ability yet to pass easily among people - H5N1 and influenza can swap genes - H5N1 has already demonstrated an ability to infect people, cause severe disease and kill, has the ability to mutate and acquire genes from viruses affecting other species</td>
<td>- Seems almost like a “setting the record straight after all the confusing media coverage” piece! - Seems to attempt to calm people down…journalist is not just mentioned by name, but by title of “Science Editor” - Not in the least positioned as inevitable, which seems to lead to a lack of need to position it as significant - Definitely signifies a break from other stories – the focus is on birds and it is noted that transmission to humans rarely occurs…but could - Totally at odds with its headline: A deadly virus jumps species and spreads - First article to question the inevitability? I think so…although one of the question headlines is “why is this strain so worrying?” - First article to go back and forth…no evidence that this, but then again, this, probably not this, but then again, this… - Interesting that the last question: can a pandemic be averted?, is not answered. The response simply says that the first priority is to reduce opportunities for human exposure to infected poultry</td>
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<td>32. News story about a new finding to be reported in Nature the following week. H5N1 flu may be developing resistance to Tamiflu, which most governments are stockpiling for a pandemic. Actors/speakers and actions: - Scientists reported, write, highlight - The girl recovered, had no known contact [with poultry], cared for [her brother who was also sick] - The researchers stress, found - Senior author Yoshihiro Kawaoka said - The Lancet warned, published - Canada has already purchased - A special working group is reviewing - Aggie Adamczyk of PHAC said</td>
<td>Feared flu pandemic, potential H5N1 pandemic - bird flu has already infected at least 117 people, killing 60 of them</td>
<td>- So much for the last article that attempted to calm things down! This one, the next day, reports a new finding that Tamiflu may not stop H5N1 - draws on Lancet article above - Research story – seems to suggest the importance of keeping an eye on the virus to see what it is doing and how - The virus seems smarter than us…we’ve been stockpiling a drug to counter it, but it might be the wrong drug - Significant part of managing is to monitor drug resistance - Intertextuality, pulling on Lancet quotes - Not sure who Aggie Adamczyk is (only non-expert quoted so far)</td>
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<td>33. News story about an interview of Canada’s health minister Ujjal Dosanjh on CTV’s question period. Actors/speakers and actions: - Ujjal Dosanjh predicted, said, did not estimate, challenged, cited - Britain’s chief medical office, Liam Donaldson, predicted, added - Canada and other countries are stockpiling - The journal Nature will publish - Canada has stocked - Health experts worry - A working group is studying - Canada is also working on - Canada is well prepared - The US is seeking [Canada’s advice] - Federal government getting in touch [with businesses to ensure they are prepared]</td>
<td>Possible flu pandemic - avian flu could claim 50,000 lives in [Liam Donaldson’s] country - has already infected at least 117 people, killing 60 of them</td>
<td>- Competition among countries again – Canada is well prepared compared to others - Seems to refute finding in above story about Tamiflu, but story does not start out that way – that happens in the middle…probably because story is about Dosanjh interview overall and things he said in it. He is refuting the scientific evidence though – or at least saying that this scientific evidence does not override the existing scientific evidence - Interesting how active “Canada” seems to be, how they are positioned as very actively preparing! No doubt because the health minister is the focus of the article - International politics…the US is asking us for advice, that’s how prepared we are - Seems to be inevitable, but lots of ‘ifs’ - Intertextuality with last article – same line about what H5N1 has done</td>
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<td>34. News piece, Britain’s preparedness plans; also draws on ‘new news’ birds in Romania now have H5N1. Actors/speakers and actions: - Britain’s chief medical officer said, told - Officials are revising [contingency plans] - Scientists warned will be unable to develop effective vaccine [until bird flu virus mutates into human form], are working on [experimental one] - The elderly and young are most at risk - 250,000 people died [in Britain’s 1918 pandemic]</td>
<td>Bird flu pandemic, deadly form of human influenza, flu pandemic - would kill about 50,000 people but not necessarily strike this winter - pandemic could double (or more) number killed in 1918, 2000 epidemic - strike every few decades</td>
<td>- Groups of the public mentioned here – but not as active, as being at risk - does not seem to add much new, rather reiterates information in other news stories, but from another perspective (Britain’s chief medical officer) - Again, seems to indicate inevitability simply by talking about possible scenarios… perhaps because why talk about them if you don’t expect them?</td>
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<td>35. Editorial about how the world is taking the threat of avian influenza and its potential to become a pandemic seriously, and is preparing and in fact well prepared, and there is no need to panic. Actors/speakers and actions: - China’s health authorities responded quickly [even though China is not famed for its open communication] - Malaysia acted - Western health authorities are on [high alert] - PHAC has promised - France’s health department has issued - US authorities are empowered, lick [their post-Katrina wounds] - We can be [reasonably confident] - CDC has issued - WHO reports</td>
<td>Barnyard epidemic, human-to-human mutant, human pandemic, flu pandemic - flu pandemic of 1918 killed tens of millions</td>
<td>- Attempts some humour: should be very afraid of avian influenza—if you happen to be a chicken; barnyard epidemic - But note sarcastic reference, “H5N1 virus creeping inexorably eastward, southward and westward”, not so different from some not tongue-in-cheek ref’s - Discusses all preparations taken place around world, seems significant (even China, &quot;not famed for its open communication&quot;) - In light of all preparation, editorial asks how much alarm is merited? - First article citing modern conditions as preparing us better than 1918 (new vaccines, improved quarantine measures/antibiotics–ample to combat threat) - Interesting, since earlier columnist cited chances between now &amp; 1918, leading to likelihood new pandemic much worse (air travel speed, etc.) - Writer suggests there is panic, and says it is time to ease up on it - Article seems a break, albeit temporary, from the usual articles - Vigilance and common sense recommended - Unlike some of the articles, this one suggests governments are very active and responsive and responsible - Pulls on stats to suggest it’s not inevitable nor even particularly significant – it is very manageable, and already managed or at least well in hand</td>
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| 36. News story on how Canadian politicians are viewing a potential pandemic and what they are telling their constituents. Actors/speakers and actions: - Liberal MPs fear, several of them say - Sources say - One MP is taking [matters into his own hands] - Prime Minister Paul Martin attempted - Health Minister Ujjal Dosanjh said - Toronto Liberal MP Jim Karygiannis said, is setting up, is telling - National caucus chairman Andy Savoy, confirmed, asked - Ontario caucus chairman Sam Buele and BC MP Hedy Fry said | National pandemic, potential pandemic, possible pandemic - strike [should an influenza pandemic...? - would likely result in deaths | - Paints a picture of the government as being divided - Argument back and forth over whether we are prepared or not - Seems purely a political story - A politician deflects responsibility on behalf of the government, saying the country’s chief public health office is responsibly fore issuing information to Canadians - Canada positioned again as being the world’s best-prepared nation - Perhaps in reaction to above article about “rich countries” not helping, Dosanjh says Canada will endorse a proposal that all wealthy countries should contribute ten percent of their flu drug stockpiles to the WHO to help poor countries - Here is the first instance we hear of the public – several Liberal MPs say many constituents have approached them or their offices asking what they should do if the avian flu hits Canada; another MP says “all Canadians are concerned to some extent” - A real challenge to the government – from its own – about preparedness - What they are telling constituents is not clear. I love this quote from one MP: “I’m moving ahead, way ahead of the pack. I’m reaching out to constituents saying ‘you’ve got to do this, that or the other thing’.
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| 37. News story based on a new report, a summary of human infections associated with the H5N1 virus. Report is only mentioned in the lead, and provides the opportunity to revisit H5N1 and current thinking about its potential to become a pandemic. Actors/speakers and actions:  
- Experts say, some experts believe  
- WHO says  
- Dr. Martha Brown, associate professor in the Department of Medical Genetics and Microbiology at the University of Toronto, says  
- Dr. Don Low, microbiologist in chief at Mt. Sinai Hospital, says  
- Officials announced | Next flu pandemic, pandemic, global pandemic  
- could also arise from some other version of bird flu  
- 35 to 50 percent of the world’s population could be exposed | - Here “new” news seems that WHO says H5N1 virus now meets 2 of 3 conditions needed for pandemic  
- Very dramatic language, what could happen if you get bird flu: bleeding from nose and gums, watery diarrhea, vomiting, abdominal pains/ sharp knife-like pains in chest  
- But rest of article is a back-and-forth, maybe it will/maybe it won’t  
- Chance for experts to air views…which add up to knowing some things, but not much and we’ll have to see. Good quote from 1 expert: people stockpiling antivirals: “We don’t have an answer to that. And I think it’s a question that has to be answered.” By whom?  
- One expert points out how countries could be pitted against each other when she says “what we can hope for Canada is that it starts in some other part of the world…”  
- back to the stats again, which we haven’t seen for a while |
| 38. News story about research that will be undertaken to find out how many people may actually have bird flu but not get very sick and die. Actors/speakers and actions:  
- Canadian scientists are set (to be the first in the world)  
- Canada’s National Microbiology Laboratory is preparing  
- Dr. Frank Plummer, head of the lab, told  
- The man’s (a man who died from H5N1) 7-year-old son was [in hospital]  
- Some people could have been infected  
- Dr. Frederick Hayden, professor of medicine at the University of Virginia, said, says  
- Health ministers and senior officials from about 30 developed and developing countries, as well as the heads of international organizations, will attend [the meeting] | New flu pandemic | - As others above, has “let’s set the record straight” tone, but this time not just with common sense and facts we have, but with some research that interjects “hard evidence” into “shirl and growing debate over whether…globe is on…brink of a new flu pandemic” – interesting as has not sounded like much of a debate to date  
- Competition among countries again, this time Canadian scientists set to be first in world to determine how widely bird flu has affected humans. That they’re working with Vietnam researchers is set off in a clause  
- This research is getting off ground as international ministers of health meet in Ottawa for 2 days of talks on how to boost global cooperation in event of a flu pandemic. Could be interpreted as “just talk,” while scientists are getting on with trying to come up with concrete evidence; could be read as this is good timing  
- Signifies international cooperation, Canadian competition, too |
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<table>
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<tr>
<th>Article type and storyline, including human/organizational actors (as sentence subject) and actions</th>
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<tr>
<td>40. Letter saying we’re tired of hearing about avian flu, on which media have been relentlessly reporting. Says we should not still be importing and exporting birds. Actors/speakers and actions: - I think - Governments believe</td>
<td>Pandemic, avian flu pandemic - might occur - might not</td>
<td>- Calls media and government to account...media for over-reporting, government for regulating our lives, but not being accountable themselves - Questions that a pandemic is imminent, but then seems to legitimize the “fears” by saying why are birds being imported and exported</td>
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<td>42. Column responding to a letter that in turn responded to the columnist’s piece of two days previous. Admitting the letter writer has a point, but that planning is prudent, and citizen engagement is necessary. Actors/speakers and actions: - A reader suggests - People with less serious illness would likely not be included - The WHO says - Younger people might be more prone - Older people might possess - Most experts now assume - I’d bet - We do need to begin [talking]</td>
<td>Pandemic - inevitable to imminent</td>
<td>- Calls on common sense, prudence - Inevitable, “when” the next pandemic comes - Might be mild, though circumstances to date suggest it might not - Reissues call of 2 days ago for public discussion about preparedness plans, about how we respond together as citizens - I believe first call for citizen engagement/ public discussion - Notes how scientists were criticized for raising panic about a swine flu that didn’t amount to much in the 70s. The writer (same columnist as before) suggests the same will happen if avian flu amounts to nothing - He certainly doesn’t think the plan is enough - Noting that the descriptions of a pandemic, and its actions, seem to be getting less dramatic...have its characteristics perhaps already been established?</td>
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<td>43. News story about the need to be on the lookout for the potential arrival of H5N1 by noting dead birds, part of expanding government early warning system. Actors/speakers and actions: - Wildlife field workers, hunters, fisherman and naturalists are on the lookout - People need to realize - Dr. Ted Leighton of the Canadian Co-operative Wildlife Health Centre says - People are urged</td>
<td>Pandemic-causing scenario - a novel subtype to which humans have never been exposed and have no immunity</td>
<td>- Bringing the public into the surveillance efforts, by saying they should be vigilant for dead wild birds - Signals cooperation...not just scientists are government but wildlife workers, people who live and work in and travel to remote areas - This one isn’t really a pandemic, although it is clearly about a disease we should be worried about. The only key word pandemic came up in “pandemic causing scenario”</td>
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<td>44. Letter by BC’s Provincial Health Officer Dr. Perry Kendall in response to column above in #42, justifying the province’s planning approach. Actors/speakers and actions: - I couldn’t agree more - Public health researchers agree - We are building - The health ministry and health authorities are turning their attention</td>
<td>Pandemic influenza, an issue of this scope cannot be addressed by the healthcare sector alone</td>
<td>- Perhaps inevitable that he would respond, as the columnist criticized the plan - Seems to suggest that the plan was for the healthcare sector, and now they are turning their attention to local governments, businesses and individuals. But the way they are turning their attention is to develop plain language information for them - So while he says “an issue of this scope” cannot be addressed by the healthcare sector alone, he doesn’t suggest how others can address it, again, other than by receiving information - Very even in tone, not inflammatory - Acknowledges the need to raise concern but not panic - To refute the columnist, calls on “public health researchers agreeing” and “international consensus” to defend how they have planned - Interesting that he says the plan has been created for leaders and planners, when actually it says in the plan itself that it is for all British Columbians – again, that tension between authority and empowerment</td>
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<td>45. News story about several birds in Quebec and Manitoba testing positive for an H5 influenza. Actors/speakers and actions: - Federal health authorities stress - PHAC’s Dr. Arlene King told - Dr. Ted Leighton of the Canadian Co-operative Wildlife Health Centre said - Federal animal health officials believe - Canadian Food Inspection Agency official Jim Clark said</td>
<td>Human influenza pandemic</td>
<td>- Only in the title and lead does this seem like an issue – the rest of the piece deals with the unlikelihood of this being H5N1 - Funny that this disease has been found because of the surveillance measure referred to in #43 – raised more alarm, but only temporarily? - The whole article consists of experts being quoted on how this is not a concern - Inevitability doesn’t seem to be big here, with phrases such as “fuelling speculation”</td>
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<td>46. News story about 25% of BC interior’s birds tested having some form of H5. Actors/speakers and actions: - Experts say - Dr. Ron Lewis, the province’s chief veterinarian, said - Officials in Quebec and Manitoba reported - BC provincial health officer Dr. Perry Kendall said - Lisa Bishop, spokeswoman with Chicken Farmers of Canada, said</td>
<td>Outbreak, avian flu pandemic (not in story directly but in sidebar fact box), pandemic</td>
<td>- Very like article above! Lead talks about discovery of bird flu, rest of story is experts telling us it is not a concern - That said, story’s last para raises potential controversy – poultry industry/farmers might not be following protocols – and no auditing - Noting now quite a few articles about bird flu, though they mention a pandemic, are less likely to be “about” a pandemic - Concern has shifted—potential pandemic to H5N – doesn’t need to be a pandemic to be of concern, rather than just “a pandemic” has a name?</td>
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<td>47. Pandemics history column, government says we’re ready but we haven’t heard what we should be doing. Actors/speakers and actions: - Vancouver fans buzzed [Stanley cup in 1918] - Students settled - New Zealand prepared - All would soon experience - All died, some bled - Eileen Lynch, former research specialist in epidemiology, scoured [accounts] - Almost 13,000 died - Fewer died [here than in Philadelphia] - Some communities experienced - Public health authorities argue - Bureaucrats spend [time making plans] - U.C. Philadelphia students turned [frat houses into hospitals] - Young women in New Zealand were trained - Volunteers proved [a godsend] - I haven’t [heard] - We watched</td>
<td>Public health nightmare, disease of unknown origin. Spanish flu - -began killing young, healthy people</td>
<td>- Same columnist decrying lack of engagement with the public about pandemic planning - Lots of active sentences in the set up, about how bad the 1918 pandemic was…seems to contribute to a sense of inevitability and significance – putting a face on the pandemic - Credits the public in Philadelphia and New Zealand with managing the flu</td>
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| 48. News story, new research shows how bird flu causes 10 times as much inflammation in human lung cells as regular flu. Actors/speakers and actions:  
- University of Ottawa virologist Earl Brown said  
- Scientists from the University of Hong Kong looked at  
- The researchers compared the levels, write  
- Vietnam has reported  
- Indonesia confirmed  
- Canadian Food Inspection Agency said | New flu pandemic, flu pandemics, pandemic influenza  
- result when a bird and human flu mix genes | - Interesting that on the heels of several columns talking about public preparedness and urging public engagement comes this article, back to the merits of research, how it is the answer  
- Intertextuality in referring to birds infected with flu – and how that virus has not been identified |
| 49. Opinion piece by former president of the Ottawa Academy of Medicine challenging the assumption that healthcare providers will be able to provide adequate care during a pandemic, and urging the government to consider their needs. Actors/speakers and actions:  
- Federal Health Minister Ujjal Dosanjh is wrong to claim  
- Front-line professionals were most affected [during SARS]  
- Families of deceased nurses were forced to sue  
- Health professionals are increasingly reluctant  
- New Orleans police department lost [members]  
- Most doctors have [no sick leave]  
- A number of aging physicians are developing [healthcare problems]  
- Many health professionals are less well-protected [than their patients]  
- Conservative public health critic Carol Skelton should demand  
- Canadians have a right | Human pandemic, influenza pandemic, pandemic | - The opinion piece writer is established as very credible...graduate of both Princeton and Johns Hopkins, former president of Ottawa Academy of Medicine and practitioner of internal medicine  
- First piece to forefront with such detail healthcare providers and what they have been through in the past and would face in a pandemic  
- Provides concrete strategies about what the government should offer healthcare providers – for the most part, financial compensation, but also masks, anti-viral agents  
- Accuses the government of rhetoric and platitudes |
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<td>50. News story about a new report that says governments should consult the public on ethical concerns with regard to pandemic containment. Actors/speakers and actions: - Governments should develop - The Federal government released [a plan] - Governments and healthcare leaders need to make [values public], should discuss, need to do - Dr. Peter Singer, director of the centre for bioethics, said - Worldwide leaders have begun</td>
<td>Flu pandemic, the crisis - could kill millions of people worldwide - strikes the world - strain that is transmissible among humans</td>
<td>- Picking up the thread from the columnist about public engagement, but this time about Canada’s (not BC’s) plan, and that the public has not been engaged - Engagement seems here though to be limited to potential ethical issues - The possibility of public panic arises – but not sure from whom... “it has raised questions about whether the public would panic in a pandemic and reject government decisions on how to deal with the crisis” - First piece to mention the public potentially rejecting government decisions - Inevitable – “when it strikes the world”</td>
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<td>51. News story about disagreement between named experts regarding how best to plan for a pandemic. Actors/speakers and actions: - Vancouver’s chief medical health officer Dr. John Blatherwick says, said - David Butler-Jones, Canada’s chief public health officer, said, categorically denied, conceded</td>
<td>Global flu pandemic, worldwide epidemic, pandemic</td>
<td>- First time an expert who is sceptical a pandemic is imminent has been named - Very interesting – an argument between two experts! Would be a nice rhetorical deconstruction - Critical of government for empty attempts to convince the public there is action being taken – suggests common sense handwashing for prevention - Argument is over the purchase of Tamiflu, which one experts feels should have been purchased in powder form, but which was purchased in pill form - Journalist takes the opportunity to provide education on Tamiflu and how it works - Expert says there is no good evidence that the avian influenza will cause a human pandemic. He’s the only one to date with the argument that the only reason we’re seeing it in so many birds is that we’re looking for it</td>
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<td>52. Business story about the economy and how we in BC are at risk because we trade with Asia. Actors/speakers and actions: - Economist Erik Bloom said, projected, added, noted, predicted, co-wrote - Medical experts have warned</td>
<td>Avian influenza pandemic, flu pandemic - have the potential to spur a global recession and cause global trade to contract by 14 percent - causing large scale health and economic damage - would also affect the supply of goods and services - [aggregate impact of] a pandemic will not be as serious as one might expect - would also hurt BC companies trying to establish ties in Asian countries</td>
<td>- Fully about economy: even when fears are mitigated (aggregate impact of pandemic not as serious as one might expect), it is about the economy (Canadians more inclined to spend money at home) - Interesting, the compartmentalization of a pandemic’s effects into just the economy - Is inevitable, but economist is careful not to say too much about significance, saying “there is no way of accurately predicting the consequences of a pandemic, nor how or when it will occur” - Very much less doom saying than a lot of the other articles: “Experience from other big diseases show that the economy can recover quite quickly”</td>
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<td>53. Business story, seems spurred by forum on avian influenza, about need for businesses to plan for pandemic. Actors/speakers and actions: - Business and health experts say - Ann Wyganowski, HZX Business Continuity Planning vice-president, said, was speaking, added, suggested - Officials have warned - Experts say - Companies, businesses with employees overseas should know - Aluminum manufacturer Alcan is already preparing, will tell - Alcan’s Vern Davis, occupational physician, said - Ray Roch, director of the worker and employer services division of WorkSafe BC, stressed, said - Companies need</td>
<td>Avian influenza pandemic, the disruption, pandemic - could prompt governments to impose travel restrictions, disrupt the demand for goods and services, and hurt productivity (experts say)</td>
<td>- Business experts have joined the health experts – first time the former have been mentioned? - Inevitable: “when the next pandemic hits” - Also sometimes “if,” though - Significance in ramifications, but also in talking about the complicated planning that needs to take place, the considerations - Very much a moral obligation on the part of businesses, which “should” do a great deal, and now</td>
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<td>54. Business story about the production and shipping of fake Tamiflu, which was intercepted by customs agents. Actors/speakers and actions: - Authorities said - Roxanne Hercules, a spokeswoman for the US Customs and Borders Protection agency, said</td>
<td>Bird flu pandemic</td>
<td>- First article of this type — a crime piece! - Others have hinted at or indicated that certain people and organizations will benefit or will seek to benefit from a pandemic, but this is the first about criminal activity - Causes this reader to wonder what else could happen! - Noting in all these articles how “said” and “claim” and so on can deflect from the action. For example the lead is that customs agents have intercepted more than 50 shipments of counterfeit Tamiflu, which is very active — but it is based on what authorities said</td>
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Appendix E.

Vancouver Sun Articles Cited in Section 8.2

When hospital operations go wrong; Lawsuits are not always able to assign blame when complications, illnesses result from surgery.

Passengers on bus urged to get tested for tuberculosis; People exposed to the disease by infected rider on a trip from Lethbridge to Kelowna.

Obesity and pregnancy a dangerous mix; Heavier women can deliver a healthy child with a minimal weight gain, but too many extra pounds increase the risks.

Scoring The Perfect 10; How to eat 10 servings of fruit and vegetables a day.

Bitter over a bad breakup? You might have 'post-traumatic embitterment disorder'; Apathy, Internet addiction and chronic fighting with spouse also proposed as mental illnesses.
June 1, 2009, p. B3.

Clean eating movement focuses on food in its most natural state.
June 1, 2009, p. D1.

Scientists get closer to anti-aging medications; ‘Longevity genes’ can be activated.

Health officials confirm 20 deaths from H1N1 flu.

Toying with our safety; Bath plaything has become symbol for hidden poisons found in many household items.