The Politics of SARS – Rational Responses or Ambiguity, Symbols and Chaos?

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Abstract

The main focus in this article is on the SARS event as a political process, involving political leaders, administrators and health professionals. How can we understand the reactions to SARS of some of the main actors and institutions? What aspects were they preoccupied with and did their definition of what SARS was all about change during the process? A selection of jurisdictions is chosen – China, the Hong Kong SAR, Canada and the World Health Organization – to explore these questions. The starting point is a view that the reactions cannot primarily be seen as an instrumental, based on rational, standard-operating-procedures (SOPs) and technical expertise, but may be better understood by a garbage can-perspective. From a review of the events as publicly reported, we find, as suggested by garbage can theory, that politicians’ and administrators’ responses to the SARS outbreak were a combination of competing rationalities and overlapping agendas. Critical decisions were triggered by extraneous factors and administrative actions were shaped by dramatic switches from one set of standard operating procedures to another, as events unfolded. The public health issues constantly vied with other agendas and only when compelling alignments among them occurred did professional or technical rationales for “solving the problem” become dominant.

Introduction

The epidemic disease SARS (Severe Acute Respiratory Syndrome) caused fear and panic on a global scale. The first case of a new kind of atypical pneumonia with no known cause was reported in Guangdong Province in southern China in November 2002. By early February, the Hong Kong media was reporting a mysterious virus sweeping through Guangdong, but the Chinese authorities issued denials and imposed a media blackout. In late February, cases appeared in Hong Kong and Hanoi, and the World Health Organization’s (WHO’s) first travel advisory was issued on March 15. Cases by now were being reported in Canada and Singapore. The epidemic peaked in April, during which month international agencies and governments all over the world – including China, which in mid-April “came clean” about the extent of the problem – adopted increasingly drastic measures to combat its spread. Cases were reported from 30 countries on six continents. By July the epidemic was said to be under control, indicated by a lifting of
all the WHO travel advisories. According to statistics from WHO, during the period of November 1\textsuperscript{st} 2002 to July 1\textsuperscript{st} 2003, 8445 people were infected by SARS, the disease killing all together 812 people, of whom 348 were in mainland China, 298 in Hong Kong SAR, 84 in Taiwan, 38 in Canada and 32 in Singapore (WHO 2003a).

Many epidemics and diseases have killed many more people all over the world and continue to do so. So how and why did this epidemic create so much public nervousness and panic? One explanation could be a more general feeling of insecurity in the world after September 11. Another explanation, connected to the first one, was the handling of SARS from the main actors involved, primarily WHO and some of the countries affected. Early on it was indicated that there was probably no cure for the disease, leading many people to think that SARS was fatal in most cases. In fact, there were different reactions and symptoms of varying severity between different infected patients; there were successful treatments; and death rates were not dramatically high compared with some other diseases. Vivid accounts in the media of how the disease was spread – via hotel lift buttons, through being coughed on by a “super-spreader” and so on – also added to the sense of fear. Was this “the big one,” the “mystery virus” that defied all efforts of modern science, sweeping the world with devastating consequences? The plague panic epidemic was as virulent, if not more so, than the disease itself. Travel and travellers were particularly affected, as the speed at which index patients cropped up in different parts of the world highlighted the significance of this mode of transmission. Countries began to screen or even prohibit visitors from affected areas; airlines cancelled flights and laid off thousands of workers; hotels in East Asia emptied.

Adding to this global public alarm and uncertainty was a feeling that the authorities didn’t have control of SARS. It was almost a double-bind situation for many countries: if they admitted that SARS was a problem and they took dramatic measures, people got nervous; if they said things were under control, it was seen as deception and cover-up, and created even more nervousness. The same pattern was seen in WHO’s initial somewhat reluctant action and their later warnings against the possible effects of the disease, seen by many as overreacting.

The main focus in this article is on the SARS event as a political process, involving political leaders, administrators and health
professionals all over the world. We are interested in the way the fighting of SARS was organized and performed. How can we understand the reactions to SARS of some of the main actors and institutions—WHO’s decision makers and spokespersons, China’s leaders, Hong Kong’s health administrators, Canada’s politicians and so on? What aspects were they preoccupied with and did their definition of what SARS was all about change during the process? Can their reactions primarily be seen as an instrumental reaction, based on rational, standard-operating-procedures (SOPs) and technical expertise? Or are their responses better understood by a garbage can-perspective, where SOPs were not in place but had to be invented, where symbols were important and several other events and problems became connected in unpredictable ways with the process of dealing with SARS?

Our analysis will principally tap into those aspects of events brought to the knowledge of the public in the media. Our empirical data do not come from primary sources, such as interviews with top political leaders. We focus on the realm of communication and public debate about SARS, and upon published internal and external reviews of national and international organizations’ responses, as a reflection of political and administrative actions. This is clearly a limitation, as much of what we conclude is based on inferences rather than on direct evidence on elite decision making behaviour.

**Theoretical Elaborations**

Graham T. Allison’s (1971) analysis of the Cuban missile crisis using three decision-making models—rational actor, organizational processes and governmental (bureaucratic) politics—drew on three seminal traditions in organizational theory and policy making studies. The same traditions inform our starting point. Allison’s contribution effectively demolished the unitary rational actor model as an adequate explanatory framework on its own. However, the insights of organizational theory on “bounded rationality” (Simon 1957) were deployed by Allison to illuminate important dimensions of the decision making process. We go further, by contending that a “garbage can” approach (March and Olsen 1976) can assist in showing how complex crises are handled from an organizational process perspective. Such an approach, we argue, also illuminates the nature of bureaucratic politics.
Drawing on bounded rationality theory, political and administrative actors’ behaviour in public decision-making processes can primarily be seen as combining social control and rational calculation (Dahl and Lindblom 1953). On the control side, political and administrative leaders are supposed to exercise control at the top, either by participating themselves in closed processes, or by tightly controlling other principal participants in the decision making processes. Rational calculation means that actors must score high on formulating relatively unambiguous goals and means and they have good insights into the possible effects of different actions and their probability of solving problems and fulfilling goals. A tight coupling between control and rational calculation may imply that there are some very unambiguous ways of organizing like standardized rules for handling decision-making processes, often labelled Standard Operating Procedures (SOPs). This implies that, when certain events happen and certain decisions and actions are taken, there is a relative lack of ambiguity about which actors get involved, what role they should play and what actions are to be taken. According to different structural positions, actors have different functions and roles to play.

There is always a trade-off between the necessity of tight control in public decisions through hierarchical steering on the one hand and, on the other, the involvement of a broader set of participants, often through different kinds of collegial structural arrangements to accommodate bargaining. Here, Allison’s governmental politics model comes into play: decision making becomes a multi-player game (Allison 1971, 162-81). While more participants may slow things down and make decisions more loose and ambiguous, this can at the same time increase the legitimacy of the leadership and the process. For example, the leadership needs the expertise of internal and external participants, particularly if it is a technically advanced policy area. These participants – particularly if their right to contribute rests on expertise that is stored in public agencies with formal jurisdictions – will want discretion and leeway for enacting their functions, something that may potentially undermine the control of the leadership and drive it to bargain and negotiate.

There are a number of potential problems for public leaders in scoring high on both political control and rational calculation. It is not
an easy task to formulate unambiguous goals in an increasingly complex and changing world, nor is it easy to find clear instruments for achieving them, for example structural or organizational solutions. The more complex, novel or crisis-bound nature of the issue, the less will it be likely that tight management of bargaining plus judicious deployment of appropriate SOPs will suffice. Insight into the effects of actions and measuring these effects amidst other public actions is also problematic.

In the SARS process we had a set of decision problems fraught with ambiguity, uncertainty, social panic and political conflict. Do we see tight control of the process by the political leadership or are the decision making processes more varied, involving a variety of participants? What characterizes the relationship between the political leadership, the administrative leadership of the health sector and the more typical epidemic expertise? Do we find unity and agreement or conflicts? Is there a clear, common definition of how to handle SARS or disagreement, and do the definition change over time? Is the impression that there are unambiguous SOPs that are used when SARS occur or do the actors have to change existing SOPs or invent some new ones?

The “garbage can” perspective developed by March and Olsen (1976) extends Allison’s framework of analysis of organizational process factors in a way that might help to cope with the extreme uncertainties and ambiguities of the SARS case. It is founded on some basic premises: first, participants in public decision-making processes have attention and capacity problems, so their participation is part-time and unpredictable. Thus, their real attention is not only based on rational calculation. Second, each and every decision situation is characterized by ambiguous stimuli, meaning that the decisions could have several different aspects, whether they are closely connected to the formal decision agenda or not. Political and social factors that have more or less ambiguous relations to the issue in hand can come into play. There could also be disagreement about how history should be interpreted, elements of “superstitious learning” and disagreement about what the decisions and the decision contexts are all about. Thus, decisions are “garbage cans” in the sense that participants can throw a lot of premises for diverse actions into them, making problem definition, solution search and choice more unpredictable.
Thus, in an organization or formal decision arena, participants, problems, solutions and decision situations come and go and are very varied and context- or situation-driven. Solutions can come first, waiting for problems to be connected with, not only problems worked on to find solutions. Participants can be characterized by local rationality, as in Allison’s organization process model, but their actions may be poorly coordinated and the collective result of separate actions relatively irrational. And the manipulation of symbols, because instrumental action is made difficult, may characterize decision-making processes. This last point has been highlighted as a common feature of many supposedly ration-comprehensive reform processes in the public sector, where hypocrisy frequently characterize leaders’ behaviour in the absence of clarity over reform consequences (Christensen and Laegreid 2001).

So what is the relevance of this perspective to the SARS process? Is the participation structure characterized by being fluid and unpredictable? Are the definitions of what SARS is all about as a public issue characterized by being particularly varied, ambiguous or changing and is the public talk accompanied by high usage of political symbols? Do different actors try to connect SARS to other political and administrative processes going on at the same time, processes that originally were pretty loosely coupled to SARS? Do they eventually see SARS as an opportunity to shift blame and support to certain actors? Are their actions typically solution-driven?

Analysis

Similarities across Actors

The SARS issue exhibited certain common features across jurisdictions, features that we can categorise into three types: first, the nature of the epidemic itself and its social and economic consequences; second, the range and type of participants involved; and third, a common context of multi-level, global governance structures.

As to the first, the SARS issue exhibited high degrees of uncertainty and risk for decision makers. Lack of knowledge about causes, along with the absence of a cure and of well-tried technologies for prevention, created similar problems for all. In part due to its nature as a new disease, the epidemic took the first jurisdictions to suffer its
consequences by surprise. At the same time, “lack of preparedness” was a common accusation, as doomsayers had been predicting such an event for some time. Bundled together with this accusation other criticisms were common, such as inadequate resources and lack of coordination among the several agencies involved in dealing with the epidemic, both within and across national borders.

As to social and economic consequences, the effect of the epidemic on business and commerce due to the fear of travel, and to the deliberate attempt by the authorities to limit movement in and out of affected areas, impacted on all affected countries regardless of the measures they took themselves to deal with the outbreak. Another near-universal feature of the SARS issue as a policy problem was the extent to which it called into question the integrity and status of the nation-state. Governments were highly sensitive to the need to “act responsibly” as a result of international pressure to prevent the spread, and they also faced the urge (particularly in the least affected countries) to “pull up the drawbridge” in pursuit of national protection. The dilemma for many was whether the responsible course of action was either internationalist and cooperative, or protectionist and unilateral.

The same groups in each community—in particular health workers, who bore the brunt of infections and deaths—were prominent in their claims to participate and to be given special attention in decision making. The special status afforded to the so-called expert epidemiologists and other medical scientists was a notable feature, albeit in a context where they (perhaps more than any other group) freely admitted their limited understanding. Complex technical debates about such things as the adequacy of methods of diagnosis and labelling, or the accuracy of published death rates, dismayed those looking for authoritative reassurance from the experts. Responses and remedies recommended by them were disconcertingly diverse and multidimensional. There was on the one hand a search for sophisticated scientific knowledge about the virus with a view to finding a chemical cure and, on the other, exhortations to the general community to wipe their feet and wash their hands. Given a natural urge on the part of medical staff to self-preservation, this lack of certainty exhibited itself in some cases as a particular kind of “techno-panic,” in which the uncertainty about causes, prevention and cure, coupled with an acute
awareness of the possible worst case consequences, led to ultra-cautious and failsafe recommendations. The very status of medical science and the health professions was wrapped up in the struggle to define the appropriate responses.

The global and international context of the issue was in part a reflection of the border-less nature of any epidemic, but it was also a consequence of two contemporary circumstances: first, the increasingly global reach of the media and second, the existence of a burgeoning set of multi-lateral institutions for dealing with cross-border health problems. As to the first, the intense interest of the international media created a news storm that no jurisdiction – not even China – could escape. Where there were obstacles to news-gathering and reporting, the internet and text-messaging were vital “unofficial” methods of access to and dissemination of information about the disease. As to the second circumstance, the role of the WHO meant that no nation state could act in isolation, although each could adopt varying degrees of the same kind of response (for example, more or less harsh quarantine and surveillance measures). The fact that the mere labelling or un-labelling of a country or region by the WHO could have such dire economic and social consequences gave that body and those upon whom it depended for support and advice extraordinary global power. In response, the pressures for cross-border cooperation of a defensive kind to protect state capacities were intense, resulting in involvement at the highest level by political leaders through multi-lateral organisations such as ASEAN. Issues of national performance and integrity were at stake, as well as the status of international monitoring and regulation by a body such as WHO.

We can best see the combined effects of these various factors on decision making by governments and by the multi-lateral agencies by taking account also of the national (local) political and institutional variables in each case. When we observe the unfolding of national and international responses in the face of events, we see the different considerations that came to play in decision making processes. We shall look first at three systems of government – China, Hong Kong and Canada – and finally at the WHO as a major institutional actor ever-present for all three sets of governments.
China

Guangdong Province experienced a serious outbreak of what later came to be called SARS during January 2003, placing the health authorities under great pressure, but information about the event was kept from the public for “security” reasons. China’s response executed a sudden u-turn in April 2003, when the authorities shifted from a stance of denial to one of confronting a national crisis. What accounts for the secrecy and prevarication in the first place, and then a sudden shift to more openness accompanied by a draconian, coordinated campaign against the disease? Was there a “trigger” that shifted the system from one approach to the other, and if so was it anything to do with the nature or severity of the actual problem?

A number of standard operating procedures in the Chinese political and bureaucratic systems combined to produce an initial process of cover-up and denial. A habit of secrecy was ingrained in the bureaucracy and reinforced by strict party control. There are two kinds of policy relevant information in Chinese government: the first for official consumption, the second for public knowledge. The same officials may be involved in creating and disseminating both kinds. Detailed accounts are passed up the line to keep the leadership informed, while information for public release is carefully formulated and passed down the line. Local journalists are tightly regulated by the party. The pattern of information release over time went through a familiar set of stages: cover-up, then dismissal of the problem as a minor one, and finally admission of the serious nature of the problem accompanied by the assertion that it had been under control from the outset (Link 2003).

A report from Guangdong health officials on the nature and seriousness of the epidemic was presented to the top leadership in Beijing on January 27. But the information was not immediately made public, and standard measures were applied to ensure that public officials did not break ranks and the media did not report the outbreak. In the face of leaks and outside pressures, on February 11, Guangdong health officials held a press conference admitting 305 cases of “atypical pneumonia” and five deaths. On March 10, China approached the WHO for assistance in investigating the outbreak, but later in the month a WHO delegation was barred from Guangdong province, raising increasing suspicions. By now, the disease had begun to take hold in
Hong Kong, whose officials put increasing pressure on the Guangdong officials and on Beijing to cooperate with the release of information. Under this combined pressure, including increasing criticism in the international media, on March 26 the admitted tally of patients was increased from 305 to 792, with 31 deaths in Guangdong and 3 in Beijing since late February. To save face, statements were made identifying Hong Kong as the source of the Beijing outbreak. However, in a sign that the strategy was still one of public denial, a State Council Meeting on 2 April stated that SARS had “already been brought under control.”

But this strategy of denial was not just a matter of a habit of bureaucratic secrecy. Crucial for understanding why the authorities were so reluctant to admit the increasingly obvious, and to take tougher measures to combat the epidemic, is the political climate of the times. The period from November 2002 to March 2003 coincided with a leadership transition, with Jiang Zemin and Zhu Rongji stepping down and Hu Jintao and Wen Jiabao taking their places as General Secretary and Premier respectively. Apart from the distraction that this transition process created at critical moments, the predispositions of both the leadership and the rest of public officialdom at such a time were to avoid any trouble and maintain calm and stability (Fewsmith 2003, 1). The stage management of the 16th Party Congress in November 2002 and of the National People’s Congress in March 2003 required displays of public efficiency all round so as not to sully the old leadership’s last days in office, while the transition period itself was marked by more than usual caution on the part of the new guard as they settled into their new roles. The potential for the epidemic both to reveal bureaucratic and party failures and to spread alarm and social unrest were it confronted head on was clearly a particularly unsettling one at this time. Tight, hierarchical control of communication flows creates many potential dysfunctions. One such arises because separate hierarchies have their own channels, but may not communicate with each other. This was evident in China in a number of ways. First, the local and provincial health authorities did not communicate effectively with the national level, and vice versa. Channels of expert communication on health matters were overlaid by the hierarchy of political command and reporting, such that the health experts at the centre could not get a clear picture of the spread of the disease from
their provincial level counterparts, as provincial political bosses or ministry chiefs got in the way of effective and speedy aggregation of the facts. This severely inhibited the tracking of the course of the disease and also the implementation of coordinated plans to combat it. The official diagnosis of the failure to respond, as presented by Vice-Minister of Health Gao Qung, stressed this point: the Health Ministry “did not give clear-cut instructions or offer effective guidance; due to the lack of a sound system of information collection, survival reports and contact tracing, there appears to be a major weakness in the compilation of statistics” (Knight Ridder Newspapers 2003; Gao 2003). Secondly, communication about the nature of the disease and the manner of treating it between localities, provinces and even between different hospitals in Beijing was also inhibited by these overlapping but tightly managed vertical communication channels. The reluctance of the military to cooperate with the health authorities in Beijing in the release of accurate information during April was such a case, even after the Government began to take serious measures. SARS statistics were not just state secrets but some of them were also military secrets, and the so-called “official statistics” for some time excluded cases in military hospitals. But here as well, the political situation indicates that not just SOPs but also the intrusion of other agendas were shaping the decision making process. There was possibly an increased reluctance on the part of the respective authorities to cooperate at this time because of the mutual suspicion between arms of the party-state arising from the uncertainties of the leadership transition. Jiang Zemin remained head of the party and state Central Military Commissions after the handover, and his continued presence as a key leadership figure was also evident in the number of his supporters appointed to the Politburo. Jiang was one of the last among the leadership to join the chorus of self-criticism entailed by the u-turn, and military leaders remained silent.

Meanwhile, the crisis as it evolved in late March and early April proved a testing ground for the new leadership. On the one hand, there was mounting outside pressure. The lack of openness became increasingly difficult to sustain not only in the face of growing international hostility and loss of business confidence, but also because rumour and panic were spreading among the local population, aided by new forms of communication such as text-messaging and the
internet. On April 9, shortly after official figures were released claiming only four deaths and 19 cases in Beijing, a retired chief surgeon of a Beijing military hospital “blew the whistle” and, in an interview with foreign journalists, claimed he had personally seen over 60 cases in the one hospital. Others began to speak out: the Director of Guangdong Province’s leading Respiratory Disease Research Institute challenged the official position that the disease was under control (Lefkow 2003). The WHO team in Beijing publicly criticised the health authorities for concealing data. The combined pressure made continued cover up or denial increasingly difficult. In what appears to be a strategic political decision, the new leadership decided to make a fresh start. On April 17 a special Politburo meeting called for complete openness and disclosure by all public officials, and set up a new task force. On 20 April, the health minister and mayor of Beijing were stripped of their party posts. The unusually tough discipline meted out to the two scapegoats might be explained by the wish to assert the new leaders’ authority (significantly, while one was a Jiang Zemin supporter, the other was close to the new leadership and was hence, perhaps, a symbolically even-handed sacrificial victim). Along with the dramatic u-turn in policy, these dismissals also symbolised to the outside world that a clean break was being made with the past in the direction of more transparency and greater international cooperation. Subsequently, many local officials were dismissed or punished for various “errors” committed during the SARS outbreak.

The Chinese bureaucracy and military have a set of standard responses to large scale crises and disasters: tough prohibitions, the rapid mobilisation of physical and human resources and the ideological mobilisation of the population. These were all rolled out after the decision to act was taken. The newly appointed Minister for Health and Mayor of Beijing were, in Chinese Party circles, “heavy hitters” (Fewsmith 2003, 4) and both took the lead with decisive action. The government announced very strict quarantine provisions; it cancelled the May holidays to limit the movement of people; entertainment venues, schools and universities were shut; road blocks were set up to prevent people leaving Beijing; and a new quarantine hospital of 1000 beds sprang up almost overnight. From a situation where inaccurate figures were released only reluctantly, the government began to issue daily updates. It shifted from a policy of token cooperation with WHO
teams to one of eager collaboration. Political leaders and the media spoke with a united voice in support of a mass campaign by the people to eradicate the danger, and lauded health workers as national heroes (other than those that were symbolically singled out for punishment). This strategy had clear political dimensions: domestically, it aligned the new leadership closely with a more open, responsive and people-friendly style as a way of providing it with its own distinct political identity (Xiong 2003); and it sent strong signals to the international community that China was “getting serious” (People’s Daily 2003; Gao 2003).

Yet the strategy also reflected and accommodated continuing internal doubts and tensions, best illustrated by the case of Shanghai where the numbers of reported cases and deaths were very low. Doubts and suspicions by the WHO and international media that the true situation was still being covered up continued to be expressed. Reports emerged that the decisions of mid-April to move to a more open stance were qualified by special instructions in the case of Shanghai (Xu 2003; Beech 2003). This also reflected Shanghai’s economic importance, and the political standing its leaders enjoyed (Jiang Zemin was Shanghai-based). The Shanghai political leadership was especially sensitive about the impact of SARS on the local economy, given Shanghai’s international economic connections, and was unhappy about the potential for the new set of measures applied in Beijing to disturb their own control over managing the delicate balance between claiming (on the one hand) that the situation was in hand and (on the other hand) appearing to conceal the truth. From the national leadership’s perspective, restoring confidence of the business traveller and investor in the safety of “doing business in China” became a top priority, prompting its sudden switch to acting the model international citizen. But further signs that the April u-turn was a matter of compromise and political strategy rather than the dawn of a new kind of political rationality (that is, not “China’s Chernobyl,” as some proclaimed) came in the following month, with a series of arrests and prosecutions against a number of people accused of “disturbing social order” for spreading news of the epidemic on the internet (Hoenig 2003).
Hong Kong's response to SARS was, on the surface, markedly different to that of Beijing. Its political institutions and the presence of a free press made cover-up impossible. But there was one important similarity: a leadership concerned about legitimacy problems. Accusations of indecisiveness and weak leadership accompanied the crisis as it unfolded in Hong Kong, and they were not without justification. The first SARS case – a visitor from Guangdong – was admitted to hospital in late February, and died on 4 March. That patient was the source of infection for others who also spread the disease to Singapore and Toronto, among other places. This only became apparent over the ensuing month, but as it did so it became a source of acute embarrassment for Hong Kong (in particular due to the unfortunate choice of the SARS label by the WHO). The spread of the infection within the SAR from this original case occurred in large part via health workers, raising the question about the state of preparedness and organization of the health system for dealing with such an outbreak. The first Hong Kong victim, a visiting Guangdong doctor, warned hospital officials upon checking in that he was suffering from a highly infectious disease that he had been treating in Guangdong. Some of his medical colleagues phoned the hospital with advice about treatment and precautionary measures (Moy and Phillips 2003). As a consequence, he was strictly isolated and effective measures were taken to limit infection in that hospital. The spread of the infection through health workers stemmed primarily from another hospital, where a patient who had been in contact with the first victim was admitted (Staff Reporter et al. 2003). Necessary protocols and safeguards against infection were not applied, leading to an outbreak among medical staff. Following this outbreak, the Hospital Authority notified the Department of Health of the situation on 10 March. Public information was released and WHO was notified on 12 March; WHO issued a global alert on atypical pneumonia (the label preferred by the SAR authorities) on 15 March.

As the numbers of infections grew, criticisms grew that the uncoordinated measures taken by different hospitals, lack of information dissemination to medical practitioners and insufficient knowledge and preparedness were hampering the response to the outbreak. Suspected cases were not promptly separated from other
patients; some patients who had been in contact with such cases in wards were shifted to other hospitals; one victim was the subject of visits from groups of medical students, many of whom were subsequently infected; some treatment methods employed had the effect of spreading infectious material through the ward; those in contact with patients did not all take the necessary precautions or have available to them the correct protective clothing; and so on. As cases emerged among private general medical practitioners who had treated suspected victims in their local surgeries, they began to voice complaints about lack of information and support from the health authorities. A subsequent report by an expert panel commissioned by the Hong Kong Government confirmed some of these problems:

…the response during the initial period of the outbreak was inadequate due to inadequate contingency planning and a number of system inadequacies … weaknesses in hospital infection control structures, inadequacies in staff training …, deficiencies in the hospital environment, scarcity of equipment, no pre-determined outbreak control plan or communication strategy, and a lack of clarity about the respective roles and responsibilities of the Hospital Authority, Department of Health, and the university (SARS Expert Committee 2003, 15)

Meanwhile, the political leadership called mostly for calm and warned against over-dramatization in the media. But the seeming lack of preparedness and coordination was apparent more widely. A major new cluster of cases emerged in late March from a housing estate, Amoy Gardens. Uncertainty and speculation mounted over how and why so many cases occurred in this area, in particular as it now appeared that the disease might not only spread through direct personal contact with a seriously ill patient. As the political leadership reluctantly was forced to admit that the sources of infection and the danger had spread into the community and outside the hospital system, their response appeared to some to be indecisive and at cross-purposes. For example, at the same time as the Health Secretary was calling for calm over the threat of infection in schools, the Education Secretary was publicly speculating in the face of growing pressure from anxious parents about the possibility of shutting the school system down. During the crisis, the Tourism Authority announced a new slogan: ‘Hong Kong – it takes your breath away’. In the face of growing complaints from health workers about lack of resources and slowness in providing equipment
in the public hospital system, a campaign was begun in the media to collect donations to buy much needed protective equipment for hospital staff.

The apparent lack of leadership and coordination can be exaggerated, given the lack of knowledge about the virus and the speed with which events occurred, but there were other signs that the Government initially responded indecisively to the outbreak. Its difficulties were political, and stemmed from the uneasy relationship with Beijing. Chief Executive Tung Chee-hwa was Beijing’s choice for the position, and continued to have Beijing’s support.2 His position as the crisis unfolded in March and early April was made acutely difficult by Beijing’s official position that SARS was not a serious problem in China. Tung held a number of well-publicised meetings with Chinese political leaders at which they offered full logistical and moral support, and from which he came away expressing gratitude. Tung even had to bear the indignity of hearing Hong Kong blamed as a source of the Beijing infections. Hong Kong SAR Secretary for Health Yeoh Eng-kiong was quoted on 17 March as saying “there is still not an outbreak” (South China Morning Post 2003a). When this was no longer tenable, he then claimed that “the mainland should not be blamed for the outbreak” (Staff Reporter et al. 2003). It appeared that the Government was under Beijing’s instructions. Certainly, Tung was under pressure not to cause the kind of panic that Beijing was so anxious to avoid on its side of the SAR border. But this pressure only could go so far. Hong Kong’s openness and the willingness to call in the WHO at a relatively early date in turn embarrassed the Beijing leadership, which came under increasing international pressure. On April 3, the first WHO mission was let in to Guangdong, with full cooperation.

Beyond the Government’s relief at receiving Beijing’s continued political backing was a growing anger at China’s lack of initial willingness to admit to the severity of its own, earlier outbreak in Guangdong and the lack of official cross-border communication between health authorities that this gave rise to. Effectively, Hong Kong’s leaders could argue that they were unprepared because Guangdong health officials were prohibited from sharing experience and knowledge with their Hong Kong counterparts. Even as the Hong Kong epidemic unfolded in March, the lack of accurate information and official contacts was a continuing problem. As already described,
a vital piece of information shared informally among medical specialists contributed significantly to the mitigation of the effects of the first hospitalised case. Had this advice been officially shared, there may have been a chance that it would have been communicated from the top down to the whole hospital system, avoiding some of the initial errors in treatment of other patients and making for better preparedness. But in turn, there was less than perfect cross-border routine cooperation on the part of the Hong Kong authorities with their Guangdong counterparts. The sensitivities of direct cross-border contact among local officials were brought to the surface by this incident.

The clashing demands of medical and political considerations contributed to internal conflict and indecisiveness in the Government, particularly as medical advice was ambiguous in the presence of imperfect information and knowledge. The clarity and timeliness of this advice was also in question due to bureaucratic conflicts within the health system. Hospital Authority and the Health Department officials were not always speaking with the same voice. Advice during March on stronger measures from medical experts close to the front line was rejected by the Health Secretary (South China Morning Post 2003b). The Hospital Authority was left to bear the brunt of much of the criticism over the rate of infections among hospital staff and the lack of a speedy, coordinated response, while in turn the Authority blamed the Treasury for cost cutting measures (South China Morning Post, 2003c).

The Amoy Gardens outbreak, along with a continuing acceleration in the number of confirmed cases, drove the Government to act. Rather as Beijing’s leaders later acted, Tung’s official pronouncements turned from reassurance and calm to a stance of decisive action. At the end of March, with 367 cases now confirmed, quarantine measures were ordered for all members of the community who had been in contact with a victim, and schools were closed. But the media immediately contrasted this with Singapore’s much more draconian and prompter quarantine measures, and “too little, too late” was the common response (Pomfret 2003). On April 2, the WHO travel advisory warning against visits to Hong Kong was announced, and this further increased pressure on the government. Earlier comments from some officials had been mildly critical of the WHO for being too alarmist. By now, the only plausible strategy was to take all-out measures to control the
epidemic, regardless of the economic or social consequences. The economic effects on Hong Kong of a sudden decline in the number of international visitors were immediate and dramatic. In order to hasten the end of the crisis and regain international public confidence, it now became very much a positive for the Hong Kong authorities to be completely open, fully cooperate with the WHO, take more drastic administrative measures, including health checks on the borders, and urge local residents to take all necessary precautions. Once the need for a coherent, decisive strategy was agreed on, the Hong Kong bureaucracy moved into top gear. All restraints on “causing panic” were dropped – for example, from April 10 the Health Department released daily information on the buildings where SARS cases had occurred, despite fears that this might cause discrimination. Schools were reopened after two and a half weeks, with strict hygiene measures enforced. But criticism continued against the inadequacy of measures taken to screen travellers at the airport and (in particular) at the land border crossing.

Canada

The Toronto SARS outbreak had its origins in the Metropole Hotel in Hong Kong, when a woman who subsequently returned to Toronto came into contact with the same index patient who brought the disease to Hong Kong. She spread the virus to her closest family, who then spread it to the family doctor and to other patients at the emergency room. Several hospital staff, both inside the original hospital hit, but also at other hospitals, were quickly infected. In this latter respect the spreading had similarities with Hong Kong. What contributed to the spreading in the first wave was an elderly grandfather of a large family that was admitted on March 16 to the hospital that first experienced SARS. He was infected by a patient who caught SARS from a family member of the index case and spread it further to his nearest family. These family members, belonging to a large Philippine religious group then spread SARS to others through large church events on March 28 and 29. The first outbreak peaked during mid March and early April, had 136 probable cases all together, of which 25 died, and 121 suspected cases of which one died (Health Canada 2003a).

After rigorous measures taken by the local health authorities, including quarantines, the epidemic seemed to be under control in mid
April, adding only some few new cases. It was now (April 23) that WHO chose to issue a travel advisory on Toronto, lifting it one week later. In mid May the alert on Toronto as an affected area was also lifted and during this period the health authorities also relaxed the control measures put in place in late March. On May 20 the second outbreak of SARS in Toronto occurred. It started with five patients in a rehabilitation hospital, who had contracted SARS through contact with a man of 96 years who had been infected in the original infected hospital in late March and early April, but was not diagnosed with SARS then (Health Canada 2003b). In this second wave of the SARS epidemic in Toronto there were 111 probable cases, of which 16 died. Most were infected from exposure at the original community hospital during the first wave. In the second wave there were only seven suspect cases of which none resulted in death, reflecting a more narrow definition of SARS than in the first wave. The second outbreak was followed by a closure of the hospital to all new admissions except SARS patients and strict quarantine measures towards the hospital personnel, and the outbreak was in reality over by the time its existence was more widely known.

The response to SARS in Canada was characterized by intergovernmental tension and confusion, followed by a blame game with wider implications. Formal authority concerning health policy in Canada rests mainly in the provincial governments. The federal government has responsibility for quarantine questions and it also deals formally with WHO. But there are no national health standards for fighting epidemics. Moreover, Ontario is among the provinces that traditionally has delegated the management of health issues to local boards of health. One implication of this is that the provinces have limited capacity to assist local boards, for example concerning epidemiological expertise, but also to communicate with all doctors and hospitals when the crisis occurred, something that resulted in contradictory advice about what to do with SARS. Overall, the local health authorities in Toronto did a relatively good job during the epidemic, even though it had resource problems, problems with adequate computer programs for tracing SARS patients, and problems of giving adequate and reliable information (Macleans 2003a). One indicator of “relative success” of the local health authorities was that there was no community spread of SARS in a broader sense in the first
wave. Most of the spreading occurred in the most advanced hospitals that obviously had problems with internal procedures of prevention, included nurses working in multiple settings and not adequate resources for infection control (National Post 2003).5

An editorial in the Canadian Medical Association Journal (CMAJ 2003) sums up a lot of the questions raised and problems experienced. It asks whether the right structure, both medical and political, was in place for fighting epidemics like SARS. It questions whether the local and provincial health authorities had the training and the resources they needed and the proper surveillance and reporting system in place. Two matters posed questions about the adequacy of the systems of preparedness: first, the lack of isolation of SARS patients by the clinicians in the initial phase of the epidemic, and second the moving of SARS patients between hospitals (Macleans 2003b). The same editorial also questioned whether the relationship between the federal and provincial level is collaborative enough and whether Health Canada should be more in a leading or coaching role.

WHO

WHO had laid the groundwork for an event such as a SARS epidemic in response to the perception of the growing dangers posed by new emerging transmittable diseases. The organization developed a set of new instruments and standard operating procedures involving collaborating centres and laboratories. The new system called GOARN (The Global Outbreak Alert and Response Network) was built up systematically from 1997 and formally launched in 2000 (Brundtland 2003). It is centrally coordinated by a team at the WHO headquarters and consists of 110 organizations and teams connected in a “virtual” network that have data, expertise and competence relevant to detect and handle international epidemic outbreaks.6 This was also an apparatus that could be activated in case of bacteriological warfare.

This system drew on a new slogan in the medical world – “evidence-based medicine.” It was widely seen as an objective system that would clearly indicate how collaborating actors should react to an epidemic. The SARS epidemic seems to show both the advantages and limitations of such a perspective. Although the leadership in WHO could base their reaction to SARS on this surveillance system, there were still several crucial questions of a “political nature” to attend to:
what was actually the nature of the problem they faced with SARS? When was it appropriate to act? Should the reaction be reluctant, not to scare people, or should it be decisive and dramatic? What collaborating institutions and countries should be involved, in what ways and when? All together this created a complex set of decision constraints for the leadership in WHO, even though they had the evidence-based system as a basis for their reactions. The potential was there for a rational response to the epidemic, but also for conflicts and symbols in fighting it.

WHO was first officially informed by the Chinese Ministry of Health of an outbreak of acute respiratory syndrome in Guandong Province on February 11, 2003. Three days later WHO learned that cases dated as long back as November 16, 2002 and that the outbreak was coming under control. The latter information later was proved to be wrong, but it seems to have slowed down WHO’s initial reactions. The GOARN system and the Global Influenza Network were alerted by two cases in Hong Kong February 19th and 20th. Similar cases were reported in late February from Vietnam and WHO sent a health expert team. It was still not easily understood what caused the disease, how it could be defined and how severe it was. When cases also occurred in Singapore and Toronto, the possibility that the disease could be spread rapidly through international travel was immediately raised. After a substantial number of hospital employees both in Hanoi and Hong Kong were affected, WHO on March 12 issued a low level alert on SARS. This alert recommended that patients with similar symptoms should be isolated and handled according to strict procedures of infection control (WHO 2003b). National health authorities were also recommended to report new cases to WHO. That alert was stepped up to a second global alert on March 15, the first ever of this type, including emergency travel recommendations. The most dramatic travel recommendation, seen as a travel ban and followed by several nations, came in late March, and was aimed at China and Hong Kong. This resulted in a dramatic decrease in international air travel, particularly in Asia. Two more alerts were further issued in April and one in May, asking people to postpone all but essential travel to certain areas, seeking to prevent further international spread of SARS. As the escalating alerts from WHO were signalled, the whole surveillance system was put into gear: collaborating laboratories worked around the clock to reveal the
secrets of SARS; the central organization consulted intensively with its regional offices and site workers; the regional office in Beijing was strengthened, more people were sent to Vietnam and Hong Kong and international expert teams were sent to China (New York Times 2003a). During late April the SARS outbreaks in Vietnam, Hong Kong, Singapore and Toronto seemed to peak, but some of these countries experienced small outbreaks again later.

In international media coverage during and after the SARS outbreak questions were asked about why WHO reacted so late (New York Times 2003b) and why it reacted so strongly – some said over-reacted – when it finally did respond. The simple answer to the first question may be that the surveillance system didn't detect the true nature of the threat posed by the pending epidemic, i.e. the indications were too ambiguous to act upon. This “failure” would have been furthered by China’s secrecy about the source of the disease in Guangdong province. Whether this shows that the surveillance system was not good enough or that the data and knowledge on SARS were inadequate for providing an unequivocal alert is difficult to decide.

When the WHO finally reacted firmly and decisively, within the organization it was perceived that “there was no choice.” Even though more evidence about the disease was available then a month earlier, one still didn’t know how dangerous it was. The combination of potentially high death tolls and absence of a known effective cure seems to have created increased insecurity around the world, even panic. This leads to the question of whether WHO could have handled differently the ways they informed the public about SARS.

The effects of the SARS process for WHO seems mainly to be positive: WHO was generally praised for its role and the organization emerged with heightened prestige and legitimacy. The global awareness of epidemics is higher, collaboration within WHO and between WHO and different countries seems to have increased, more resources have been channelled to fight future diseases like SARS, and WHO has acquired stronger methods of reaction and greater influence as a result of the epidemic. These are all side-effects to the main process of fighting the epidemic. Of particular importance for WHO was the 56th World Health Assembly that in late May 2003 supported WHO actions in the SARS process and supported a revision of the International Health Regulations covering surveillance of epidemic
diseases to give WHO a more central role (WHA 2003). WHO acquired increased power and resources to issue global alerts, set up an instant communication network, tap unofficial but reliable sources of information and send its own teams to countries and see to it that they were doing enough to control outbreaks (New York Times, May 28, 2003). An intergovernmental working group open to all member states was set up to review and recommend a draft revision of the International Health Regulations for adoption at the 58th World Health Assembly in 2005. The newly elected director of WHO Dr Jong-Wook Lee, announced on May 22 two initiatives related to SARS. The first was a pledge by the donor countries of £200 million to expand and strengthen the agency’s response network towards epidemics like SARS, the other was an initiative together with the World Economic Forum’s Global Health Initiative to raise £100 million for the same cause (WHO 2003c; New York Times 2003d).

As shown WHO had its epidemic surveillance system put in place when the SARS epidemic developed, meaning that they primarily reacted based on some standard operating procedures and what was seen as evidence-based medical premises. This system was, however, confronted by different national health systems that did not necessarily fit smoothly with the WHO system. In addition, the SARS process in these countries also involved other elements that were less health related and more related to ongoing political processes. So how can we describe the relationship between WHO and the three countries analyzed during the SARS process?

The relationship between WHO and China on the surface appeared to be a good one before the SARS epidemic started. China was the first country Dr. Gro Harlem Brundtland visited after she became director of WHO in 1998 and from then on mutual confidence was built. WHO’s relationship to China was one of confidence-building rather than confrontation, with a willingness shown to wait to get more openness and correct information about the outbreak (WHO 2003d). Groups of WHO experts were sent to Beijing, but had to wait three weeks until they were allowed into the province, obviously a result of traditional secrecy and tension between the central and province levels. When China opened up, the relationship between China and WHO strengthened greatly. China said that they would cooperate fully with WHO and provide full information about SARS, and also took drastic
measure to fulfil its promises. WHO, from a sceptical and critical start (particularly from regional and “front line” officials), turned to praising China for its efforts as an encouragement for it to continue with this kind of openness. For the surrounding world this made both China and WHO look good.

The relationship between WHO and Hong Kong during the SARS epidemic seems to be far less complicated than the relationships with China and Canada. The relationship may be characterized as “transparent and helpful.” WHO didn’t dig into the somewhat complex relationship between mainland China and Hong Kong, but saw Hong Kong as well organized and competent. WHO used information from the SARS cases in Hong Kong as guidance to other countries with SARS. This also meant that WHO was reluctant to criticize Hong Kong for some of its flaws in the handling of SARS. One sign of this goodwill was that WHO, after pressure from the Hong Kong authorities, gave Hong Kong some extra hours of preparation time before issuing the travel alert.

The Canada case is quite another story and shows a sharp tug-of-war and conflicts between WHO and Canada, and we will therefore look more closely into this relationship. Some background is necessary to understand some of the conflict. When Dr. Brundtland started as the director of WHO, the relationship between Canada and WHO was somewhat strained because Canada had vigorously supported the “Inter-American” candidate from Barbados. But the relationship was gradually mended and got better. WHO had every reason to believe that Canada, as a developed country with a good health system, could handle the SARS epidemic. It was therefore less reason to send experts or to interfere in the SARS process there, compared to for example China, and less reason to come up with a travel advisory.

It obviously came as a big surprise to Canada that WHO came up with a travel ban to Toronto on April 22, and it also surprised many around the world when the ban was lifted a week later without much happening in between that could account for this move. Canada protested the travel advisory both through a letter from the Assistant Deputy Minister of Health to WHO on April 24, and also with a delegation to WHO. Canada expressed concern and disappointment over the decision and claimed that SARS was by now under control. Health Canada also simultaneously issued an advice saying that travel
in and out of Toronto was safe, contradicting WHO’s travel advisory.

There seems to be at least two possible explanations for what happened. One is the straightforward one, saying that there were good medical reasons both to establish and lift the ban on Toronto. The ban should originally have been put in place earlier, but was postponed because WHO thought Canada had control, so the time between planning to impose and lifting the advisory was actually longer than a week. In this respect it was understandable and based on standard operating rules that WHO on April 30 could say that “the situation in Toronto has now improved” (WHO 2003f). Dr. Rodier, the director of Communicable Disease Surveillance and Response at WHO argues in a commentary in the Canadian Medical Association Journal in late April that WHO’s travel advisory was no punishment but based on evidence and objective criteria (Rodier 2003). But based on his account, it remains unclear why the advisory didn’t come some weeks earlier when the first SARS wave peaked in Toronto. His arguments for lifting the ban are more specific, but most of the criteria mentioned seem to have been met even before the travel advisory came.

The second version is based on the fact that Canada is the only country to react strongly against the travel advice. Both the Prime Minister and the Mayor of Toronto thought it was highly unfair and insisted that they had SARS under control. This reaction may also be seen as based on facts: the curves for the disease seemed to show that it was under control when the ban came, so in that respect WHO may have had inadequate information, as it was argued. But resisting the ban can also reflect a country with much more self-confidence than some of the Asian countries involved, and one probably with a more strained relationship to WHO. Therefore the process was elevated to a high political level and the ban was lifted through contacts and negotiations between WHO and the federal level in Canada. The Canadian authorities promised to install more rigorous screening and testing at the airports, something that didn’t have effects that easily could be measured (New York Times 2003e). In the aftermath one can say that WHO looked better then Canada, because Canada’s insistence that it had the epidemic under control was obviously contradicted when the second outbreak came.

The Toronto epidemic seems to be different in some ways from the ones in China and Hong Kong. It was a much more limited, al-
though very deadly outbreak of SARS, because it was limited to one index case that later lead to three groups of SARS infected patients, two in the first and one in the second wave. That made it potentially easier to fight, but in fact purportedly one of the best health systems in the world had problems in doing so. The case is also different in that the local and federal authorities fought back from the notion that they had serious problems with SARS, something that had not happened in Hong Kong and China (once the initial denials were overcome). Fighting back obviously helped the standing of the authorities, because they had also been widely criticized and this could be a way of shifting the blame towards WHO, but the appropriateness of that strategy waned when the second wave occurred. It also showed clearly that this was a political process with give-and-take with wider political and economic implications. It also illustrates very well how an epidemic, like many other dramatic events with serious political implications, could be defined in different ways. The local and federal authorities insisted that a limited outbreak, mostly contained, should not lead to such dramatic measures like asking people to shy away from Toronto, potentially seen as a warning against going to Canada at all.

**Conclusion**

Events such as the SARS epidemic give rise to special problems for political leaders and administrators. Our review of their responses shows how attempts to exert control and impose a rational, technical order based on the close participation of government health experts were first prompted, but then thwarted, by the nature of the problems. China’s case is particularly interesting in that the initial response to the epidemic was not to see it primarily as a public health problem so much as a potential threat to political and social stability. This is a not unfamiliar scenario in a country on the one hand used to coping with both man-made and natural disasters, among which this epidemic may have initially appeared nothing out of the ordinary, and on the other hand constantly wary of potential sources of social unrest. But the misreading of the potential for the neglected (even suppressed) public health dimensions of the issue to cause acute political embarrassment gave rise to a sudden shift from one set of standard operating procedures (cover up and denial) to another (draconian punishment
and mass mobilization). As well, the Government switched over to accept (at least on the surface) the WHO definition of the urgency of the issue as a public health problem and its diagnosis of the deficiencies in the country’s health systems.

This complex interplay of different agendas, and of problems and solutions becoming transformed as the issue “jumped tracks,” was less apparent on the surface in the other two countries, where the issue was dealt with more from the outset under a set of health policy response procedures guided by international protocols set by the WHO. Yet here as well, the political vulnerabilities and sensibilities of the authorities also shaped the responses. Similar “blame games” and cross-cutting agendas made the orderly and smooth application of remedial measures less than predictable. But at various points in each case, “trip-mechanisms” tipped the stance of the authorities from one of confusion (from a health policy perspective) and blaming to one of decisive, open and dramatic action. The confusion and conflict were in part a result of lack of know-how and uncertainty, and in part a lack of bureaucratic preparedness. The switch to full acknowledgement of a “crisis” and the mobilisation of drastic measures to deal with it as such came once this response was seen also as a solution to the attendant political and economic problems, that is as a way of re-establishing legitimacy in the eyes of panicking publics (domestic and overseas) and restoring interrupted business activity. Symbolic reassurance of relevant publics (according to how their interests and needs were perceived) was critical at all stages for all actors, including the WHO with its own agenda of confidence building in new political relationships (as with China) and its agenda of institutionalization of its overarching monitoring and coordinating role in an environment of conflicting national interests and agendas.

In sum, we find as suggested by garbage can theory that politicians’ and administrators’ decisions during the SARS outbreak were in many critical instances triggered by extraneous factors, while administrative actions were shaped by dramatic switches from one set of standard operating procedures to another, as events unfolded. This switching can not be explained simply by bureaucratic politics. The responses were a combination of competing rationalities and overlapping agendas in the public realm. The public health issues constantly vied with other
agendas and only when compelling alignments among them occurred did professional or technical rationales for “solving the problem” within a single means-end frame become dominant. There was, however, a form of convergence on a set of measures that restored public confidence and (in particular) international business confidence. The shape of these measures was crystallized largely through the parallel (but not always consistent) decisions and interventions of the WHO. The uncertainties over what was the precise nature of the problem and what were the “solutions” continued, however, to create ambiguities and conflicts among health sector policy actors. Their power as solutions lay not just in their capacity to assert control and rationality within the public health policy domain but also in their capacity to restore confidence and bolster legitimacy and support for local political elites.

Following the end of the outbreak, in the remainder of 2003 there were one or two isolated SARS cases (and some false alarms) in several countries. The response in each case was identical: the public health authorities and the governments concerned seemed to vie with each other for the approval of WHO, with fully transparent, rapid and firm responses. That this was the preferred political strategy was a demonstration of the increasing penetration of the agendas of domestic policy making by protocols and standards set by the WHO, a transnational body with symbiotic links with domestic health policy experts and administrators. As a final thought, we therefore predict a more politicised future for that body, based on our observations of the significance of political considerations in the manner of responses to the initial outbreak.
Notes

1. The contrast is stark between this decision in April and the earlier decision to conceal the potential danger of epidemic in February, when hundreds of millions of Chinese citizens took to the roads, trains and airways to return to their communities for the New Year holiday.
2. The Hong Kong Chief Executive is elected by a local electoral college, the composition of which is effectively controlled by Beijing.
3. At the international airport in Hong Kong the number of daily travelers fell from around 100,000 in early March to around 15,000 in mid May.
4. In the light of the limited central capacity to handle epidemics such as SARS proposals were discussed to establish a Canadian Office of Disease Control and Prevention, built on the American model.
5. The only contagion outside the hospital system in Toronto was in the closely knit ethnic-religious group, but this also originated in the hospital system.
6. From January 1998 through March 2002 WHO investigated 538 outbreaks in 132 countries (Brundtland 2003).
7. In a virtual press briefing on April 23 representatives from the Canadian press asked critical questions about this travel advice, claiming that Canadian officials labelled them unfair, but got relatively vague answers from the WHO representative that pointed to the information gathered in general without going more specifically into criteria for the ban (WHO 2003e).
8. The Mayor of Toronto argued that WHO hadn't adequate information on the SARS situation in Toronto (Toronto 2003).
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