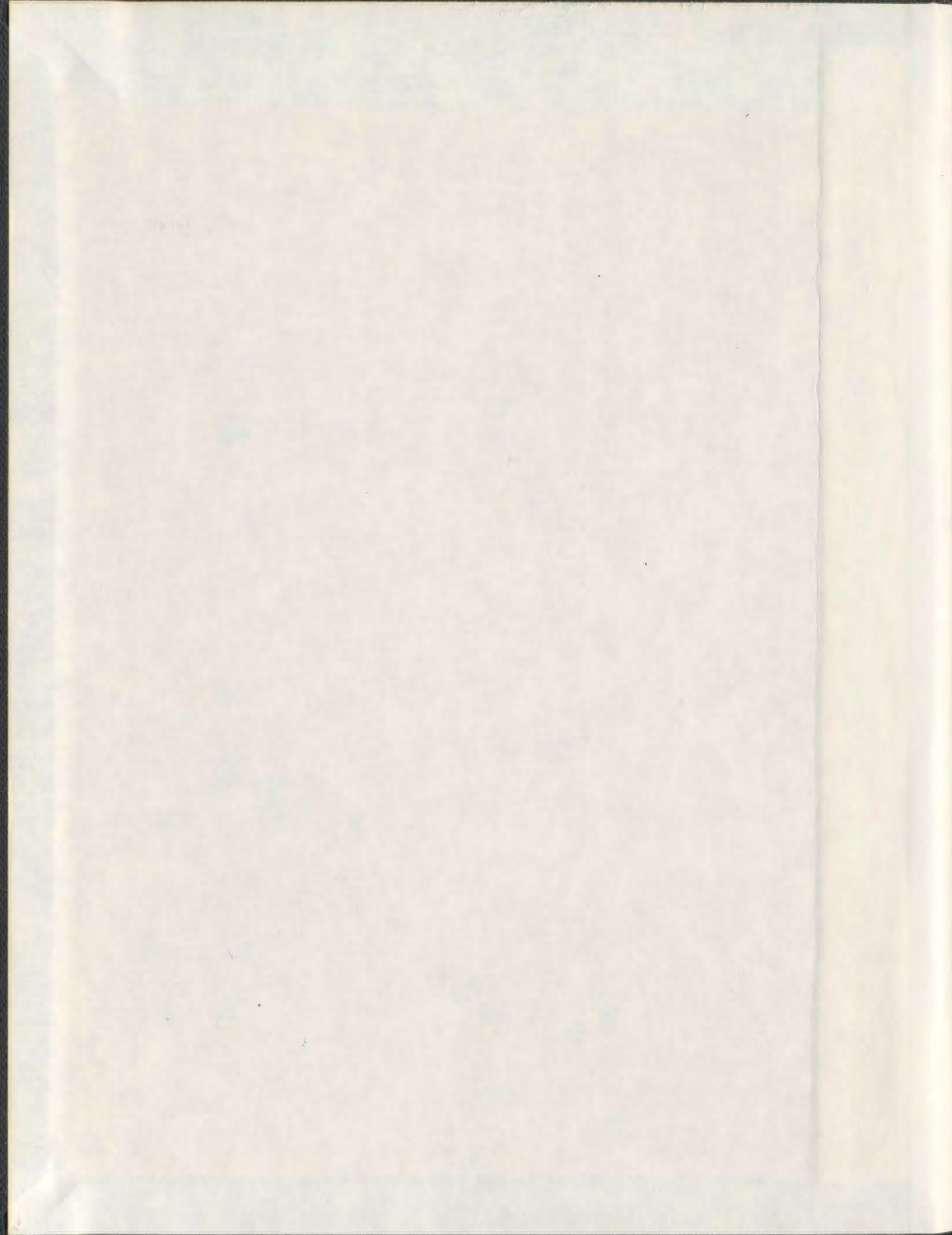


SARS AND ILLNESS NARRATIVES:
AN EXAMINATION OF AN EPIDEMIC

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SARS and Illness Narratives: An Examination of an Epidemic

by

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Abstract

One of the largest recent disease outbreaks began in November of 2002, when the first cases of a disease that would soon be known as SARS began spreading in China. Since then, the SARS coronavirus has achieved infamy seldom seen among diseases, sweeping through media and Internet sources to create a panic that left thousands of people halfway around the world wearing surgical masks in attempts to protect themselves from perceived harm.

The goal of this dissertation is to examine and understand the narratives that people told about the SARS outbreak—the rumors, gossip, legends, jokes, and other forms of oral communication. Examining these narratives will provide insights into why people believe the things they do about diseases, and why narratives both shape and are shaped by disease.

A key concept included in this examination involves the reasons behind the exaggerated, and in many cases disproportionate reactions exhibited by the public. Tied up in these reactions were issues of race and ethnicity, personal and familial protection, and fear, all of which were directly influenced by oral narratives, as well as by information gathered from media sources. Ultimately, sources such as newspapers and news broadcasts can be blamed for the larger part of the hysteria that surrounded the outbreak. But oral narratives were also culpable, and so a second thrust of this work will be to examine what steps can be taken to counteract, or possibly preempt these sources of information.

Ultimately, it is the goal of this work to demonstrate that the types of narratives that circulated during the SARS outbreak closely resembled narratives associated with other diseases, thereby establishing a template or typology of disease narratives. The existence of such a typology would mean that medical and health personnel, responding to future disease outbreaks, would be able to better predict the forms of narrative that would arise, and would thus be better able to respond to the panic and xenophobia that so often accompany epidemics.

Acknowledgements

Writing any list such as this is stressful, to say the least. I began researching this project almost exactly five years before completing my first draft, and in that time I no doubt discussed my various and ever-changing ideas with hundreds of people. Dozens more helped me in subtler ways. It takes a village to raise a child, as the saying goes, and it took the support and encouragement of everyone around me to help me create this work. The impulse to therefore include in this section anyone and everyone I've talked to since March of 2003 is strong.

More stressful still, after narrowing down this list of contributors, is the task of placing them into some sort of order. Whose name should be first? Will I offend anyone by placing their name last? By leaving them out altogether, even if by accident? To this last question I can only say, I tried my best to include everyone, and if a name is not on this list it is only due to my idiocy, and not because I did not appreciate what that person did for me.

As for ranking names by importance, I have concluded that any such feat would be self-defeating. I cannot say, for the most part, that one person helped me more than another. Like the butterfly in Ray Bradbury's "A Sound of Thunder," the removal of any one person from the history of this project could result in catastrophe. The lists of people that make up the rest of this section will therefore be random, written down as they occurred to me, with no differentiations made as to importance or usefulness.

Save one. I met my wife, Lynnette, only a few months before beginning this project. She has, in faith and love beyond my comprehension, remained beside me throughout my struggle to bring this work to light, offering condolences where necessary and, as was more often the case, Drill-Sergeant-like encouragement during my periods of sloth and torpor. For putting up with me (and putting me up, given my graduate student's salary), I will never adequately be able to express my gratitude. Thank you, my love.

In random order, then, I also wish to thank the following people.

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My former roommate Robert "Robbie D" Dennis was instrumental in not only helping me procure a place to stay while I conducted my research in Toronto, Canada, but for introducing me to one of my informants, and for providing me with bibliographic resources. Robert's sister, Hollie, and her husband, Michael Peter Carter, were kind enough to offer me a bed and an Internet connection in Toronto, and more importantly, free use of their coffee maker.

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Outside of the academic world, no two people have been more influential and supportive than my parents, David and Jan. Together with my grandmothers—Ruth and Willa—they have provided shoulders strong enough on which to support the world. For assistance both financial and emotional, I offer the following prayer: May your beer be forever cold and never flat. *Gracias*.

I also wish to extend my appreciation to everyone who has ever encouraged me to write, regardless of genre. Special mention must be given here to Sam Green, Michael Donovan, Bill Holm, Bill Kloefkorn, Robert Hodgson Van Wagoner, Primus St. John, J.V. Brummels and Eddie Elfers at Logan House Press, Charles Cuthbertson, Robin Parent, Micah Schicker, Chris Okelberry, Ian Brodie, and Jodi McDavid.

Finally, a note for the fallen. Ellen Meloy, Leslie Norris, and Ken Brewer—all wonderful people, all brilliant writers, all fast friends—did not make it to see the completion of this work. I know they would have been proud to see me succeed. From whatever vantage point they're watching me, I hope they're smiling.

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Chapter 1: The Yellow Brick Road

What has been will be again,
what has been done will be done again;
there is nothing new under the sun.

- Ecclesiastes 1:9

In 2003, for a frantic few months, a virus spread across the world with a fury that seemed apocalyptic. This novel disease came from China, but quickly slipped that country's boundaries to bound halfway across the world in a matter of only a few hours. Its speed left doctors and researchers gasping in the wake, struggling to throw up walls both physical and intellectual against the assault. But these reactions were as nothing compared to the fear that gripped the nations of the world, who were suddenly confronted with a strange, invisible, and unexplained foe that killed one out of every five people it touched.

Panic ensued. Thousands of people were involuntarily quarantined. Thousands more simply chose to stay home, rather than risk catching the new virus from a coworker or stranger. The tourism industry ground to a near-halt. Airlines, theaters, restaurants, hotels, and other businesses showed record profit losses. Chinatowns all over North America were virtually empty. And people were dying: not only laypersons, but doctors and nurses too, cut down by the very disease they were struggling to understand.

For a frantic few months, the virus was everywhere. Even when not physically present, its name was everyday writ large on television screens and the covers of newspapers: Severe Acute Respiratory Syndrome, known far better by its acronym, SARS. Headlines screamed the death tolls. The 9 o'clock news mapped out the new geographical areas where the virus had spread overnight. Radio announcers warned people to wear their protective masks and avoid public places at all costs. The messages were impossible to avoid. SARS equaled fear. SARS equaled the unknown. SARS equaled the uncontrollable. SARS equaled death.

And then, almost as suddenly as it had arrived, the virus disappeared. No cure or vaccine prompted its departure; no great medical breakthrough hastened the world towards a SARS-free future. Instead, in the end, the simple measures were what proved most effective: isolating the contaminated, regular temperature checks, public announcements on proper hygiene measures, vigilance. There were those who predicted that the virus would return, but their warnings have so far proved groundless. As of early 2008, a full four years after the last cases of SARS whimpered out of existence, there have been no relapses, no new outbreaks. The virus exists now only in test tubes in highly-guarded facilities, and in the memories of those who survived.

There are thousands of questions that could be asked about an epidemic such as this. Where did it come from? Why did it appear? Why didn't it prove more lethal? Is there a cure? Will it ever return? Medicine has answered many of these questions, as will be revealed in these pages. However, there are many more questions that lie beyond the normal interests of virologists, and many perspectives that do not appear in the pages of

such prestigious publications as the *British Medical Journal* and the *Journal of the American Medical Association*. For instance, what is the storymaking process that underlies the disease narratives that circulated among laypersons? Why was SARS so prone to these kinds of narrative constructions? What do these stories reveal about popular conceptions of disease?

Questions such as these deserve answers as deeply investigated as the conclusions that appear in medical journals, precisely because the kinds of questions that the layperson asks about a novel disease are the same questions that a virologist asks about it. That is, am I vulnerable, who is infected, and how can I assure my safety? The answers that come from such questions may ultimately be different, and even highly contradictory. This, however, does not lessen the importance of the questions. The act of understanding anything that is new is accomplished initially by creating for that novel item a story, and that story is created by taking what is already known about a similar item and laying that knowledge over the rough form of the unfamiliar. All of our beginnings are the same; there is nothing new under the sun.

The juxtaposition of medicine and folklore that drives the study of these questions is initially problematic and confusing. Medicine is, after all, the rationalized, highly scientific study of the body and of those objects that attack it. Medicine is seen as austere, detached, objective. Its practitioners are regularly accused of dehumanizing their subjects, of treating living, breathing human beings as little more than broken vessels whose wants and needs, opinions and cultural mores are irrelevant and unwelcome. Medicine is good at treating diseases, shoddy at treating people. What could this

discipline possibly have to offer in the way of understanding how humans think and act, behave and react? Folklore, on the other hand, is the study of culture, a discipline dedicated to understanding the reasons behind many aspects of human thought and action, behavior and reaction. Folklore is grounded in the human condition, and its practitioners highly value the wants and needs, opinions and cultural mores of the people they study. And any folklorist who attempts to make a medical diagnosis is obviously overstepping the bounds of her training.

Rather than being opposing constructs, these theoretical stances can in fact function well together, dovetailing into a mechanism that can—at least in certain areas—provide answers that either discipline by itself could not. Medicine can tell us how to transplant an organ; folklore can tell us why some ethnic groups refuse such lifesaving procedures, viewing the organs as the seat of the soul, and what may be done to deal with such situations. In contrast, folklore can tell us that people have used the foxglove plant since the middle ages to treat various maladies; medicine can tell us the name of the plant's relevant medicinal compounds, and provide standardized, safe preparations of them to treat individuals with atrial fibrillation. In the areas where these disciplines meet, it is safe for both practitioners to wander, and to point out questions and answers the other side may not have considered.

It was in this spirit that I began my study of SARS. I became aware of the outbreak at roughly the same time and in the same manner as most everyone else in Canada: I heard about it on the news. Stationed safely as I was at the time on the isolated island of Newfoundland, I wasn't particularly concerned about the outbreak, and

experienced only a slight bout of concern when the virus crossed the Atlantic and surfaced in Toronto. Far more important to me at the time were the aftereffects of the destruction of the Twin Towers on 9/11, which had happened only a few months before, and the beginnings of the war in Iraq on the 19th of March, 2003. Compared to the War on Terrorism, a small virus seemed rather an odd thing on which to place so much attention.

It therefore caught my eye when this small virus quickly overtook headlines everywhere, and the word "SARS" became at least as common in news reports as mentions of Saddam Hussein. Combined with this was work I was doing as a Research Assistant at Memorial University of Newfoundland (MUN), where my advisor, Dr. Diane Goldstein, had recently finished revisions on her then-unpublished book, *Once Upon A Virus* (Utah State University Press, 2004). I was privileged to read galley drafts of this book, and assisted Dr. Goldstein in the construction of its index. The combination of these events was fortuitous, and soon led to my wondering whether SARS would make for as good of a subject for study as AIDS had been for Dr. Goldstein. I discussed the subject with her, and, encouraged to pursue it, began my research.

I pause here to explain the presence of the following, largely personal and subjective narrative in what is otherwise a scholarly work. Bruce Jackson, in *Fieldwork*, criticizes scholars for their fieldwork efforts. He does so not only because he finds their methods flawed, but their academic reports devoid of emotions and scrubbed free of any mention of failure. Jackson writes, "Thousands of folklore studies are based on fieldwork; only a few of those studies include commentaries on how and why the

fieldwork was done or tell us much about moments the writers found interesting or memorable.... Folklorists report their successes, not their failures" (1987, 13-14).

Jackson says that the absence of this information in scholarly articles is potentially harmful to students, who receive from such studies the impression that any failure in fieldwork means that the fieldworker herself is a failure. The absence of this information is also deleterious to the project as a whole because pure objectivity is impossible, as is ensuring that every relevant question has been asked, every pertinent research path followed to its furthest ends.

In other words, there is no such thing as flawless fieldwork. There will always be questions that went unasked, or informants who went un-contacted (or even unnoticed). Additionally, the metaphorical "lenses" through which any fieldworker views a topic—lenses based on cultural and familial morals, personal likes and dislikes, and even what mood the fieldworker happens to be in at that moment—color and shape the questions the fieldworker asks, and thus the responses that the informants give. Looking at this from a different angle, when I ask an informant if they have heard any jokes about SARS, I am telling that informant that 1) I am only interested in hearing about SARS, and not any other disease, and 2) I am only interested in hearing jokes, and not any other oral form. Even simple questions thus drastically limit the answers a researcher is likely to receive.

So, recognizing my own flaws and fallibilities, and in the interests of as best a full disclosure as I can manage (changing only a few names to protect certain identities), I present the following, being a description of my fieldwork. I hope this account will not only provide readers with a glimpse of the problems that I encountered (and my solutions

to them), but will offer to the newer students of the discipline a document which proves that even worst-case scenarios can result in good data. There is nothing wrong with making mistakes; the only failure lies in failing to learn from them.

My initial efforts in studying SARS—detailed in sharper relief in chapter three—were to log on daily to several websites (principally CNN.com, Yahoo.com, and MSN.com), beginning in April of 2003, and print off any news article that mentioned SARS. Isolated as Newfoundland is, this seemed to me the best method for procuring news of the world, and I kept up the task for almost two years. Other forms of research during this time were limited, and mainly relegated to reading various and sundry academic texts. Coursework and other requirements of the Ph.D. resulted in a significant gap between the outbreak and most of the interviews.

Thus, my search for interviewees in the Toronto area actually began sometime in January or February of 2005, though I was not scheduled to travel to the area until the summer of the same year. I thought it prudent to begin early. The fieldwork that I was to conduct over the summer would be the largest project of its kind that I had ever undertaken, and I did not take the task lightly. I began my search for interviewees as many students often do: by asking everyone I knew if they had any contacts who would be willing to talk to me. Several did, and passed along the pertinent contact information.

I spent the next few months slowly making my way through the list that my initial efforts had generated, weeding out those potential informants who had no wish to speak to me, profusely professed their ignorance of anything relating to SARS, or otherwise made it clear that they would not be comfortable being interviewed. Where possible, I

asked these people if they had any contacts they would be willing to share with me before we concluded our discussions, and a small handful did. I also ruled out interviewing anyone not in the immediate Toronto area, as my budget was too small to afford extensive travel, or even the renting of a car. Where I thought relevant, I placed the names of these non-Toronto residents on a "potential telephone interviews" list.

Though it seems incredible to me now, the medium-sized list of potential informants that I had gathered through friends and colleagues was, by May of 2005, pared down to only seven confirmed interviewees. By this time I had also established that my fieldwork dates in Toronto would be July 8 to 14, so I set about working on a suitable series of questions that I could ask my interviewees, as well as procuring the appropriate recording equipment. A trip to Wal-Mart solved the latter problem, resulting in a Sony Walkman cassette player/recorder with a rather ineffective built-in microphone, but an external, plug-in mic that proved to be of excellent quality in my run-throughs.

The summer months passed quickly, and all too soon July loomed. I made one last round of confirmation emails and phone calls in late June, and was pleased to note that all seven informants were still planning on meeting with me. I was particularly excited about three of them: Anne, Bob, and Carol (whose names have all been changed to protect their identities). Anne was a nurse in the Toronto area during the SARS outbreak, and though she was not employed at any of the hospitals that were the most heavily affected, she had mentioned in our earlier conversations that she had a few good stories to tell me. Bob was a student at a Toronto-area University, and the friend of Bob's who had given me his email address had assured me that Bob had at least one incredible story to tell about life

in Toronto during the SARS scare. Finally, Carol was the director of an International Students program at a major Toronto university, and had teased me on the phone with promises of the horror stories that she and the university's Asian students had faced during the crisis.

So, eagerly anticipating the stories these people were to tell me, I boarded a plane on July 8th and arrived in Toronto in the late evening of the same day. For residence I had secured a spare room in the apartment of the sister of a former roommate of mine, and after settling in, walked around the neighborhood to acquaint myself with the landscape (it being too late in the night by this point to bother people with phone calls). The next morning—Saturday, July 9th—I began to contact my informants to book my meetings.

I do not profess belief in portents and omens. Nevertheless, I was unsettled when the first phone number I dialed brought neither answer nor voice mail, and the person who answered at the second number had never heard of the informant I was seeking.

Unbelievably, my day only continued to decline from there. Anne did answer the phone, but became instantly nervous and unwilling to talk. Whereas earlier she had remarked that she had several stories to relate, she now claimed that she didn't remember much about the outbreak, and doubted that anything she could contribute to my study would be of much use. I politely disagreed, remarking that any story about SARS was important, and that even the smallest mention of it would be worth my time. But Anne still hedged, and thus began ten minutes' worth of my attempting as courteously and professionally as possible to get Anne to agree to meeting with me. All of my attempts were rebuffed, and it quickly became obvious that this interview was simply not going to

pan out. I thanked Anne for her time and gave her my number in case she changed her mind, and moved on.

My next call went to Bob, who had already agreed to meet with me during the afternoon of the following day—Sunday, July 10th. Bob also answered the phone, but when I introduced myself, he informed me that he had forgotten that he was going to a rock n' roll concert on Sunday afternoon. I offered to meet with him earlier or later in the day, but he replied that he wouldn't be available. Neither would he be available during the week, because of classes and his evening job. Neither, in response to my last-ditch effort, would he be available if I immediately took the subway to his house; he was going into the country for the day. Feeling increasingly suspicious, I left Bob my number in case his schedule cleared, and dialed up the next person on my list.

Another no answer. Then an answering machine. Finally, I phoned Carol. The only number I had for her was her office number at her university, but I had used it before, and knew it to be correct. The last time we had talked (which was only two weeks earlier), I had informed Carol that I would be arriving on a weekend, and we had agreed that I should leave my contact information on her message manager, which she would retrieve when she came to work on Monday morning. But when the message manager picked up, a recorded voice informed me that Carol was no longer affiliated with that university; she had taken a job elsewhere. No contact information was provided, nor was the location where she had begun her alternate employment.

There followed a frantic few hours in which I repeatedly called back the phone numbers of the two people who hadn't picked up, dialed several numbers at Carol's

university to try and find her forwarding information, and scoured my notes for interviewees that I might have missed, or phone numbers that I might have written down incorrectly. Eventually, I was simply forced to acknowledge the reality of the situation: all seven of my confirmed interviews had fallen through.¹ It was now early evening on the 9th of July, and my plane left early the morning of the 14th—meaning I suddenly had only four days to completely reconstruct my fieldwork efforts, find new interviewees, and conduct my interviews.

So I took the only course of action that seemed reasonable: I called the one person I knew who lived in Toronto and asked her if she'd be interested in meeting me at a bar for a drink or eight.

The person I called was Jillian Gould. Jillian had started the Ph.D. program at MUN at the same time I had, and had taken her Comprehensive Exams at roughly the same time as well. She had moved to Toronto some months earlier in pursuit of a job and to conduct her fieldwork—in addition to being closer to her family, who lived in the area. I reasoned that if anyone were capable of sympathizing, it would be Jillian. She was, luckily for my liver, unavailable that evening, but invited me over to her house for dinner on the night of Monday the eleventh. In response to my tales of fieldwork woes, she mentioned that her roommate, Jennifer, had lived in Toronto during the SARS outbreak, and might be able to give me a few stories. At the time, this information actually proved more discouraging than anything: somehow, Jillian had slipped my mind in my earlier

¹ Though this was only a fatalistic reaction at this point, it ultimately proved to be true. Despite repeated calls over the next few days, I never did get anybody to pick up the phone at the two houses that lacked answering machines, and the informant who did have an answering machine never called me back.

casings of friends and colleagues with contacts, so when I hung up the phone I found myself cursing my own idiocy at not calling the one person I knew who actually resided in the city in which I was doing my fieldwork.

The next two days passed slowly. The people with whom I was staying had full-time jobs, so were rarely home, and Toronto was in the middle of a summer heat wave that left me literally drenched with sweat if I stayed outside for longer than ten minutes. Try as I might, I could not think of another way to resurrect my fieldwork than hope Jillian's roommate would be able to recommend a few people. I had by now thoroughly exhausted my Toronto-area connections, and I was—and still am—entirely uncomfortable with the idea of engaging random people on the street in conversation on the off chance that one of them might have a story to tell me. Yes, there were probably other avenues open, but none occurred to me at the time. So for the first two days of my fieldwork trip, rather than conduct the interviews that I had planned for the previous four months, I sat in a non-air-conditioned apartment and slowly sweated through my clothes.

Monday eventually meandered in, and late in the afternoon I packed my recording equipment into a backpack and set off for Jillian's. Upon arrival, my host informed me that not only did Jennifer have a few stories that she'd be willing to share, but that between the two of them they'd thought up a few other people I could talk to. I was elated, and for the first time since Saturday felt like things might still have a chance of turning out all right. So immediately after dinner I hauled Jennifer into the living room, set up my equipment, and plunged in.

That first interview taught me two very important lessons. First, I learned that it's a bad idea to set up an interview right next to the only phone in the house. Second, I learned that the list of questions I'd prepared for these interviews was far too long. I'd been working on this list for a few weeks, and by the time I arrived in Toronto I'd managed to come up with three typed, single-spaced pages' worth of queries. I asked Jennifer every single one of them, thinking at the time that I was making sure that I gleaned every relevant piece of information possible. What ended up happening was that the interview took the better part of ninety minutes, and by the end Jennifer was visibly exhausted and beginning to beg off answering the more difficult questions. I felt terrible about this, and when we were finished I apologized and told her that I'd no idea the process would be so lengthy and draining.

Luckily, she was a good sport. I say this because she responded to my apologies by telling me that her parents were in Toronto during the outbreak, and were interested in talking to me—she'd called them earlier in the day, after Jillian had told her what I was researching. Better still, I was then told that Jillian's brother was also in Toronto in 2003, and that he was available for an interview. Excited, I immediately rang both parties and secured interviews for the following day.

Jennifer's parents—Angel (pronounced ON-hell, with a Spanish accent) and Rosita—were wonderful interviewees. Theirs was the first interview I had ever conducted with two people at the same time, and despite their occasionally talking over each other (which produced an almost untranscribable mess on audiocassette), they told wonderful

stories. To my delight, halfway through our interview Angel excused himself to call Luis, a friend of his, as it had occurred to him that Luis would make a good interviewee.

And so he did. Luis knew few specific narratives about SARS, but was very opinionated as to why outbreaks should be taken seriously. When I asked him if he'd heard any SARS jokes, he told me that there was nothing funny about people dying. My interviews with Luis, Angel and Rosita marked a significant shift in my orientations to the kinds of questions I was asking. The list that I had created was almost sterile in its examinations of the outbreak, with most of the questions following the form of "did you hear x?" and "what was your opinion of y?" Despite all the research that I had so far done on SARS, the question of ethnicity had never fully permeated my understanding of the material. That is to say, while I was aware that racism had been a part of the outbreak, it had blindly never occurred to me that I might be interviewing people of Asian descent (Jennifer, Angel, Rosita, and Luis were all Chinese-Filipino). The questions that I had prepared were in no way insensitive to race and ethnicity, but they did fail to adequately address it, and so halfway through my chat with Angel and Rosita I began ad-libbing questions to try and incorporate these details. Talking with Luis forced me to further consider these facts, and as well, revealed to me that some of the questions I was asking (for instance, "Have you heard any jokes about SARS?") could be interpreted as insensitive—especially if asked to someone who had lost a friend or family member to the virus. I was fortunate to catch this before I offended anyone, but the realization still came as a shock.

When I returned to my apartment later that afternoon, another pleasant surprise awaited me. Robbie, the former roommate of mine whose sister's spare room I was currently sleeping in, had tracked down a buddy of his named Mike, who was an EMT in Toronto during the SARS crisis. Mike would be showing up for dinner in an hour, and I could interview him afterwards. That interview turned out to be one of the most informative of my entire fieldwork process, at least in terms of what was going on in the city from a medical perspective. But Mike was not just a member of the medical community—he had also been a patient, as he was one of the first people quarantined for SARS in Canada (though he had never actually contracted the virus). My interview with Mike was so engrossing that I completely forgot about the list of questions lying next to my elbow, and instead spent our entire talk merely urging him to tell more stories.

The next morning, I hopped on the subway and rode to Brown's College, where Jillian's brother Jonathan worked. My interview with him focused mostly on his perceptions of life in Toronto during the crisis, and resulted in a few good sound bites. Then, as I was packing my cassette recorder into my backpack, Jonathan mentioned that his department's secretaries, Annie and Mayee, might be good to talk to. He walked me out and introduced me, and I spent the next hour weaving and bobbing my way from one secretary to the other, trying desperately to capture their stories through the stream of students that kept running through the office. Finally, just before I left the building, Jonathan re-emerged from his office and hauled me to the rear of the room, where he introduced me to Justin. Unfortunately, I had only brought a single tape to the meeting in my hurry to leave the apartment that morning, and as I had already filled almost the entire

tape between Jonathan and his secretaries, I only had enough space for Justin to relate a single narrative. Still, I was satisfied: in three days I had conducted nine interviews, which was a far cry from the utterly blank and useless tapes I had been dreaming of since Saturday.

In my heart, however, I suspected that nine interviews would not provide enough material for an entire dissertation. So after I returned to Newfoundland, I went back through the notes that I had made while in Toronto and discovered three potential contacts who had escaped my notice during my three-day interviewing whirlwind. The first was Ann, who was Jillian's aunt. I sent Jillian an email to see if it would be acceptable for me to give Ann a call, and made that call on the 27th of July. Ann's connection to the SARS crisis was that her husband had been hospitalized for a possible case of pneumonia during the beginning weeks of the outbreak. It turned out that her husband was fine, and had not contracted the coronavirus, but Ann's stories of what it was like visiting her husband in the hospital showed the strain that medical staff and hospital visitors were under.

My second contact was Seny, who had been referred to me by Angel and Rosita, as well as Luis. Seny was Filipino, and worked for a major corporation in the Toronto area. I was initially planning on Seny's interview to also be by telephone, but late in the month realized that a wedding I was going to in Ontario might coincide with Seny's being able to be interviewed in person. I would have to squeeze the interview in during the short time I would be in Toronto proper (roughly the few hours on either end of the trip when I would be arriving at or departing from the airport), but the quality of the

interview would make the trip worth my time. As easy as it was to conduct the telephone interview with Ann (and similar long-distance interviews that I'd done for other projects), the results were never of the same value as the face-to-face meetings. So I called up Seny, and we agreed to meet at her office in the early afternoon of the 3rd of August. Seny proved to be an excellent interviewee, whose recollections of the SARS outbreak were vivid. Her stories were engrossing and detailed, and I left her interview wishing that more informants were as intelligent and well-spoken.

I still at this point wasn't quite satisfied with the number of interviews I had conducted, so upon returning to Newfoundland I got back in touch with Jennifer, my first interviewee, who had mentioned that her boyfriend would be an ideal person to talk to. Benjamin was the third of the potential contacts that I had noticed in my notes, and Jennifer was happy to provide me with his phone number. Benjamin's life is more heavily detailed in chapter five of this work, but it should be noted here that at the time I interviewed him, he was working as a bartender in San Francisco. Thus, the only interviewing method available to me was the telephone. After several false starts, I eventually managed to get in touch with Benjamin, and interviewed him on August 17th.

As has already been made evident, virtually my entire fieldwork process ended up being a series of serendipitous moments. But Benjamin's interview stood out even among those, for he had spent 2003 in China, traveling and filming sections of the Yangtze River for an independent, self-financed documentary. Benjamin's descriptions of the lives of the villagers who resided on the banks of the Yangtze ended up being critical for the

creation of large parts of chapters five and six of this work, and gave me valuable insights into the roles of race and ethnicity in a disease outbreak.

I did have one further lucky break that merits mention. When the school semester at MUN started in early September of 2005, our department held its annual “meet and greet” orientation, in which all faculty and student members introduced themselves and gave brief biographies. Having spent August transcribing my interviews—a process that would take me until December to complete—I took the opportunity to announce during this orientation session the topic and nature of my research, and asked that anyone who had any SARS-related stories please contact me. At the session’s end, a new graduate student named Heather Read approached me and noted that she had lived just outside of Toronto in 2003, and that her mother was a nurse in Ontario during the outbreak. Heather expressed interest in being interviewed, and I jumped at the chance, sitting down with her on the 9th of September for the better part of an hour. Heather’s recollections, especially those involving her Asian roommates, helped to further my theories on the nature of race and ethnicity in outbreaks, evidencing as they did the blatant racism present in Toronto during the SARS crisis.

And thus ended my series of interviews. I did announce in all of my classes for the next two years that I would be interested in talking to anyone who had any SARS-related narratives, but only one student ever expressed interest. Unfortunately, that student had to drop out of school altogether some weeks later due to a medical emergency, and I never saw him again. Still, my efforts in the summer of 2005 netted me thirteen interviews, totaling some 300+ pages of transcriptions. I had at one point

considered revisiting Toronto in 2006 for additional interviews, but decided against such an excursion, partially because of budgetary restrictions, and partially because it seemed to me after transcribing my interviews that I already had enough information to write about for quite some time. Indeed, my transcriptions exceed the length of this dissertation.

Creating those transcriptions also revealed to me the importance of the directions I was forced to take, and the questions I was compelled to consider, following my initial fieldwork meltdown. Though it was neither plan nor intent—nor even noticed at the time—the list of interviewees I brought with me to Toronto consisted entirely of Caucasians. While I no doubt would have gathered considerable and important information from such a group, my data would have been largely homogenous, reflecting the attitudes and perceptions of people who in many ways stood on the outside of the outbreak, being rarely—if ever—forced to confront the realities of being judged for the color of their skin or the shape of their heritage. But as the first four people I interviewed belonged to a community and ethnicity that had been heavily stigmatized, I was forced to change my horse midstream, as it were, and reflect upon their experiences.

Looking back, this shift in approach sent shockwaves through what I had assumed were carefully constructed ideas, and affected virtually every aspect of this project. Because of those first four interviews, there is not a single chapter in this dissertation that does not, in some way, consider the effects of xenophobia and racism during the epidemic. In many ways, my being confronted with the narratives of people from stigmatized communities and ethnicities was the single most important factor in the

shaping of everything that was to come from my efforts. It would not be unreasonable to declare that this dissertation would have been poorer without such refocusing.

Other aspects of my fieldwork also forced me to change my ideas. As I have already mentioned, my interview with Luis made me realize the dangers inherent in asking for jokes about SARS from people who may have had friends and relatives perish from the disease. Mike proved an excellent and willing source of information in this aspect, and also gave me insights into the medical community that I might not have gotten otherwise. And my phone conversation with Benjamin gave me a glimpse into the very heart of the country that was blamed for the outbreak, providing me with data that allowed me to make a case for the existence of parallel reactions to the virus, regardless of place, ethnicity, and status. So while my interviews with Jen, Angel, Rosita, Luis, and Seny were perhaps the most important in terms of redirecting my thoughts, they were not the only factors that proved critical.

The work that has resulted from my research efforts has taken some three years to write, and will, I hope, shed light on an area of folklore that has so far gone unnoticed. I also trust that the theories and ideas I put forward here are useful to other scholars, as well as to students of both folkloristics and medicine.

This work is organized as a series of studies, introduced by a large amount of background material to familiarize the reader with the subject and pertinent scholarly ideas. Chapter two begins this theoretical orientation with an overview of three key areas that are especially relevant in the examination of SARS. These areas are those of folklore, the media, and SARS. Taking these topics one at a time, chapter two first examines the

theoretical standpoints in the field of folklore that deal with folk medicine, health panics, and legends, and the intersections between these areas. The chapter then moves to the field of media theory, noting key works that describe the relationship between media presentation of topics and public reaction to those topics, where in many cases the media's slant on the report colors and shapes public reaction. Finally, the narrative moves to the world of SARS, and provides a glimpse at the writings of people who work within the field of medicine and science, and what their reactions were to the outbreak.

Chapter three provides a chronicle of public information for the SARS crisis. The focus of this chapter is twofold, simultaneously presenting the outbreak as it was revealed to the public through various media sources, and as well, showing the medical version of the epidemic as revealed through various academic journals. The ultimate goal of this chapter is to demonstrate that there were key differences in what the public was receiving versus what the medical world was discovering and announcing. Especially in the areas of published rumor and legend, the story of SARS that the public received from the media in 2003 was not the story that the medical establishment was telling. This chapter will set the stage for the examinations that will occupy the central studies of this book.

Chapter four begins this series of studies, and focuses on etiological legends. Dozens of narratives dealt with the origin of SARS, including why it arrived and where it came from. Providing glimpses at legends as widely varied as government conspiracy theories and animal origin stories, this chapter will demonstrate that the narratives that arose during the SARS outbreak closely resembled the narratives that arose during the initial years of the AIDS epidemic. In doing so, this chapter attempts to establish the first

in a series of arguments that ultimately demonstrate that disease narratives do not spring out of nowhere, but are instead recycled from previous outbreaks.

Chapter five moves the examining lens from the field of etiological legends to narratives that deal with gathering places. Beginning with an historical overview of narratives concerning the negative consequences of eating in Chinese restaurants, the chapter then moves to the world of SARS, where the modern and historical narratives are once again found to be similar in tone and plot. These modern narratives are then examined as they appeared in media sources, and as well, as they appeared in their oral forms, as related to me by my interviewees. Beginning a theme that will thread throughout the remainder of the book, this chapter then addresses the racial and ethnic fears that such narratives caused, and their consequences.

Chapter six continues the investigations into the xenophobic nature of SARS narratives by examining those legends and rumors that involved individuals conducting private actions in public spaces. Many of the narratives that circulated during the outbreak had at their roots incomprehension as to the different meanings that cultures place on actions. These misunderstandings and miscommunications led to scenarios in which Asians were wrongly blamed for misconduct, when in fact the conduct was completely appropriate according to Asian standards. Such blame was not just the province of the public; media sources assisted in the spread of negative rumors by not only publishing those rumors, but by continually printing stories that fomented anti-globalist sentiments.

Chapter seven uses the lens of stigma theory to further examine the racism and xenophobia that came packaged with the coronavirus. Especially useful in this chapter is the work of Erving Goffman, whose studies of stigma brought the subject to the academic community as a whole. However, Goffman's theories of stigma are found to be lacking in key areas when held up to the types of stigma experienced by my interviewees during the SARS outbreak. This chapter therefore highlights these underdeveloped areas, pointing out avenues for further classification rubrics, and suggesting new criteria for the types of stigma that could be studied.

Chapter eight examines the state of folk medicine during the outbreak. Several SARS cures are noted and discussed, and the types of these cures are compared to the preventative and curative measures employed by laypersons during other epidemics, such as AIDS. In addition, this chapter looks at the longstanding battle between folk and "official," "Western," or "hospital" medicine, and the interconnections and fragmented pathways that lie between these realms. More specifically, this section addresses the reasons why folk medicine has remained a vibrant, and even growing presence in the modern world, suggesting that the medical establishment may be doing itself and its patients a great disservice by attempting to quash the public's interest in it.

Chapter nine is the last study, involving an in-depth scrutiny of the nature and problem of rumor and legend in disease outbreaks. These forms of narratives have by this point been proven to be deleterious and damaging, and this demands the question of what can be done to prevent or stymie their spread. Unfortunately, the answer to this question is difficult, for rumors and legends have proven to be notoriously difficult to eradicate.

However, there have been some recent studies that may have shed new light on possible solutions to these problems.

SARS is, by all appearances, a dead disease. It existed during a specific period of time, then vanished. Like the Latin language, it provides scholars with a perfect specimen to examine, an ideal, non-evolving thing-in-a-bottle that can be placed under a metaphorical microscope and seen from end to end, all of its connections fixed and unchanging, even if yet undiscovered. The following series of examinations are by no means exhaustive in scope, but will hopefully provide at least a ray of light in a previously dark chamber, and give voice to people whose stories would have otherwise been forgotten.

Chapter 2: Folklore, Media, and Medicine

One of the largest recent disease outbreaks began in November of 2002, when the first cases of a disease that would soon be known as SARS began spreading in China. Since then, the SARS coronavirus has achieved infamy seldom seen among diseases, sweeping through media and Internet sources to create a panic that left thousands of people halfway around the world wearing surgical masks in attempts to protect themselves from perceived harm. Extraordinarily, the virus's non-age-adjusted mortality rate was, overall, only one in five ("Research puts Sars [sic]..." 2003)—a significant risk, but nothing compared to the 90% rate of the Ebola virus, or even the 22% rate (in Canada) of common pneumococcal pneumonia, neither of which have a media frenzy to parallel that of the SARS virus.

The ultimate goal of this dissertation is to examine and understand the narratives that people told about the SARS outbreak—the rumors, gossip, legends, jokes, and other forms of oral communication. Examining these narratives will provide insights into why people believe the things they do about diseases, and why narratives both shape and are shaped by disease. But in order to begin such an examination, we must first contextualize the study of diseases and medicine as a whole within the fields of folklore, media studies, and medicine. Examining existing literature on health models, belief systems, disease panic, and other areas will provide us with a background appropriate to the study of a novel disease by providing common theoretical ground and language.

Any theoretical orientation regarding SARS must by necessity be multidisciplinary, for the greater portion of specific information about SARS exists outside the academic field of folklore. Within the field, Diane Goldstein's recent book *Once Upon a Virus: AIDS Legends and Vernacular Risk Perception* (2004) contains one paragraph that briefly discusses the similarity between SARS and AIDS narratives, Norine Dresser's website *In Focus* contains a one-page section under its "Online Multicultural Manners" on SARS rumors (Dresser 2004), Monica Kropej listed a few Slovenian SARS rumors in her 2003 ISCLR paper (Kropej 2003), and both urbanlegends.com and snopes.com, if they can be considered authoritative, contain articles debunking some of the current SARS legends. Beyond that, not much is available. As of late 2007, no major book by a folklorist has dealt exclusively with the subject, and an MLA International Bibliography search for articles on "SARS" returned only three relevant hits: two from the field of linguistics, and one from sociology, written in a dialect of Chinese,² none of which were relevant to my focus. There are a few sources other than these within the field—sources that somehow escaped the eyes of the MLA—but they are few and far between.

This is not to say that the field of folklore cannot offer anything toward the study of SARS. In fact, there are many sources that offer widely varied theoretical standpoints that *can* ultimately be applied to this topic—the work simply involves looking at those theories in new lights, demonstrating how their tenets are also applicable to areas outside those initially determined by their creators. What needs to be made clear, however, is that

² The MLA citation provided an English summary for the Chinese article.

a study of any disease such as SARS—which existed not only in the vernacular health perceptions of the layperson, but in several other realms, such as science and medicine—must take into account those other areas. As such, the focuses of this chapter will be threefold, each section being particularly relevant to the arguments that will occupy this thesis. First, I will examine the work within the field of folklore (or work that is regularly used by folklorists), especially as these topics relate to rumor, legend, and health panics. Second, I will look at work that attempts to analyze and construct theories involving the media, including newspapers, magazines, and televised news broadcasts. Finally, I will investigate the medical and health-related realm, delving into work written by doctors, nurses, scientists, and other professionals who work primarily within the realm of medicine.

These are not the only three realms of importance in the study of SARS, but it does seem to me that they are of primary concern in the matter, since many of the problems with and confusions about the disease that resulted in panic and xenophobia came from the communications (or lack thereof) that took place between these areas. For example, it took the scientific community some time to isolate the SARS coronavirus and locate its source in the Chinese civet cat. During that time many hypotheses were advanced within the scientific community concerning such details, and, as is the nature of scientific work, some of those hypotheses were ultimately proven incorrect. Regardless of their potential for being correct, however, media sources reported every piece of news they could glean from the scientific community, their quest for details driven by an information-hungry public that purchased in mass quantities any newspaper with the

word “SARS” in its headline. And the information-hungry public absorbed those facts, leading to lay people discussing the problems amongst themselves.

Several areas of concern crop up in this scenario, as briefly (and therefore inaccurately) as it has been stated here. For one, there are distinct levels of vocabulary in all three layers of this picture, from the highly technical medical jargon of the scientific community, to the simplistic vocabulary employed by most newspapers, to the widely varied communication styles used by laypeople. The problem is that the media—which has arguably the simplest language of the three—is the main source of communication between the scientific and lay communities. Any information that comes from the scientific community must therefore be pared down to its bare bones and rephrased in such a fashion as to make it “understandable” to the general public. Considerable loss of nuance and meaning is the result of such paring, a consequence that can result in miscommunication and misunderstanding.

A second area of concern in this scenario is the accuracy and completeness of information as it flows from one source to another. In addition to the problems mentioned in the previous paragraph, the media is a problematic source of information precisely because it is a business, and therefore has as a primary interest the creation of profit. News stories that will sell newspapers will get published as a result, while news stories that are of lesser interest (or impact) will be put aside, pushed to later pages of the paper, or left uncovered altogether. So while the announcement of, say, lemmings having been discovered as the carriers of SARS would rank high on the list of “publishable material,” the retraction of this information at a later date might or might not be considered as

important, depending on any number of factors, and the public might not be made fully aware of the change. Incorrect information thus would continue to spread.

A thought experiment such as this could continue for quite some time, but I believe the points that I have brought up will serve for now to illuminate my reasons for focusing on these three areas. Rather than continue to list possible causes of concern, then, I turn to the examination of the theories that have been used to discuss these areas. I begin with folklore and folkloristic materials, moving from there to discussions of the media, and finally end with examinations of the materials surrounding SARS.

FOLKLORE AND FOLKLORISTIC MATERIALS

As mentioned previously, there has been little research on SARS within the field of folklore. There has been, however, ample study of AIDS and the subject of illness narratives, both of which relate to my topic. Diane Goldstein's aforementioned book is among the latest of these, dealing with issues of vernacular risk perception and illness narrativity. Bonnie Blair O'Connor's *Healing Traditions* (1995) contains an extensive chapter on AIDS and vernacular health care responses. And Dennis Altman's *AIDS in the Mind of America* (1986), while one of the earlier works, still provides an excellent look at how mid-1980's Americans—gay and straight, infected and disease-free—viewed the epidemic.

Sub-issues have also been covered thoroughly. Numerous books and articles have dealt with alternative AIDS therapies (Anderson et al. 1991; Anderson et al. 1993; Altman 1986; Berger, Stuart M. 1985; Grieve 1982; Marin and Marin 1990; O'Connor 1995; Serinus 1987; and Snow 1974, among many), and almost as many have focused on

cultural belief systems and how they lead people to perceived differences in risk-related activities when it comes to contracting the virus (Flaskerud and Calvillo 1991; Flaskerud and Rush 1989; Harwood 1981; Trotter and Chavira 1981, etc.). Even the subject of AIDS as a punishment from God has not gone unnoticed (Flaskerud and Rush 1989; Mays and Cochran 1987). And while SARS still lacks folkloristic works on these topics, vernacular discourse, legend, and communication are overflowing with untapped, unrecorded examples.

Because of the wide-ranging natures of these texts, illness-narrativity research also provides a wealth of indirect information on SARS. The recent movement in this area, for instance, towards viewing health narratives as models for illness and health action (Good 1994; Mattingly 1998) is especially relevant, as it provides a means to look at SARS narratives as keys to complex cultural belief systems. Laurie Stanley-Blackwell's 1993 article on Acadian good-Samaritan legends and the New Brunswick leprosy³ epidemic of the 1840s is an excellent work detailing the link between health and legend, demonstrating how the narratives used by communities were "therapeutic...they demystified the disease, mitigated its harshness, and combated the pervasive notion that the disease was an hereditary scourge among the Acadian population" (33). And Gillian Bennett's article "Bosom Serpents and Alimentary Amphibians: A Language for Sickness" demonstrates how legends serve as mediators of health crises, allowing those

³ The terms "leprosy" and "leper" are widely considered offensive and politically incorrect. The preferred term is "Hansen's disease," which will be used hereafter, except when directly quoting a source.

afflicted a means of understanding their diseases—how they came to be ill and how they can recover (1997).

Another theoretical approach that will prove crucial in examining SARS narratives is that espoused by David J. Hufford in *The Terror That Comes in the Night: An Experience-Centered Study of Supernatural Assault Traditions*. In examining the existence of “Old Hag” narratives,⁴ Hufford found that, contrary to what had been previously written, the “Old Hag tradition contains elements of experience that are independent of culture” (1982a, 15). In further examining previous literature on the subject, and on other supernatural phenomena, Hufford found that research into folk belief contained a disturbing set of assumptions, three of which he found most pernicious:

(1) That statements which do not appear to allow for materialistic interpretation may be rejected out of hand; (2) that “the folk” are always poor observers and consistently confuse subjective with objective reality—a confusion which the scholar can unravel rather easily at second hand; and (3) that informants therefore cannot maintain memories separate from legends. (1976, 73)

Because of assumptions such as this, Hufford created a new hypothesis, the “experience-centered approach,” which he explains as essentially following the rule that, when collecting data, “we should suspend our disbelief and not start wondering immediately what *really* happened—that is, what would be an explanation we could accept” (Hufford 1976, 73-4). Instead, we should begin our fieldwork from the stance that the material we are about to receive is coming from “accurate observations interpreted rationally” (1982a,

⁴ The “Old Hag” is the name given in Newfoundland, Canada, to a phenomenon that typically consists of an individual waking sometime during the night, but finding him or herself to be temporarily paralyzed. This is often accompanied by the sensation of pressure on the chest (often leading to feelings of suffocation), as well as hallucinations of supernatural beings entering the room.

xviii), and as such, “When an informant relates a bizarre but believed experience, we should try to ask some of the questions that his friends and neighbors might, as well as those that occur to a university professor” (1976, 74). This valuing of informant belief systems and narratives is as critical in dealing with disease narratives as it is in researching supernatural phenomena.

Contemporary Legends

Beyond these general orientations, any approach to the examination of the narratives surrounding SARS must begin with the legend genre. Contemporary legends, as defined by Patricia Turner, are “unsubstantiated narratives with traditional themes and modern motifs that circulate in multiple versions and are told as if they are true or at least plausible” (1993, 5), and are characterized by “persistence, pervasiveness and persuasiveness” (Kapferer 1996, 246). The oral passage of a legend is “often fundamentally a political act” (Ellis 2001, xiv), a fact that is closely tied in with Ronald L. Baker’s assertion that “mass culture nourishes legendry—providing it with fresh subject matter and spreading its dissemination” (1976, 367). According to Jan Brunvand, the maintenance of legends is based on three criteria: “Strong basic story appeal, a foundation in actual beliefs, and a meaningful message or moral” (1981, 10), and as Tamotsu Shibutani has stated, the genre advises, cautions, and informs with speed and authority (1966).

Much of the field of legend research is, in fact, directly relevant to the study of SARS, since my examinations of the coronavirus largely entail dissections of the narratives that surrounded it, such as legends, rumors, jokes, gossip, etc. Legend theory

that specifically deals with disease and illness is particularly relevant, providing a background for subsequent discussions about novel illnesses. In this sense, a relevant starting point lies in a small work by Frances Cattermole-Tally that originally appeared in the "Topics, Notes and Comments" section of the journal *Folklore* in 1995. In this, Cattermole-Tally discusses the fantasies and realities surrounding the intrusion of non-human organisms into the body. Beliefs in the possibility of such intrusions go "far back in history and [are] almost world wide" (89), and transcriptions (or at least descriptions) of the stories that accompany them have appeared in folkloric texts for decades. For instance, Thomas R. Brendle and Claude W. Unger's *Folk Medicine of the Pennsylvania Germans: The Non-Occult Cures*, published in 1935, mentions the Pennsylvania Germans' use of the word "worm" to describe intestinal parasites such as the tapeworm (qtd. in Cattermole-Tally 1995, 89-90). What is critical about Cattermole-Tally's article, however, is not its descriptions of historical beliefs in animal intrusions, but its discussion of the problems inherent in many folkloristic works concerning those beliefs. "Fears of worms or reptilian forms existing in one's body are not without basis," Cattermole-Tally warns: "Just as many physicians often ignore or dismiss *beliefs* about diseases, so most folklorists overlook or ignore the *reality* that diseases might be caused by animals residing in the human body" (Cattermole-Tally 1995, 90, emphasis in original).

This call for what is essentially academic belief, or at least willing suspension of *disbelief*, in the beliefs of others is well-evidenced in Adrienne Mayor's "The Nessus Shirt in the New World: Smallpox Blankets in History and Legend." Mayor's article starts off by recognizing that smallpox blanket stories "may be based on historical fact"

(1995, 55), and moves from there into an examination of the historical consequences of these stories. Echoing Véronique Campion-Vincent's earlier observations that contamination fears often involve elements of xenophobia (qtd. in Mayor 1995, 67), Mayor notes that "in poison-garment legends of Europe, India, South America, the United States, and elsewhere, those who are Others in terms of race, culture, nationality, ethnic group, religion, gender, status, class, ethics, and so on, are held responsible for contaminating clothing" (Mayor 1995, 67). These examinations of the racial stereotypes present in smallpox blanket stories are furthermore extended to other illness narratives, Mayor noting especially the similarities between legends surrounding smallpox and AIDS. Both narratives, for example, exhibit themes of "moral responsibility, blaming victims..., [and] 'fatal gift' motifs" (1995, 56), as well as "morally ambiguous situations" (1995, 68) that blur the boundaries of accountability. It is, however, the theme of "Others as contaminating strangers" (1995, 72) to which Mayor keeps returning—a theme that will appear again and again in the discussions of SARS that will appear in subsequent chapters.

Xenophobia such as that which appears in Mayor's work may in part come from what Bill Ellis has noted of legend-telling: that it can be seen as the "communal exploration of social boundaries" (1990b, 31), where members of a group define and demarcate their borders. A consequence of such demarcation can be the exclusion of those members who are deemed not to fit communal norms and expectations. In "Organ Theft Narratives," Véronique Campion-Vincent applies the examination of xenophobic responses to narratives concerning the theft of body parts, especially in relation to baby

parts and stolen corneas (both of which come from South America), and kidneys (in Europe and North America). "Legends and rumors," she says, "thrive on the degree and intensity of belief" (1997, 7), and narratives that involve outsiders stealing body parts from children provide an opportune medium for the flourishing of intense beliefs. In a separate essay, Campion-Vincent expands on these points to bring out the nature of these fears of outsiders, saying, "In a state of crisis in which the established value system of a group or society seems at stake, it is easier to cope with anxiety if it becomes fear of someone who can be held responsible" (2005, 105), noting at the same time that the belief in stories such as these is in part explainable by their not relying on "fact or reason," and therefore being unaffected by them (2005, 106). The full extent of xenophobic sentiments is usually downplayed in reports by popular media, but oral narratives are not so tame, and make apparent the full spectrum of sentiments.

Campion-Vincent's articles are important for more than just their discussions of xenophobia. Along the way, the articles also touch on reasons behind the existence of rumor and legend, creating a theoretical framework for the understanding of the basic human needs that drive the creation and promulgation of such narratives. Quoting Neil Ascherson, Campion-Vincent states that "rumor exists because it fills a need. 'The need for an interpretation which suddenly and magically strings together disconnected fears and hopes, nostalgia and hatreds and displays them in a single significance'..." (1997, 32). Narratives such as these provide a means of expressing deep-seated emotions that may not be socially acceptable in other forms of communication. Simon Bronner discusses one example of this in his examination of children's contagion folklore, wherein

he finds that the “cooties complex” came out of associations with polio, but existed among children as a means of “playfully dramatiz[ing] the dread of the disease,” while simultaneously examining the modern logics of appearance and cleanliness in association with health (1990, 107).

Laurie Stanley-Blackwell’s aforementioned work on New Brunswick narratives concerning Hansen’s disease shows a different purpose for legends. In her work, the stories are not told by one set of people about another, but by one set of people about themselves. In this case, the legends mitigate the fears associated with the disease, and attempt to explain its presence in a way that removes the focus of blame from the local population, specifically by claiming that the disease came from elsewhere as a result of travelers. In making such narrative claims, the local people create “a humanized and indigenous aetiology for leprosy” (1993, 39). Diane Goldstein presents yet another view of this, noting that the AIDS legend tradition “betrays our obsession with origins,” wherein the underlying themes of popular legends all revolve around a single concern: “establishing a first—a source for this thing that made our world change so irreversibly” (2004, 77).

Another way legend theory can be used to examine health-related concepts is by utilizing its ability to discuss rationally and logically the vernacular theories that surround disease and cure. These vernacular theories are often scorned by the “official” medical community, but this does not necessarily result in their being abandoned by the layperson. Gillian Bennett gives an excellent example of this in relation to bosom

serpents and other animals believed to be able to reside inside the human body. Bennett claims that these narratives form

...a complete language for talking about sickness. They are a metaphor-come-true which allows a rational aetiology to be deduced from the central image and a logical cure devised. But they are also a means whereby lay persons may talk informedly to each other and to their therapists about the nature and course of the sufferings. Best of all, they are a means through which the efficacy of the various medical alternatives may be debated. The doctor need never have the last word (though he often does even here). The stories are there to be told, to demonstrate that no matter how many times patients are told that their sufferings are imaginary, in the end the scoffers will be confounded and the patient will be dramatically vindicated. (1997, 239)

Regardless of the purpose behind the legend, the narrative itself continues to be spread because it “resonate[s] with the life circumstances” of the narrator and audience (Bennett and Smith 1996, xxii). Elissa R. Henken exemplifies these themes in her article “Escalating Danger in Contemporary Legends,” especially as the narratives she chooses to study exhibit fears of Others. Her main purpose is to demonstrate that legends seem to be changing in two ways in the modern world: first, the amount of danger a victim faces in a legend seems to be larger and more life-threatening now (as compared to, say, legends in the 1970s); and second, that there appears to be a movement away from justifiable or merited punishment in these narratives. This second topic is well-demonstrated in the “welcome to the wonderful world of AIDS” legends, where Henken says that, in contrast to previous narratives where AIDS victims could be blamed for promiscuity in having contracted the disease, “that legend has been largely superseded by legends in which the victim, unwittingly pricked by an HIV-infected needle, has simply gone to the movies or used a payphone or soda machine or gas pump” (2002, 261). No longer is it necessary in legends to justify a victim’s plight by having them take a course

of action deemed immoral or inappropriate by community standards. Instead, we now have narratives where even those who are innocent of any crime are potential victims. Such “changes in punishable behavior appear clearly linked to changes in a group’s morals” (2002, 259), possibly evidencing a shift caused by the nature of modern society, where “shame appears to be losing its strength as a social control and people are rewarded for publicly humiliating themselves on television” (2002, 271-2). As such, legends employ increasingly harsher punishments for violators of social and communal norms in order to remain relevant, and furthermore need to emphasize the negative consequences of inappropriate acts by demonstrating that even innocent people are not safe. In legends, it is no longer acceptable for the public to assume themselves protected from harm by their positive actions.

Paula Treichler’s *How to Have Theory in an Epidemic* provides an excellent summarization of many of the points that have so far been addressed. Concerning the origins of AIDS narratives, she states that, given the uncertainties that revolved around the disease’s origins, transmission vectors, curability, and other unknowns, “it does not seem unreasonable that...people’s imaginations give birth to many different conceptions” (1999, 16). Reactions to these stories vary widely, depending on multiple factors, but the narratives are important as a whole because they are evidence of a cultural “sense” of truthfulness (1999, 104). For instance, Treichler states that “some of the idiosyncratic, unreasonable, apparently demented meanings attributed to AIDS provide important insights into how people make sense of the world, collectively and individually, and how language works in culture. They reveal sources of mistrust, resistance, fear, and

disempowerment” (1999, 222). Such narratives, especially as they exist in the form of conspiracy theories, offer empowerment to their narrators in knowing secret and dangerous information, which helps explain why these narratives “of blame and causation circulate geographically with astonishing ease” (1999, 220). Bordia and DiFonzo provide additional reasons for this transmissibility in their discussions of rumor, wherein they note that uncertainty and anxiety are key to the spread of rumor, especially as that rumor applies to topics of personal relevance, and that there seem to be three motivations to the spread of rumors: “fact-finding, relationship-building, and self-enhancement” (2005, 88). Considering these factors, it should come as no surprise that rumors have been closely linked to the spread of “violence, prejudice, and discrimination” (Knopf, qtd. in Fine 2005, 2).

Health Panics

A specific subset of legend-related material that is directly related to the investigation of SARS narratives includes theories about panics, such as health, moral, and Satanic panics. Panic was omnipresent in the SARS outbreak, and the theories that arise in academic literature about other areas will prove helpful in examining the 2003 epidemic. Jeffery Victor defined a “rumor panic” as “a collective stress reaction in response to a belief in stories about immediately threatening circumstances,” and said about them, “a rumor panic in a community can be identified by the existence of widely occurring fear-provoking behavior” (1993, 59). Moral panics appear frequently in society, and may be novel, but have also been seen to appear, then submerge into an

almost-unnoticed state before reemerging decades later, sometimes with such force that they enact legal and social changes in response (Cohen, Stanley 2002).

Bill Ellis has written widely about Satanic panics and devil-worshippers. His 1990 article "The Devil-Worshippers at the Prom: Rumor-Panic as Therapeutic Magic" restates his theory that "one function of legend is to 'name' previously undefined threats and by so doing gain psychological control over them" (31), which is a variation on his "communal exploration of social boundaries" theory stated earlier in this chapter. Ellis' most relevant point in this article is his summarization and extension of work done by Joel Best. Best, Ellis explains, in studying the exaggerations of the numbers of abducted children reported by organizations and individuals, finds that the problems behind these inflated numbers lie not in the facts that a claim exists, but in the reasons "people find for justifying drawing certain conclusions from the facts" (1990, 29). People's perceptions of a problem, then, are more influential in their summarizations of the problem than are the actual facts. Accordingly, these perceptions should be the main focus of study for problems involving especially panic-related narratives, for as Ellis points out, when closely examined, many of these perceptions and claims turn out to not be "irrational," but evidential of deep-seated fears and anxieties. And as devil-worshippers are often synonymous with "cults" in the public consciousness, then David Frankfurter's paraphrasing of Claude Lévi-Strauss provides an excellent parallel commentary: "Cults...are 'good to think with' when people are anxious about cultural decline, subversion, and evil" (2003, 111).

In a later article—1993's "The Highgate Cemetery Vampire Hunt: The Anglo-American Connection in Satanic Cult Lore"—Ellis continues his investigations into the nature and origins of panic. Early on in this essay Ellis notes the historical precursors to the modern-day narratives, including the European witch-hunting hysteria of the 14th to 18th centuries, and before that, to the "blood libel" legends that have existed in various forms for almost two thousand years. Narratives that center on cults and the panic caused by them are thus quite old, and knowledge of this points toward some common underlying factors, especially the fear of the unknown as it appears in the guise of Others and outsiders. Reactions to these fears can be fierce and immediate, as evidenced by Ellis' numerous examples involving community members openly confronting these Others, sometimes carrying weapons to exaggerate (or perhaps reflect) their emotions. These narratives are not restricted to a specific demographic, but "seem to appeal to a broad spectrum of ages, with different ages responding to them for different reasons" (25). Panic narratives are ubiquitous, and public reactions to them evidence genuine concern and belief in their underlying claims, regardless of factual reality.

The lasting effects and power of panics is well illustrated by Lesley A. Hall in an article covering the medical warnings and perceived-as-immoral nature of masturbation during the late 19th and early 20th centuries in Britain. The "horror of masturbation" (1992, 386) that was common during these years persisted despite dozens of tracts which attempted to counter popular negative superstitions regarding the act. Hall attributes many of the negative rumors to several influential writers, many of whom were highly religious, and some of whom were medical professionals. The works written by these

people characterized the act of masturbation as derogatory, dangerous, and in severe cases, deadly. Men in particular were painted as being highly susceptible to the act, their sexual drives “hard to control” and “fragile, readily damaged by a moment’s carelessness” (1992, 387). These works succeeded in being popular for two reasons. First, the tracts that attempted to discount them were filled with what Hall calls “ambiguities” (1992, 386), where authors seemed unsure of their claims, undermined their own arguments, or otherwise stymied discussions. Second, the works that did succeed did so largely because they built on already-existing belief systems about the negative potentials of masturbation. As Hall says, “So loaded was the subject with negative connotations that any reassurances seem to have been far less audible than the slightest hint of potential harm” (1992, 387).

Kathleen Woodward provides an excellent addition to the examination of panic in “Statistical Panic,” wherein she examines the role statistics play in creating fear and anxiety. Statistics are pointed out as being equitable to risk, especially when it comes to health. In our modern society we are surrounded by figures and facts that tell us, for example, the likelihood that we will contract breast cancer, or fall down a flight of stairs, or be eaten by sharks. Statistics is, in fact, “a discourse of risk. We are at risk, it seems, of anything and everything” (1999, 179). One of the many problems Woodward points out concerning statistics is that they are too easily read in a negative sense, and often promote “a sense of foreboding and insecurity” (1999, 180). So, for example, if someone is told that they only have a one in ten million chance of being eaten by a shark, the message that can end up being made clear is not that it is extraordinarily unlikely for such an event

to occur, but simply that such an event *can possibly* occur. Given this fact, and the statistic-rich nature of the modern world, Woodward claims that, in some ways, our lives are essentially a series of statistical panics, one occupying our minds for a fleeting moment until another moves in and shoves out the first one, and so on. The panic that can be caused by statistics is especially acute, largely because of the uncertainty intrinsic to the statement: "What in fact panics us, however, is that we cannot be certain of our own future, however much [it has been] quantified...for us" (1999, 187). In the end, Woodward claims that, following the work of Ulrich Beck, industrial society has been replaced by the risk society, where "What we fear is risk itself" (1999, 180).

The last few articles have moved towards panic specifically associated with health issues. Margaret Humphreys' "No Safe Place: Disease and Panic in American History" brings this transition to its fullest, shedding light on modern instances of fear and anxiety related to such epidemics and health scares as cholera, malaria, heart disease, and the 2001 mailing of anthrax-laden letters, among others. It is Humphreys' contention that modern Americans have largely forgotten what it means to "feel that our place is contaminated, diseased, and unsafe" (2002, 845), and so scares such as the anthrax-mailings often result in panics disproportionate to their actual morbidity. Such reactions are not solely limited to North America, nor to novel anxiety-inducing health situations. In fact, Humphreys states that, in general, "diseases do not cause panic in direct proportion to their morbidity and mortality, a fact that seems counterintuitive" (2002, 846), and illustrates this by noting that women are far more afraid of breast cancer than heart disease, despite the latter being far more prevalent and deadly.

Humphreys also notes that the “crossing of boundaries” (2002, 847) as it relates to diseases passing both real and artificial borders is central to panic. She comments, “The scariest diseases are traveling diseases. Strange plagues that threaten the place of sanctuary arouse the most fear. This is particularly true when the disease can be tracked” (2002, 850), and adds that there is a direct correlation between the speed of mortality and the escalation of panic. The spread of panic, however, is directly dependent upon the spread of information (or disinformation) surrounding the disease, and the media plays a role in this circulation. Humphreys even goes so far as to claim that “disease panic and the news media form their own generative circle” (2002, 846), where the panicked public demands more information from the media, and upon its presentation, such information begets more panic, which creates a call for more information, etc.

Race and Racialization

Humphreys’ article is important in another aspect: its discussion of racial themes. Panic, she says, begets racism and xenophobia, particularly because of the “crossing of boundaries” mentioned earlier. Diseases that come from elsewhere are blamed upon the people who inhabit the country of the disease’s origin. Erecting boundaries around our own homes is an “inevitable response to a traveling, panic disease” (2002, 850), but also results in the formation of psychological boundaries between “us” and “them” and the creation of the “Others” category noted in Mayor’s discussion of the Nessus shirt. The quarantining and avoidance of these Others is the consequence of such boundaries, and has numerous historical examples, including the quarantining of San Francisco’s Chinatown during the bubonic plague epidemic of 1904, and various fears associated

with immigrating Jewish people in 1892 (who were tied to typhus), and Italians in 1916 (who were blamed for polio) (2002, 852).

The racial comments present in Humphreys' work correspond with what Charles L. Briggs has noted: that "narratives about epidemics make racial and sexual inequalities seem natural—as if bacteria and viruses gravitate toward populations and respect social boundaries" (2005, 272). This "racialization," defined by Omi and Winant as "the extension of racial meaning to a previously racially unclassified relationship, social practice, or group" (1986, 64), can be seen as a consequence of living in the modern world as described by Martín-Barbero, where we do not have societies with media, but media constructs that shape society (1987). In this sense, the narratives that appear in the media influence the way professionals and laypersons perceive the health system, both in terms of its practitioners and how it relates to the non-medical sections of the population. The same could be said of how the population perceives disease. Any new virus or bacterium that has its origins in a foreign country is immediately, irrevocably tied to that place and the people who live there, and thus AIDS becomes synonymous with Africa, SARS with China, etc. At the same time that these diseases become synonymous with race, they can also reshape racial boundaries, changing the way laypersons and professionals perceive others (or Others, after Mayor). Such changes are not necessarily irrevocable—few people today would still associate Jewish people with typhus—but they can provide ruts in the road, as it were, into which future discussions of the connections between disease and race can slip. As Briggs says, "Producing narratives of race, disease, and space involves the collaboration of biomedical professionals, public health officials,

politicians, reporters, and, often, anthropologists. Such narratives can be firmly in place before an epidemic has begun, thereby shaping epidemiological investigations, prevention and treatment regimes, and long-term effects” (2005, 277).

Alan Kraut’s *Silent Travelers: Germs, Genes, and the “Immigrant Menace”* provides a second look at issues of race and disease, strongly demonstrating the historically assumed links between immigrants and epidemics, especially regarding tuberculosis, cholera, and the bubonic plague. The reality of the situation, Kraut argues, is not that the immigrants were necessarily carriers of diseases, but that the conditions they were forced to live in (many of them being exploited for cheap labor) were of such poor quality and sanitation that disease often resulted. American citizens, then, were largely to blame for the outbreaks for their negligence in creating decent living situations for these immigrants. Despite this (or rather, because of a lack of understanding of this), the immigrants continued to be blamed as carriers and spreaders of disease—a stigma that has carried forward ever since, as evidenced by Haitian peoples being accused of propagating the AIDS virus in the 1980s (Kraut 1995, but see also Fairchild 2003; Markel 1999; and Marks and Worboys 1997). Racialization such as this finds an easy scapegoat in the form of people who are already stigmatized in some way or another, whether as prostitute, criminal, foreigner, or some other illegal and/or immoral label: “in many of the deliberate-infecter narratives, the aggressor is portrayed as a member of a threatening ethnicity or social group—a group already thought to have eroded morals” (Goldstein 2004, 48).

Risk and Risk Assessment

The panic and racialization that is often present in legends can be seen as part and parcel of risk-determining decisions made by the lay public. Defined by Mary Douglas, “risk” is “the probability of an event combined with the magnitude of the losses and gains that it will entail” (1992, 40). The determination of risk inherently involves the creation of “boundaries” between one group and another, or more precisely in relation to SARS, between oneself (or an extended peer group) and a group of people seen to be more at risk of contracting the disease (Gilman 1988). Risk is a key concept in the study of not only legends, but health beliefs as expressed in legends, as the narratives that come from situations deemed potentially harmful by the lay public offer direct insights into the collective psychological frameworks present during periods of stress and anxiety. Risk estimation is a natural response to tension, indeed a critical facility required to function properly. However, it is also an act that has proven problematic for authorities seeking to quell panic. Not only does risk estimation lead to panic and racialism, but identifying and understanding the underlying causes of such actions can be difficult, and “official” communication designed to suppress and subdue those actions can have the opposite effect. Many academic models of risk-related behavior fail to take into account cultural and personal meanings of “risk,” “susceptibility,” and “risk reducing behavior,” instead attempting to assign generic models and definitions to individuals—an act that can result in the same sentence having different meanings for researcher and researchee (Goldstein 2004, 163). William Leiss and Douglas Powell have further noted that:

Research has suggested that efforts to convince the public about the safety and benefits of new or existing technologies...rather than enhancing public

confidence, may actually amplify anxieties and mistrust by denying the legitimacy of fundamental social concerns. The public carries a much broader notion of risk, one incorporating, among other things, accountability, economics, values, and trust. (2004, 11)

Leiss and Powell point directly to the confusion of basic definitions as the source of many problems in the communication of risk between authority figure and layperson. Specifically citing the vast differences between the “quantitative language” of the experts and the “qualitative terminology” of the average human being (2004, 27-8), the authors provide a specific plan for risk management discussion. Experts must first be able to understand these “qualitative” dimensions, second, acknowledge the validity of such dimensions, and third, determine those conditions that will best present the public with the opportunity to acquire the information necessary to avert unwanted reactions (2004, 30). Only an approach that places an equal amount of importance on the experience and knowledge of layperson and expert will bridge communicative gaps.

Risk-related discussions such as these are important to the discussion of disease precisely because the communicative gap between official sources and laypersons is often wide and ignored. Worse, as Philip Setel has warned, “medical literature virtually creates ‘culture’ as a reservoir of unhealthy practices to be stamped out” (qtd. in Treichler 1999, 161), which gives evidence that extermination is also an option in this rubric. Neither of these choices are ultimately beneficial to either medicine or layperson, as 1) eradication of a belief system as widespread as that found in folk medicine is virtually impossible, and 2) ignoring that system disserves the medical industry by not only ruling out possible new treatments, but causing medical professionals to turn a blind eye to potentially dangerous drug interactions between prescribed and folk medicines. It is

curious to note the disdain some branches of official medicine have towards folk medicine, as the logics that have created these two strands of thought, while different in their conclusions, are similar in their approaches and even methods. Ultimately, all epidemiology starts as folk epidemiology: the construction of stories about novel diseases. Some of these stories end up as beneficial and others are ultimately proven incorrect, but as has already been stated, the story-making process is the same for both groups of people: am I vulnerable, who has the disease, and how can I not get it?

Despite such similarities, the historical debasement of folk medicine by official medicine is well documented. On a larger scale, folk belief as a whole has been frequently deemed as little more than superstition and belief in magic and the supernatural (Honko 1964; Mullen 1969). Folk medicine, however, seems to attract special attention when it comes to official scorn. David Hufford has succinctly summarized the academic disparagement of folk beliefs with the phrase "what I know, I know; what you know, you only believe" (1982b, 47), a stance that varies in its public expressions from outright contempt to sincere, but misguided attempts to "reeducate" the public. Efforts in this latter area often assume patients to be "empty vessels," who, as described by Bonnie Blair O'Connor,

...in the absence of medically accepted knowledge about health and illness, are assumed to have *no* knowledge about them as a basis for making choices or taking action.... The conception of patient education thus frequently operates on the basis of an extremely simplistic view of its mission: "communicate successfully with people so they will understand their health problems (usually as we, not they, define them) and they will want to change their behavior".... When the proposed changes do not occur, or when they come about very slowly, the cause is generally interpreted as "resistance to change" and defined as a "problem" which is located in the "target population." (1995, 177)

Again, perhaps the largest problem with such an approach—one that defines folk medical knowledge as “inadequate to [the] task or insufficiently elaborated: naïve [and]...beneath the required level of cognition of scientificity” (Foucault 1980, 81)—is that it “mitigates against successful intersystem negotiation, and overlooks the salience and significance of nonbiomedical healing systems as resources for coping with illness” (O’Connor 1995, 4).

From a biomedical perspective, it should be said that there are studies that do seem—at first blush—to support the notion that laypersons are naïve in their scientific thinking. Laypersons have been shown to incorporate both official and unofficial health beliefs into their repertoire, some of which may be entirely contradictory (Bauman and Siegel 1987; Kimmel and Keefer 1991). From a scientific perspective, the presence of the more “accurate” of the two practices should result in the destruction of the less-accurate, “superstitious” one. When this does not happen—as is often the case, according to these studies—the conclusion is that the holder of such practices is insufficiently advanced or intelligent to discern between them, or to recognize the superior validity of the “proper” one. Thus, such studies do seem to point to patients being strongly in need of “guidance” from official sources. It does not help that social scientists claim that the continued presence of such irrational beliefs is evidential of “primitive” modes of “magical” thinking (Nemeroff, Brinkman, and Woodward 1994).

What studies such as these fail to consider is that “belief and behavior are strongly culturally shaped, and definitions of health and illness are cultural products” (O’Connor 1995, 35). Rather than being illogical and irrational, examination of lay belief systems shows that they are carefully constructed according to real-world experiences, and

heavily refined over the course of time to accommodate new ideas and fine-tune current ones—including abandoning altogether ideas that have been found to be injurious or ineffective. Systems such as these are in fact “logical” and “rational,” in that they have been created based on evidence gathered from long-term observation and experience (Hufford 1984). Lay health systems are indeed greatly different from the modern Western models, but these differences, while recognized, have been largely ignored or overlooked in their importance and rationale. For instance, while Western models place almost all of their value on objective experience—to wit, the absence of disease and the proper functioning of bodily processes—lay health models place their emphasis on subjective experience: that the subject has feelings of good health, such as being energetic, pain-free, and able to perform daily routines (Calnan 1987). Such concepts are part of a group’s “cultural constructions of reality,” where the worldviews of a people define and shape how they react to themselves and others (Berger and Luckmann 1967; Toelken 1975). One group’s belief system may be similar to that of another group, or it may conflict with it on several fundamental levels. Bonnie Blair O’Connor gives an excellent example of this in the form of the Hmong, a southeast Asian people who believe that bodily mutilation “prevents the departure of the spirit to join its ancestors prior to rebirth” (1995, 90). Under such a belief system, any form of medical surgery breaks cultural taboos, and as O’Connor details, the concept of organ transplantation for the Hmong is almost entirely unthinkable. Conflicts between the Hmong and Western doctors are common because of these beliefs, but doctors rarely attempt to accommodate them; the Hmong are instead labeled as “bad patients.”

Many theories and models have been created in attempts to help Western doctors better understand their patients, none perhaps more effective than the Health Belief Model. This model, developed by sociologists, "holds that the factors affecting health-related behavior [on the part of laypersons] are perceived susceptibility to and seriousness of a given health threat, perceived benefits and barriers to a given course of health-promoting or remedial action and (internal and external) cues impelling action" (O'Connor 1995, 29). Decisions, then, *are* being made on an internally logical and rational system. In the presence of an injury, several factors are considered, and a decision made based on what the patient (and perhaps his/her family) feels is the most appropriate course of action. If a particular course of treatment, whether it be traditional or hospital-based, is deemed overly stressful or potentially more injurious than the injury itself, then that course of treatment is removed from the list of options. This manner of thinking is not that different from what takes place in a doctor's office: if a patient has an infection, the doctor considers a possible range of treatments, concludes that an antibiotic regimen is ideal, but upon finding out that the patient is allergic to penicillin, opts for a drug free of that compound. The logic in both systems is clear. Lay health systems merely rely partially on traditional remedies—remedies that are considered superstitious or magico-religious by doctors, and so are disparaged. The arguments that arise because of this disparagement would be minimized if doctors were able to incorporate lay health belief systems into their practice, recognizing not only their permanence in worldwide cultures, but their cultural importance. When these belief systems are not only permanent,

but indicative of the choices people may be likely to make given a health problem, it only makes sense for Western medicine to attempt to understand them.

MEDIA THEORY

More could be said concerning the relevance of folkloristics to the study of SARS, but in the interests of space we move from here into an examination of theories surrounding the media, focusing especially on newspapers and television. An understanding of theoretical works in this area is especially important in the case of the SARS outbreak, as many people relied heavily on media sources for information, and thus the biases and quirks that are an inherent part of a news source are often passed on to the public, sometimes with less-than-desirable consequences. Leiss and Powell have noted the vacuum-aborring nature of the public when it comes to information, and have identified media sources as a component in the filling of such vacuums. In this sense, events that are reported by media sources “become the substantial basis of the public framing of...risks” (2004, 31), including both inflammatory comments from doomsayers and the soothing tones of politicians who assure that there is nothing to worry about.

Specifically in reference to the SARS crisis, J. Karlberg, writing in the Correspondence Section of the journal *Acta Pædiatr*, noted that public response in Sweden to the outbreak had been so widely affected by media reports that even healthcare workers’ reactions had been compromised. Karlberg gave as evidence the case of a Hong Kong mother and child who arrived in Sweden in April of 2003 for a vacation. Soon after landing, the ten-month-old son developed a high fever, and the mother attempted to have him examined at a hospital in Stockholm. She was forced to wait

outside (in 3° C temperatures) for twenty minutes, then told to take the boy to a different hospital. Upon arrival there, the woman was told to wait in her car, where she was met by a doctor dressed in protective clothing, who looked at her son through the window before announcing that the hospital did not take pediatric cases (despite there being a pediatrics department in the hospital). She was then told to go to a third hospital, this one an hour's drive away. The child was examined at this third hospital—by a doctor and a nurse wearing masks, gloves, and gowns—and eventually sent home until test results came back. In the meantime, the mother was advised to wear a mask and quarantine the child. The boy was eventually diagnosed as SARS-negative, but the situation left the mother distrustful of the medical community. Karlberg attributes the reactions of the healthcare workers encountered by the mother to media reports that called SARS a “killer disease” and compared it to “the Black Death, Spanish Flu and Mad Cow Disease,” and furthermore stereotyped residents of Hong Kong as dirty and “pest-infected” (2003, 1350). Karlberg ends his note by calling for a greater degree of openness in treating patients, summarizing the reactions of Drs. David Baltimore and David Ho, AIDS researchers based in the U.S., who spoke openly against irresponsible media coverage of the SARS outbreak, “even going as far as calling it Severe Acute Media Syndrome” (2003).

An example as isolated and brief as this should still demonstrate the importance of understanding media theory. Even in a country like Sweden, which had a grand total of five confirmed infected people, none of whom perished (“Summary of Probable ...” 2008), reactions against the SARS virus were extreme, fueled by reactionary and

inflammatory articles in the press. From a folkloristic perspective, the role of mass media in disseminating legends has long been recognized. Dégh and Vazsonyi noted in 1973 that media is perhaps the “greater part” of the transmission of such narratives, after they spend the initial and smaller part of their existence being passed orally (37). Only a few years later Robert Mitchell noted the major role that media played in “compounding...rumors that served as a substitute for information through ‘formal news channels’” (1979, 40), and both Bengt af Klintberg and Jan Brunvand have remarked on the rapidity in which legends are spread by media sources, the reports adding to the entertainment value of the narratives, as well as their plausibility (Brunvand 1981; Klintberg 1981). Perhaps all of this is best summarized by Elliott Oring, who said, “At the boundary of the legend is not the myth or Märchen with which it is forever being compared.... At the boundary of legend is news...that is, the reports, accounts, statements, and stories that we read daily in our newspapers” (1996, 337).

Moving specifically into the realm of media coverage of epidemics, we find that the literature still has much to say about the influence of news reports on the public. Steven Epstein has noted that the media’s continual use of a specific set of reporters and “experts” to discuss a situation not only mirrors “the internal stratification of a social movement or a scientific community, but can even *construct* such hierarchies” (1996, 335). In this sense, media reports cannot be seen as simply a record of the events in an epidemic, but must be considered a functional part of those events, both shaping them and being shaped by them. If a media source designates Doctor X as an “expert” on the topic and continually uses his sound bites (perhaps because he is simply more photogenic

or better at paring down complex jargon into easily-understandable speech than his peers), then Doctor X literally *becomes* the “expert” on the subject in the eyes of the public—despite the fact that he might not know as much as Doctor Y, who is simply not as effective at communicating with media sources.

Seen in this light, the role of the media in outbreaks is far more complex than might be assumed. This is compounded by the basic nature of news sources—specifically newspapers—which is that they are businesses attempting to sell their product (though even televised news reports compete with the reports being delivered on other channels for viewers). As such, the coverage of the thousands of newsworthy events that take place around the world on a daily basis is not only curtailed by access to information concerning those events, but economic judgments about which of those events will be seen as the more interesting by the public, and will thus sell more product. Elizabeth Bird has commented on the nature of this relationship at length, stating specifically that:

News reflects and reinforces particular cultural anxieties and concerns. It goes in waves; many scholars have demonstrated, for example, that waves of reporting about teenage suicide or child abuse do not necessarily reflect actual changes in the rates of these problems. Rather, they reflect waves of interest, and in turn feed the anxieties that have produced the interest in the first place. (1996, 47)

What appears in the pages of newspapers and the special reports on the evening news cannot thus be assumed to be an unbiased and accurate reflection of daily events. Instead, it must be thought of as a subjective representation of them, sifted through numerous political, economic, social, and cultural filters.

The effect that the media ultimately has on the public is contentious. There are some who argue that the narratives dispersed by media sources are ultimately helpful—

after all, the media does disseminate useful, correct information on a regular basis, including articles that debunk popular misconceptions, or warn of the negative consequences of certain actions. The title of Marshall Goldberg's 1987 article epitomizes this stance: "TV Has Done More to Contain AIDS than Any Other Single Factor." Goldberg's piece is a defense of television-based AIDS reporting, arguing that, despite the problems to the contrary (inaccuracy, sensationalism, etc.), television has ultimately done the world a service in presenting information about the disease, having taught the basics of transmission, susceptibility, and prevention. This article is admittedly not scholarly, appearing as it did in the pages of *TV Guide*, but as it was written by a physician and appeared in the pages of a magazine with a purported circulation of 16.3 million in 1989 (Jones 1989), it was no doubt considered authoritative by many of its readers.

On the other side of the argument lie those who claim that the narratives circulated by the media have done varying degrees of harm, largely due to their inaccuracy, misunderstanding of key concepts, or misrepresentation. Benjamin Radford provides an example of the sometimes-inaccurate nature of news reports in his article "Ringing False Alarms: Skepticism and Media Scares." Radford only briefly mentions SARS in his work (as an example of a disease that is regularly given "alarmist headlines"). However, he does present four major stories that appeared in newspapers between 1990 and 2001, including missing/exploited children, racist church fires, the dangerous nature of bounty hunters, and the 2001 case of a Nigerian "slave ship". In all four cases, the nature of the threats and the numbers associated with them were grossly

over-exaggerated by the media—especially in the case of the slave ship, which turned out to be an innocuous ferry transporting job-hunting (and free-living) teenagers to Cotonou. The most exaggerated fact, however, was the presence of missing or lost children, a number estimated by the U.S. Department of Justice to reach 400,000 each year. However, a study by the Crimes Against Children Research Center found that 73% of those children were home within twenty-four hours, and the larger number of the remaining children were absconded with by a parent, usually the result of a divorce. In fact, between 1990 and 1995, the National Center for Missing and Exploited Children handled only 515 cases of children abducted by strangers (Radford 2005). Thus, the media cannot be assumed to consistently provide accurate reports.

A second, and perhaps more serious take on the negative aspects of media is given by Paula Treichler, who states:

We can point out that documenting a scenario in print does not make it so. But who are the “we,” and to whom are we pointing this out? And what do we expect to accomplish? A scenario that casts “the media” or “the government” as complicit in duping the public about AIDS will not be dislodged by network news reporting or a lecture from the U.S. surgeon general. Evidence, facts, the assertion of authority: none of these will function to discredit an alternative account of truth. Indeed, as the sociologist John Gagnon has deftly put it, the difference between a conspiracy theory and a scientific theory is that a scientific theory has holes in it. (1999, 323)

So the media may not only be responsible for the spread of inaccurate information, but are largely incapable of correcting certain types of misinformation once it has been spread (by whatever source or method).

In reference to SARS, the media has often been criticized for making matters seem worse than they actually were. Two key articles will suffice to demonstrate this.

The first is Peter Washer's "Representations of SARS in the British Newspapers," which appeared in 2004. Washer's study entailed a close examination of news articles appearing in all major Sunday national newspapers in the UK for a four-week period following the 16th of March, 2003. Any article that mentioned SARS was noted, coded for any of twenty-four key themes, and entered into a qualitative software database. Washer's first observation upon examining his results was that:

In the very first reports of SARS on 16 March, all the articles referred to the new illness as a "killer bug" or to a "mysterious" "lethal" "deadly pneumonia virus". This new "threat" was described as "moving at the speed of a jet" and people affected were not responding to traditional treatments. Combined with adjectives like "untreatable" were some graphic descriptions of how the "victims' lungs swell and they suffocate". (2004, 2565)

For the first two weeks of the period Washer studied, newspaper articles revolved around several themes, including the origin of the disease, the attempts by Western doctors to combat it, the search for a "patient zero," and the idea that SARS could be the next plague. By the third week, however, only three types of story dominated the papers: 1) Chinese corruption and inefficiency; 2) the death of a major researcher, Dr. Carlo Urbani, who contracted SARS while in Thailand; and 3) the negative effects of SARS on the economy. By the fourth week the only major thread left was the discussion of global economies in light of the epidemic. Constantly mixed in with these threads over the four-week period, however, were comparisons of SARS to other diseases, such as AIDS, Ebola, and Spanish Flu. These comparisons are important because all of those diseases came from somewhere other than the UK—in other words, the newspapers were constantly pointing out how recent outbreaks all came from elsewhere. This reporting contributed to the UK's xenophobic reaction: "the social representation of SARS

resonates with representations of infectious diseases throughout history: we lay the blame for the new threat on those outside one's own community, the 'other'" (2004, 2570).

Stephen L. Muzzatti's "Bits of Falling Sky and Global Pandemics: Moral Panic and Severe Acute Respiratory Syndrome," gives an even harsher criticism of the media's handling of the epidemic, especially in regards to foreign peoples. Muzzatti states:

The media's construction of Asian communities as breeding grounds of contagion was not focused exclusively on Canada. Rather, news coverage in the United States saturated viewers with images of East and Southeast Asians wearing masks and creatively-framed camera angles provided footage of deserted Chinatowns in American urban centers, further fueling the stigma. (2005, 123)

Muzzatti unequivocally blames the media for coverage that was "little more than sensationalism and xenophobic fear-mongering" (2005, 124), and that contributed to the "victimization of already disenfranchised groups" (2005, 125).

By far, then, the majority of voices cited here agree that the media, while valuable, are often guilty of inflammatory exaggerations, inaccurate statements, and in regards to disease outbreaks, fear-mongering. This last detail should be kept in mind as we move into the final section of this chapter: a review of the theories and articles specifically surrounding SARS. The articles that fill the final section of this chapter are almost exclusively written by doctors, nurses, and medical researchers, and have appeared in the pages of scientific and medicinal journals, whether as articles or commentaries. As a whole these articles represent the overarching thoughts and ideas of the men and women on the "front lines" of the battle against SARS, including not only scientific opinion, but also personal concern. As such, these articles may be considered a litmus test for the psychological profile of the scientific and healthcare communities, in

that they reveal both what was considered globally relevant and personally relevant. The topics researchers chose to study mirrored the concerns they felt present in their own lives.

SARS AND OFFICIAL MEDICINE

Many of these articles, of course, focus on the healthcare community itself, and how the SARS outbreak affected the nurses, doctors, and researchers who studied it. Like the articles that appeared in the popular press and media, these scientific articles are tinged with fear and anxiety—though put into clinical, quantitative terms and charts. Wong et al., for example, discuss the psychological responses of Hong Kong healthcare students to the outbreak, noting a disparity between the reactions of nursing and medical students. According to their study, nursing students were significantly more likely to experience stress than their medical student counterparts, most likely the result of their having lengthier and more frequent contact with patients. However, even non-healthcare students showed anxiety, though in this case such reactions are attributed to a general fear of the unknown. The study concludes with a recommendation that support services be made available in similar future situations (Wong et al. 2004). A study of the responses of general practitioners and traditional Chinese medicine practitioners in Singapore showed somewhat similar responses, though in this case the general practitioners were far more likely to report having felt psychological distress. Unfortunately, no attempt was made to explain this imbalance, nor were any recommendations made to better the working lives of these people (Verma et al. 2004).

In Canada, a study conducted out of the University of Toronto's Department of Psychiatry on the psychological impact of SARS on hospital workers also found that nurses were more likely to report having felt stress. Furthermore, healthcare workers who dealt with patients who had (or were suspected of having) contracted SARS reported greater amounts of stress than their peers. The study connects these responses to not only the fear of contracting SARS, but also to social isolation and job stress, and recommends that intervention attempts in times of future outbreaks should focus on all three of these areas, rather than just on the fear of the disease itself (Maunder et al. 2004). Another study of the reactions of healthcare workers to the crisis examined the reactions said workers had to having been quarantined. Unsurprisingly, many of these healthcare workers experienced feelings of fear, loss, and frustration, but some were also equally concerned about their forced inability to do their job—i.e. to help others in a healthcare capacity. The study concludes by again recommending changes be made to policies in case of future outbreaks, specifically noting that better literature on dealing with infectious diseases, as well as stress management, be made available (Robertson et al. 2004). Many of the conclusions of this study were echoed in an examination of the psychological and occupational impact of SARS at a teaching hospital (Mount Sinai) in Toronto. During the first four weeks of the Canadian outbreak (the span of time investigated in this study), eleven healthcare workers at the hospital contracted SARS, and the hospital did set up several health support interventions for these employees. However, the infected workers still reported feelings of loneliness, anger, and fear, as well as concern about the effects of their being quarantined on family members and other

hospital staff. In contrast, healthcare workers who were not infected with SARS reported heightened stress responses when it came to treating those workers who were infected (as opposed to regular patients), and increased apprehension over spreading the virus to family members (Maunder et al. 2003).

A different set of studies examined the reactions of non-healthcare workers (i.e. the public) to the outbreak, specifically regarding their opinions about interacting with the healthcare community. A study in Taiwan found that the public's utilization of medical services as a whole decreased drastically during the outbreak, with inpatient care dropping by 35.2%, and ambulatory care by 23.9%. Even the field of dentistry was affected, experiencing a 16.7% reduction in the number of patients. Given these numbers, the authors of the study warned that the healthcare community should not overlook the possibility of collateral, unreported health issues during times of crisis (Chang et al. 2004). A similar study of a major teaching hospital (Prince of Wales Hospital) in Hong Kong reached comparable conclusions, in that almost all areas of the hospital's emergency department experienced significant decreases in the number of patients reporting health concerns. The authors noted that trauma cases, minor cases, and the mean daily attendance all decreased by up to fifty percent. The only areas not affected by the outbreak were 1) patients requiring immediate care, and 2) the number of patients discharged against medical advice. In the former area, the number remained the same, but in the latter, the numbers actually decreased, meaning that fewer patients were leaving without first securing the doctor's permission. Fear was noted as the driving force behind these changes, as well as possible changes in community behavior, where members of the

public took better care of themselves so as to preclude any necessity of entering a hospital (Man et al. 2003).

One editorial, written in Canada in the summer of 2003, shortly after Toronto had been removed from the World Health Organization's travel advisory list, also mentioned the widespread fear, but firmly located the source of that fear in the media. This should come as no surprise, given this chapter's previous section on media theory. But this article in particular, which appeared in *Clinical Nursing Research*, placed significant blame on news sources:

The way in which the media report news about infectious diseases often tends to increase anxiety because the focus of certainty is frequently the number of deaths. There have even been suggestions that some of those issuing bulletins about SARS may want to increase press circulation, boost ratings for particular TV news channels, highlight pressure for better access to health funding, or even make political headlines. Whatever the underlying reasons for generating publicity about SARS, there has been an immense response of fear in the general public and the panic that death is imminent for all who contract the disease. (Hayes 2003, 300)

Regardless of whether or not the claims made by Hayes were valid or truthful, their placement within this editorial demonstrates that even within the medical community, the media were being blamed for fear-mongering. Hayes, however, is not so polemic as to claim that the media is the only source of fear, noting that the medical community is also at fault. Among other details, Hayes notes that the masks that healthcare workers were required to wear, while greatly decreasing their chances of contracting the virus, were seen by some nurses as a "barrier between individuals" (2003, 301), and a catalyst for negative reactions in nurse-patient interactions.

In fact, if one word were to be used to describe the reactions reported in almost every piece of collected literature concerning psychological reactions to the outbreak, it would be “fear.” Most of the articles dealt with the negative effects of fear, such as heightened anxiety of infections spreading during commercial air travel, with a similar apprehension building over the possibility of using airlines to disperse bioterrorism agents—a possibility that was made clear as a result of SARS (Alexander, D.A. 2003; Karwa, Currie and Kvetan 2005; Mangili and Gendreau 2005). Other articles detailed the public’s confusion and fear caused by the disruptive measures that Toronto had to enforce to deal with the outbreak—measures that were made the more disruptive because of the city’s lack of a plan for such an occurrence, meaning that the process was bumpy, sometimes contradictory, and bewilderingly altered from week to week (Lim et al. 2004). Yet other articles noted the stigmatization of Asian-American communities while other races remained untouched (stigmatically) by the public, a situation that resulted in the stigmatized communities avoiding or delaying seeking health care (Person et al. 2004). Two twists on this recognition of almost-universal fear were, first, a commentary about undergraduate medical students in Toronto, who were frustrated that the outbreak had resulted in their not being permitted to enter teaching hospitals in late March and early April of 2003, a situation that many students felt hampered their education (Clark 2003). Second, an article from the Center for Epidemiology and Biostatistics at the School of Public Health in Hong Kong pointed out that the panic caused by SARS resulted in a public far more concerned with their collective health, and thus more likely to follow the

preventative measures recommended by healthcare workers and government officials (Lau et al. 2003).

Not all articles dealt with fear, of course, and M. Oren's study of quarantine measures provides a useful segue between discussions of fear and matters of a more abstract nature. Oren's article does acknowledge the presence of fear in the public, but from a more qualitative perspective, noting that informing the public of medical matters creates a dilemma between warning of a potential threat—a significant source of stress creation in regards to the public—and ascertaining the likelihood of that threat actually occurring (i.e. waiting to see if the outbreak actually occurs before sending out warnings). While this is a significant ethical quandary, Oren points out that containing a potential outbreak at the start is far more effective than reacting to it once it has spread throughout a community, and as such, weighs in favor of advance warnings (2004). Singer et al. also discuss some of the ethical situations that arose because of the outbreak, including the ethics of quarantine (individual liberties versus protecting the public); the balance between protecting private information and revealing necessary medical information; healthcare workers' dilemmas over their duties to help the infected, which raises the chances of those workers' families contracting diseases that the workers may bring home; patients whose necessary surgeries were postponed because of restrictions that limited the number and type of people who could enter hospitals during the outbreak; and the question of how to deal with outbreaks in a global community, which includes issues of travel, responsibility, transparency, and honesty (2003; see also Bernstein 2003 and Smith et al. 2004). Singer et al.'s paper makes no attempt to provide answers to these

questions, instead merely attempting to present issues that must be dealt with by the healthcare community. However, the article does point to the fact that many researchers and medical professionals were concerned with ethics, and eager to discuss them.

Other researchers and doctors were more interested in discussing the physical problems that occurred in attempting to treat patients and prevent the spread of the coronavirus. Oren's above-noted article was positive in its evaluation of quarantines as effective measures, but other healthcare professionals were not so optimistic. One of these was Richard Schabas, a former Chief Medical Officer of Health for Ontario, and Chief of Staff at York Central Hospital during the SARS outbreak. In a review published in the *Canadian Medical Association Journal*, Schabas unflinchingly pointed out the positive and negative ways with which the outbreak had been dealt, delivering an especially deflating commentary on quarantines:

Ontario's response to SARS has been energetic. Unfortunately, however, it appears to have been based on unachievable expectations, specifically, that quarantine would eliminate the disease. Let's be realistic. Quarantine plays an important but limited role in the community control of respiratory infections. It can reduce the impact of an outbreak but, according to our experience with other respiratory diseases, it won't stop transmission entirely. (2003, 1432)

Instead of massive quarantines, which Schabas says do little more than drain public health resources, he recommends a program of general surveillance, accompanied by public and professional education. Quarantines do still play a role in this new rubric of disease control, but a lesser one, implemented only when necessary.

J. Levett took an even darker view of what could have been in the article "Severe Acute Respiratory Syndrome (SARS): Loud Clang of the Leper's Bell." Levett stated that the ease with which the coronavirus rapidly spread between continents should have been

a wake-up call for health professionals and organizations worldwide. The article, which appeared in December of 2003, forecast two possible futures for the outbreak (which had gone into a recession by this time): a successful containment, or a worst-case scenario involving massive outbreaks. The latter situation was especially troubling for Levett, who claimed that European health services would not be able to cope with the sudden strain. The article ended with a call for the establishment of a European Union Center for Disease Control (2003).

Finally, for the bleakest side of the outbreak, some researchers pointed out the possibilities of SARS being used as a model for bioterrorist activities. This scenario was glossed over in a previous paragraph in this chapter, but deserves more examination here. A.C. Shurtleff, writing for the *Investigational Drugs* journal, reported on a series of forums in 2004 designed to address the possibilities that some recent emerging infective diseases could be possible agents of bioterrorism, and what steps could be taken if such a scenario occurred. Also discussed in these forums were genetic engineering methods to circumvent or enhance the immune system, the creation of vaccines and immune therapies, and the dearth of new antiviral drugs (2004). The seriousness of these forums is perhaps best demonstrated in a different article, wherein the discussions revolved around the possibilities present in anthrax and smallpox being used as agents of bioterrorism. Here, D.K. Bhalla and D.B. Warheit gave a history of the purposeful misuse of biological agents, beginning with infected cadavers being thrown into the water sources of opposing armies in medieval times, and continuing until the present day, with the anthrax-mailing scares of 2001. Bhalla and Warheit noted that both anthrax and smallpox are classified as

category A agents by the Centers for Disease Control and Prevention, a spot reserved for those agents that could cause the most harm after deliberate introduction into society. The great danger of living in the modern age, they note, is the relative ease with which organizations can sometimes acquire such agents, the cheapness of their manufacturing, and the ease of their delivery. International treaties limiting the availability of such agents are helpful, and more are created every year. However, Bhalla and Warheit concluded that the only logical (and necessary) tack is to develop new strategies for the early detection of harmful-agent dispersal, and new treatment strategies for the long-term survival of the infected (2004). Given the nature of this message, it is easy to see why Shurtleff's article carries such weight: released into society on a massive scale, SARS could be devastating, and easily overwhelm the available medical services, as Levett warned earlier in this section.

Ending this rather morbid section on a lighter note, one notes that not all researchers lambasted governments and healthcare communities for failing to take a more expedited or effective approach in dealing with the outbreak. C. Liu, while admitting the Chinese government's initial failure to report SARS, pointed out that China was ultimately successful in containing the epidemic, and praised his Chinese colleagues for their efforts (2003). And two Hong Kong dentists pointed out late in 2004, in the *Journal of the American Dental Association*, that despite up to one-third of healthcare workers in some countries contracting SARS from their patients, not one dental health care worker ever became infected through a dental setting. The authors gave as reasons for this curiosity the universal health control measures standard in the dental community, as well

as the relative non-infectious nature of the coronavirus in the early stages of individual infections, and recommend that the dental community maintain its current level of infection control measures (Samaranayake and Peiris 2004).

A final section in this chapter discusses studies of disease rumors, and the theories that have been forwarded to discuss the propagation of viruses in an epidemic. Interestingly, and bringing us back to the more folklore-oriented section that began this chapter, many of these scientific theories attempt to solve the complex mathematical equations involved in virus propagation by treating the virus as a rumor that exists in small-world networks. Mathematically, it seems, the two forms spread in similar fashion, and one can thus be used to discuss the other. Historically, researchers investigated this relationship using zero dimensional models, where different “subpopulations” are mixed equally, interacting with other subpopulations in proportion to their size. However, as Kuperman and Abramson pointed out in 2001 (building on the work of D.J. Watts and S.H. Strogatz), such models do not accurately reflect the dispersal of real-world subpopulations, and as such, they propose adopting “small-world” models, which are neither dependent on the subpopulations being well-mixed, nor on lattices of groups. Such reorganization produced a clear difference in terms of epidemiology: the small-world models produced results evidencing a much faster epidemic propagation than earlier models—results that better resembled what occurs in the real world (2001). Using these small-world models, and building on work that Kuperman and Abramson began in the above essay, D.H. Zanette pointed out that “an epidemiclike model, which can be interpreted as the propagation of a rumor, exhibits critical behavior at a finite randomness

of the underlying small-world network” (2001, n.p.). In other words, that there exists a critical point in the existence of a “rumor” where, if it does not die out in the neighborhood of its origin, but spreads over a finite fraction of the population, its ability to propagate further grows geometrically and dynamically. Such conclusions bring to mind Oren’s statements (given earlier in this chapter) that it is far more effective to contain an outbreak earlier, rather than later.

A different model for calculating social and biological contagion arrived in 2004, proposed by P.S. Dodds and D.J. Watts. This model used most of the work from existing frames, but included the memory of individuals as part of its calculations. Novel in its approach, for this marked the first time that human memory of exposure was explicitly made part of contagion studies, the work of Dodds and Watts showed that there is a strong correlation between the contagion models used in the social sciences (i.e. rumors) and in epidemiology (i.e. disease), whereas they had previously been thought to be largely incompatible:

Our model suggests, however, that in reality these two kinds of contagion models may not be entirely distinct. We venture the possibility that some infectious diseases may spread in a fashion similar to social contagion processes. For example, two exposures to an agent sufficiently close in time may infect an individual with higher probability than would be expected if the exposures acted as independent events. (2005, 598)

A second point of theoretical importance in this discovery lies not at the beginning of the contagion process, but at the end. In addition to studying individuals who contract diseases, Dodds and Watts also studied people who recovered and became permanently immune afterwards, and found “that epidemics inevitably die out but may be surprisingly persistent when individuals possess memory” (2005, 587; but see also Dodds and Watts

2004). Noted mainly in relation to biological models, this statement has great relevancy when combined with the social science world, where “epidemic” refers to “rumor,” the result being that the models used in this article demonstrate some of the reasons why narratives about a disease continue to exist long after the disease has vanished.

This brings to a close our discussions of theories. Realistically, the hundred-some-odd sources that were used to construct this chapter represent only the tip of a vast iceberg. Each section—folklore, media, and SARS—could be expanded to hundreds of sources by itself, and there are arguably more sections that could be added to provide this work with a better grounding. But as stated at the beginning of this chapter, the sections I have chosen to use here represent what I see as the three main areas of discussion that will occupy the remainder of this volume. Incomplete as these sections may be, they still represent a large cross-section of the work that has been done, and will provide an understanding of the areas from which the rest of this work will launch forth.

Chapter 3: Chronicle of a Health Panic

The origins of the SARS virus can be traced to China's Guangdong province, though it was some months after the disease's initial outbreak in the Western world that a full timeline could be constructed. Secrecy on the part of the Chinese government is the main reason for this, followed closely by the difficulties of reverse-tracing public disease pathways. But even after locating the earliest-known examples of human-related SARS, investigators were still left questioning where the virus had come from before entering the human population; viruses aren't created *ex nihilo*, so the disease had to have its origins elsewhere. But where? An animal? Which animal? And how did the virus manage to cross thousands of miles of land and open water to almost simultaneously spring up in Hong Kong, Hanoi, and Toronto, but miss the places in between?

This chapter will be a discussion—albeit brief—of these issues. A full-scale timeline is not necessary for the purposes of this dissertation, but more to the point, would add potentially several hundred pages of largely irrelevant information. It is, however, necessary to cover the basics: to skip a rock over the pond and point out how the brief ripples this causes intertwine. The materials I use to create this chapter largely consist of newspaper clippings, and the methods I used for gathering them can be seen in some ways as evidence of public concern about the disease at various points in time.

For the better part of two years—April 2003 to summer 2005—I checked various online newspapers and news sources such as CNN.com, MSN.com, and Yahoo.com on an almost-daily basis, printing every article that contained in any way the word “SARS.”

The results of this effort have produced a stack of paper some seven inches high, containing literally hundreds of journalistic contributions. The bulk of these articles, however, were printed between April 2nd, 2003 (the first day I began this task) and July 2nd, 2003; these three months together compromise over half of the pile. The decrease in available articles after this point in time can be seen as evidence of the wane in public interest in the disease in concordance with the virus's declining worldwide presence. July 2nd, 2003, for example, is the day the World Health Organization removed Toronto from its list of infected cities. Not coincidentally, North American news sources began focusing their attentions elsewhere afterward. By 2004 it was difficult to collect more than two or three articles a week, and the last of the series of regularly published stories—at least on the websites I checked—sputtered out in July of that same year. Subsequent journalistic contributions do exist, of course, but dwindle to sporadic thrashings, barely managing one or two contributions a month.

What results from these efforts—the bulk of this chapter—can therefore be seen as a chronicle of public, media-based information concerning the outbreak: that is, the selective progression of events based on journalistic wents and biases, which are themselves largely based on considerations of assumed public interest. In other words, and as has already been discussed, newspapers print stories that sell. The narratives that construct the media's version of events are therefore extremely suspect, for though this version does contain much that is true and factual, it also bends at times towards the sensational at the cost of objectivity.

Peter Washer, in his article “Representations of SARS in the British Newspapers,” adds another facet to the suspect nature of the media’s version when he says:

But beyond the *realist* global epidemic of (the disease) SARS lies the globalization of the *phenomenon* of the SARS panic, where the saturation and speed of the world news media’s coverage leads to the (supposed) risk posed by SARS being *socially constructed* on a global scale. And yet despite the modernity of the medium, the message is almost comfortingly familiar: The social representation of SARS resonates with representations of infectious diseases throughout history: we lay the blame for the new threat on those outside one’s own community, the ‘other’. (2004, 2570)

Though Washer’s examination of SARS-related newspaper articles covers only those pieces written between 16 March and 13 April 2003, he does conclusively demonstrate that media—at least the British strand of it—shows particular subjectivity in continually presenting SARS as a threat to the public, but simultaneously assuaging that public through the process of “othering” with reassurances that the average reader was in no danger.

Why then include the following timeline, as rife as it is with biases? Because the media was in many cases the primary disseminator of data for much of the public, and large sectors of the population can be said to have been directly influenced by what they heard on the evening news or read in the morning papers. Many of my informants said that their televisions were turned on constantly throughout the SARS epidemic, and always tuned to a local news channel. And if the news reported rumors, then it seems only logical that those rumors became part of public consciousness.

At the same time, it is important to remember that the version of SARS as represented through media coverage is not the only way to organize the data. In fact,

there may be dozens of potential versions—personal, cultural, etc.—all filled with biases and exclusions based on what was and what was not seen as important. For the purposes of this chapter, two of these versions stand out: not only that represented in the media, but also that represented in medicine. Media sources may have been the primary source of information for the public, but journalists were not, for the most part, the people on the front lines of the outbreak fighting to understand the disease, treat its victims, and prevent its further spread. This honor goes to the doctors, scientists, and healthcare workers who spent those few months risking their own lives—and sometimes dying—to save the rest of us. So throughout this chapter, the media's version of SARS will be periodically interrupted by a side discussion of the medical version, as represented through the articles that were being published in the *British Medical Journal* and *The Lancet*. This construction will allow for a glimpse at the differences in focus between these two sources of information, showing that what one source considers important is not necessarily seen as such by another.

Epidemics fade. This is the natural progression of such things. Equally true is that epidemics rise, and when this happens, rumors begin: where the disease came from; who is responsible for it; how long it will take to find a cure; how virulent it is. But in order to see the connections between rumor and fact, it is first necessary to lay down said facts, that we may have a corkboard on which we can later pin our analyses. Let the following timeline, then, be our board.

In mid-February of 2003, China's government reported 305 cases of atypical pneumonia in the Guangdong province. Five of these cases resulted in death, but the

Chinese government refused to say much more about them. Despite this secrecy, the World Health Organization (WHO) learned on February 10th that such cases had been occurring with some regularity in China since at least November of 2002. China's government reassured them that these were not significant, and on February 14th issued a statement claiming that the disease was under control ("Timeline for SARS" 2003).

On February 21st, 2003, an elderly professor from China's Guangdong province checked into the Metropole Hotel in Hong Kong, having traveled there to attend a wedding. The professor took a room on the ninth floor of the hotel. He had a cough and fever, and soon infected twelve other guests at the hotel, possibly by sharing elevators with them. These guests then left the hotel, traveling to Vietnam, Canada, the United States, and Singapore. They carried the virus with them, infecting people in these new countries, and thus spread the disease much more rapidly and efficiently than virtually any other illness in human history (Goudsmit 2004, 140-141).

Within days these travelers and their infected victims began arriving in hospitals, complaining of symptoms such as fever, coughing, and shortness of breath. Puzzled medical staff attempted to interpret these symptoms, as they seemed in some ways to indicate flu, but also pneumonia. It took only five days for doctors in Hong Kong to realize this was a separate disease altogether, and to give this set of symptoms its own name; on February 26th the world was introduced to Severe Acute Respiratory Syndrome, or SARS. Other cases soon followed, and only two days later the first reports of this new disease emerged from Vietnam. Less than two weeks later—on March 12th—the WHO issued a global health alert to health-care workers, stating that a new flu-like disease was

spreading and seemed to be highly contagious. Two days later the disease was reported in Toronto, and the day after that the WHO issued an emergency travel advisory, warning that the new disease was spreading worldwide. At this point such guidelines did not restrict travel to any specific part of the world, but merely advised travelers to be wary of SARS symptoms and to report to airport personnel if any fellow passengers showed signs of such symptoms (“Timeline for SARS” 2003).

On March 18th, German doctors made the first step in identifying the physical structure of this new virus, claiming to have found evidence of a paramyxovirus in blood samples taken from a patient who had SARS. Scientists in Hong Kong, who found evidence of the virus in two other patients, confirmed this. The paramyxovirus belonged to a family of viruses that can cause, among other diseases, measles. The findings reported in Germany and Hong Kong were immediately noticeable to medical staff worldwide, as pneumonia can be a complication of the measles (“Timeline for SARS” 2003).

On March 20th, Hong Kong officials hypothesized that the global spread of SARS might have had its origins in a guest at a local hotel. Using this, epidemiologists were able to trace the illness back to the old professor from Guangdong, and thence to China. An entirely new avenue of study opened, and the search for the origins of SARS moved to this new country. The Chinese government made the investigation official on March 21st by formally asking for help from the WHO in investigating the outbreak in the Guangdong province (“Timeline for SARS” 2003). A team of WHO experts traveled to the region on April 7th, but was hampered significantly by the secretive nature of the

Chinese government. Eventually researchers were able to follow the chain back to a single man—a cook—in Shenzhen who checked into the Futian Hospital on August 20th, 2002, having already infected his wife and two of his sisters. This patient would proceed to infect a number of doctors and health care workers. The elderly professor was one of those infected, though probably through an indirect route; it is unclear whether he and the man in the Futian Hospital ever met. What was known was that the cook regularly prepared, as part of his job, meals containing animals caught in the wild (Goudsmit 2004, 141). This matter will return in future discussions of the origin of the disease.

The last ten days of March marked the onset of panic and quarantines on a global level. Scarborough Grace Hospital in Toronto closed temporarily on March 23rd due to an outbreak of SARS, and the chief of Hong Kong's Hospital Authority was admitted to a hospital on the same day, complaining of pneumonia-like symptoms. On March 24th, researchers claimed to have found strong evidence that this new disease was caused by a coronavirus, which is also responsible for the common cold. More importantly for some future discussions, coronaviruses also infect animals, raising the possibility of an animal-human crossover in the search for the origins of SARS ("Timeline for SARS" 2003).

Additional information comes from Peter Washer's article:

In the *British Medical Journal* of the 22 March [sic], there was already speculation as to the origins of the virus which was thought to be an influenza virus or the Hong Kong Avian Flu. In *The Lancet* of the same day, whilst focusing on the Western Authorities which were investigating the illness, they also said that 'a WHO team is working closely with the Chinese authorities'. Both journals mentioned that chlamydia was also found by the Chinese authorities in the lung tissue of many of the early cases. *The Lancet* also mentioned that bioterrorism had not been ruled out as a possible cause. (2004, 2565)

On March 26th, the government of Ontario declared a public health emergency in

light of the recent spread of SARS. Thousands of people were ordered into self-quarantine and told not to leave their homes. New quarantine issues arose the following day when a small number of passengers on international flights contracted SARS from fellow passengers, the extended contact and sharing of air on the flights having provided ideal conditions for the disease to spread. The WHO, in response, requested that Canada, Hong Kong, and Singapore begin screening passengers for SARS symptoms. The airlines complied by passing out self-diagnostic leaflets to passengers containing a series of questions concerning health status and possible prior exposure. On the last day of March, Hong Kong's health department issued an isolation order that required all residents of an entire apartment block into self-quarantine until the ninth of April ("Timeline for SARS" 2003).

In the March 29th edition of the *British Medical Journal*, an editorial set a grim tone in its discussion of this new epidemic by opening with "Plagues are as certain as death and taxes" (Zambon and Nicholson 2003, 677). At least one academic voice subsequently claimed that this pessimistic tone set the stage for the next week's worth of newspaper reports (Washer 2004). The *BMJ* article was largely fact-based in its estimations of the dangerous nature of the disease, while simultaneously recognizing what was not yet known about the new virus. Researchers had determined incubation periods, symptoms, the virus' mode of dispersal through airborne droplets, and the progression of the disease in the lungs, where x-rays of the infected revealed "small focal unilateral diffuse interstitial infiltrates" (Zambon and Nicholson 2003, 677)—simultaneously noting that these nodes were often overlooked, and might not appear at all in certain individuals. The

clinical presentation of the virus was noted to “suggest an illness of variable severity ranging from mild illness to death. The speculation is that the most severe illnesses occur among first level contacts of an index case” (Zambon and Nicholson 2003). However, the article stopped short of attempting to locate an origin for the breakout, noting only that it appeared to be linked to the aforementioned cases in Guangdong province. Rather than providing a hopeful ending, or even a guess, the article ended with a sobering description of the state of affairs:

The techniques of tracking a new disease parallel those of tracking a war and involve documenting death and detritus, progressing up blind alleys, reporting spectacular highlights, and asking unanswerable questions, emphasizing that emerging infectious diseases and mortal combat may still have much in common. Our mastery of the microbial world is less complete than we might imagine and more subject to chance interactions in the environment than we might care to admit. (Zambon and Nicholson 2003, 678)

It was at roughly this point that I began to take notice of this outbreak as a possible area of study and commenced my daily gathering of news articles. The chronicle of public information that follows from here is my own, though the skeleton behind it comes from official sources. It should be noted that, because the news agencies and websites I checked were North American in origin, most of the articles I gathered either concerned themselves exclusively with North American issues about SARS, or if they considered foreign countries, were written by North American journalists or the Associated Press. Bias is thus very possible, but I will endeavor to cover the story from all fronts.

We begin, somewhat naturally, with more examples of quarantine. On the first of April, American Airlines Flight 128 from Tokyo was quarantined briefly on the tarmac at San Jose International Airport in California after five passengers reported SARS-like

symptoms (Sloan 2003). On the same day, the first suspected SARS case was reported in Australia, the first three cases were reported in Indonesia, a Malaysian hospital said it had quarantined several suspected patients for a number of days, and Singapore reported three new cases after screening processes at airports led nurses to send seven people to hospitals. At this point in time some 1770 people in five countries had been diagnosed with SARS, and sixty-four had died (“US holds plane...” 2003).

The WHO declared a travel advisory on April 2nd, asking potential passengers to “consider postponing all but essential travel” to Hong Kong and Guangdong Province, China. The U.S. Center for Disease Control echoed these concerns, adding Singapore and Hanoi to its list. Canada managed to avoid the list, having convinced the CDC that the spread of the disease in Toronto had been checked (Cohen, Jon 2003). A day later, the residents of the quarantined apartment block in Hong Kong were relocated to isolation camps after the initial quarantine proved ineffective. U.S. President George Bush echoed concern over infectious spreaders, issuing an executive order on April 4th that permitted the quarantining of healthy people suspected of having SARS, but not yet displaying symptoms (“Timeline for SARS” 2003).

The *British Medical Journal* was curiously devoid of SARS-related articles on the 5th of April, as was *The Lancet*. It was, admittedly, too early in the epidemic for scientists to have begun publishing papers describing their work with the disease, but in *BMJ*’s first April edition, the only mention of the disease came via a report in the journal’s “News” section. For the most part, this article reviewed the death tolls and gave a brief history of the WHO’s actions in responding to the crisis. But there were two important pieces of

information revealed: first, that microbiologists at the University of Hong Kong believed that they had isolated the virus involved in the outbreak as a coronavirus (a finding which agreed with similar studies at the U.S. Centers for Disease Control); and second, that the same Hong Kong team had already provided hospitals in the Hong Kong area with a simple test for the virus, based on polymerase chain reactions (though the test was noted by the team's spokesperson as being in its initial stages, and therefore still in need of fine-tuning). The article was very clinical in its presentation of this information, and all of its sources were medical; there was no mention of rumor or gossip, only data and arguments about that data (Parry 2003a).

As mentioned above, April 7th was when a team of WHO investigators traveled to Guangdong province to ascertain the origin of SARS. On April 8th, Chinese doctors made a statement to the effect that there were more SARS cases in China than the government was reporting. As if proving the logic behind this statement, Hong Kong reported forty new SARS cases a day for the next three days in a row. The WHO investigators made an initial report on April 9th, declaring that China might be withholding information about SARS ("Timeline for SARS" 2003). Initial forays into discovering the disease vectors responsible for the mass contamination occurring in Hong Kong led health officials to state that cockroaches might be responsible for carrying the disease from one residence to another, as reported by Yahoo! News (Lyn 2003a). Worldwide, the effects of public concern over travel were already being felt: Australia's Qantas airlines, for example, cut 1,000 jobs—or 3% of its workforce—on Wednesday, April 9th, and carriers such as Finland's Finnair, Germany's Deutsche Lufthansa, Japan Airlines System Corporation,

All Nippon Airways, Hong Kong's Cathay Pacific Airways, Korean Air, and Garuda Indonesia reported financial losses and cuts in flights ("SARS hits airlines..." 2003).

The April 12th editions of the *British Medical Journal* and *The Lancet* were equally as lacking SARS-related information as the editions published the previous week. In *The Lancet*, only a single news article existed. The *BMJ* had little more, consisting mostly of a news piece, penned by the same author as the April 5th *BMJ* news piece, which was once again clinical in its reporting, using official sources as its references and avoiding discussion of rumor and hearsay. The article gave the death toll, and remarked that the argument over the cause of the disease had come down to isolating whether the coronavirus identified the previous week was the sole cause, or whether it was operating in conjunction with another factor to create the symptoms associated with SARS. Also noted was the WHO's declaration that the disease did come from one of China's southern provinces, but that they could not yet confirm whether there was any link between animals and humans in the disease's transmission (Parry 2003b). The only other mention of SARS in the April 12th edition of *BMJ* came in the obituary of Dr. Carlo Urbani, the WHO official who brought the disease to the world's attention, and who died from SARS-related complications on the 29th of March ("Carlo Urbani" 2003).

April 14th marked a banner day in the scientific and medical study of this new disease, with Canadian scientists successfully sequencing the DNA of the coronavirus believed to be responsible for the outbreak. Scientists in the Netherlands confirmed a day later that a coronavirus was indeed responsible for SARS. According to an MSNBC.com report, the 17th of the month was another day of discovery, with Hong Kong officials

reporting the infection vectors of the apartment complex where a quarter of the territory's 1,300 cases were identified (the same complex whose residents had earlier been relocated to isolation camps). SARS had, according to their investigations, spread through a leaky sewage system ("Timeline for SARS" 2003).

Closer to home, it was also on this day that Memorial University's International Centre notified its students via email that the Canadian Embassy in Beijing, China would be closing to the public for a full week: "No visa applications can be submitted; no interviews will be conducted; no documents can be picked up in person during this period. Service by mail will continue." International students—especially those students from Vietnam, China, Hong Kong, Singapore and Taiwan—were also advised to check the latest updates from Health Canada before traveling home (International Student Advisor 2003). In a follow-up flyer distributed campus-wide at Memorial University on April 22nd, all students arriving from Hanoi, China, Hong Kong, Singapore and Taiwan, and any students "who may have had close contact with a person with suspected or probable SARS" were encouraged to check their temperature daily for three weeks and self-monitor for cough, shortness of breath, or difficulty breathing (Student Health Service 2003).

On the mainland, worshippers in Toronto attending mass on Good Friday were either asked to or voluntarily changed their religious rituals, avoiding dipping their fingers in holy water, receiving bread in their hands instead of on their tongues, bowing to the cross instead of kissing it, and avoiding altogether the sharing of wine. Choir members with sore throats or coughs were even asked not to sing, as the act could spread

expectorant—and thus disease—over the congregation. On Easter Sunday—considered by many the most important celebration of the church—Bishop John Boissonneau of the Catholic Archdiocese of Toronto excused from attending mass those who were sick or in quarantine because of SARS (Brown, DeNeen L. 2003).

The April 19th edition of the *British Medical Journal* contained yet another news story, this one remarking on how the virus' spread was difficult to control (Parry 2003c), but it also marked the first time that month that the virus appeared in an article elsewhere than the "News" section. In fact, the journal's first section, "This week in the *BMJ*," had as its opener a blurb titled "Severe Acute Respiratory Syndrome Demands Strict Control." The blurb itself was only a short summary of the contents of the two pieces in the journal that did discuss SARS, but it seems indicative of the larger state of affairs that it opened the edition. Also indicative was that the first of these two pieces, a lengthy editorial, opened the "Editorials" section. The editorial itself was written by the Deputy Director of the Enteric, Respiratory and Neurological Virus Laboratory at London's Health Protection Agency, and summarized the scientific advancements that had been made in the investigations of the coronavirus since it was brought to the attention of the Western world. SARS was noted to almost certainly be caused by a coronavirus, but that there seemed to be some association between the disease's symptoms and a human metapneumovirus that was isolated in 2001, with a note that laboratories around the world were racing to check these correlations (Zambon 2003).

The second major piece in the April 19th edition of the *BMJ* was a professional paper by two researchers at the University of Hong Kong, one a professor and the other a

physician. The paper was short, but reviewed Hong Kong's daily-rising number of deaths from SARS, summarized laboratory and pathological findings, recommended courses of treatment, and provided a list of precautions for doctors to take when treating the SARS-infected. Much of the paper was thus review, but the recommendations for treatment and prevention did cover new ground, including the advocating of quarantine as the best method of inhibiting the disease's spread, and the note that public education of proper hygiene measures would be critical in dealing with the outbreak (Chan-Yeung and Yu, 2003).

The April 19th edition of *The Lancet* was similarly focused on SARS, but contained even more works relevant to the outbreak. In total, seven of the edition's fifty-six articles were devoted to the disease: one editorial, two commentaries, one article, one news piece, and two "Correspondence" letters. All of these pieces were clinical in nature and tone, discussing infection control measures and the identification of the coronavirus as the possible source of the infection.

On the other side of the ocean, China faced increasing pressure and criticism over its lack of openness in discussing SARS and revealing pertinent and timely information. In response, the Chinese government promised to be more open, and on April 20th, reported the number of SARS cases in China as rising from 1,512 to 1,807, and fired the Beijing health minister and mayor ("Timeline for SARS" 2003). A report filed by journalist Dexter Roberts on April 21st does not show evidence of this new openness, however; in attempting to interview a Beijing doctor about SARS, Roberts was told, "I am not allowed to talk about my country's public health.... I'm sorry—but the ministry

has just informed me of this order.” Roberts went on to discuss the serious shortcomings in China’s healthcare program, where 90% of the rural population was without any form of health insurance, and 45% of the urban self-employed suffered similarly. Those who did have health care were either rich or struggling to stay insured, China’s health care costs having jumped 500-600 percent since 1993 (Roberts, Dexter 2003).

Several hundred miles south, Hong Kong experienced its own set of problems, its economy sputtering miserably in the wake of SARS. Tourism dropped to all-time lows, leaving hotels and airplanes virtually empty. Experts, such as James Hughes of the National Center for Infectious Diseases in Atlanta, Georgia, were quoted in newspaper articles with such declarations as, “It would be hard for me to see how [SARS] could be eliminated from places like...Hong Kong at this point.... I think it would be prudent to say it’s here to stay” (Stein 2003). The same comments were made worldwide, with experts beginning to think that SARS had become so widespread that its eradication would prove impossible. SARS was predicted to crop up seasonally, much like the common cold. Hong Kong was not without its bright spots, however; on the 22nd of April, some 200,000 students were able to return to school after a three-week hiatus, mass efforts to halt the spread of SARS having been deemed sufficiently successful to allow daily routines to begin anew (“Timeline for SARS” 2003). Hong Kong also created a novel warning system for its people in the form of text messages sent to cell phones: “Those opting for the service will have their phones tracked and will be told via short message service (SMS) which buildings within a kilometer of their location have had SARS...cases occur, as declared by the Hong Kong Department of Health” (Lui 2003).

The last few days in April continued to bring bad news to residents of the Toronto area. On the 22nd, The Centers for Disease Control and Prevention sent specialists to the city to help contain the spread of SARS, Toronto having been deemed key in successful North American containment. At this point in time some sixty-six hospital workers had been listed as probable or suspected SARS cases, their numbers comprising almost 25% of the 259 SARS cases in the province. 7,000 people in the Toronto area had been quarantined. There were only fifty-seven cases of SARS reported elsewhere in the country, and all fourteen SARS-related deaths had occurred in Toronto ("CDC team arrives..." 2003). The very next day, the WHO extended their travel advisory to cover, among other places, Toronto, giving this Canadian city the dubious honor of being the only location outside of Asia to have warranted such a warning ("New SARS travel..." 2004). Reaction to this new advisory was swift and, in some cases, scornful. Toronto Mayor Mel Lastman went on record as saying, "Let me be clear; it's safe to live in Toronto, and it's safe to visit Toronto" ("City of Toronto..." 2003). Despite such reassurances, major league baseball teams were advised against visiting hospitals, using public transportation, mingling with crowds, and signing autographs ("MLB issues guidelines..." 2003), and high-profile players like Alex Rodriguez of the Texas Rangers made public statements to the effect that they would confine themselves to their rooms between games to avoid possible exposure ("Rodriguez, Rangers..." 2003).

The effects of the WHO warning were seen almost immediately, the travel advisory being for many the final factor in canceling travel plans to the already-suspect city. Store owners reported business falling by half literally overnight, and traffic in

shopping malls ground to a near-halt. Hotels, already under strain, found customers canceling reservations; some hotels had their occupancy rates drop to 20% or lower. Conventions were cancelled en masse. Air Canada was hit especially hard, the travel advisory coming only three weeks after it had been forced to file for bankruptcy as a result of losses sustained due to the war in Iraq. Planes arriving in Toronto after April 23rd were almost empty. Most telling, however, were the words of J. J. Johnston, chief economist at the Royal Bank of Canada, who said, "Our feeling is that probably now [SARS] is going to take about a half percent off of the national growth rate for the second quarter." Bad for business, indeed ("Toronto's economy takes..." 2003).

Other areas of the world suffered similarly. On April 23rd, Beijing ordered 1.7 million primary and secondary students to stay home until May 7th. On April 24th, a major hospital in Beijing was sealed off under government orders, the 2,300 people inside forced into quarantine until further notice ("Timeline for SARS" 2003). The International Air Transport Association, the governing body over international flights, predicted that SARS would cost the industry some \$10 billion dollars, and would affect airlines on every major continent ("SARS hits Asian..." 2003). Officials overseeing the 2004 Olympics in Athens, Greece began questioning the process of admitting several hundred thousand athletes and visitors into the country, any one of whom could be infected, and did not immediately rule out postponing the games (Bondy 2003).

Even the United States—largely untouched by SARS, with only thirty-nine probable cases and no deaths—felt the effects. Chinatowns in every major U.S. city reported sluggish business, with restaurants and other Chinese-run businesses saying

traffic might be down as much as 60%. One walking tour in San Francisco's Chinatown reported that no one showed up for their Saturday excursion—for the first time in twenty years. Travel agencies in Los Angeles said that 90% of their booked flights to Asia were cancelled, and school groups in New York cancelled field trips to the Museum of Chinese in the Americas (Hopkins 2003). So potentially serious were the economic effects that on April 24th the U.S. National Institutes of Health formally asked for assistance from U.S.-based drug manufacturers in developing a vaccine, drug, or immunotherapy system to help combat SARS (Pearson 2003).

By late April, few places in the world had not been touched by SARS, either directly in the form of the disease itself or indirectly in the form of the resulting economic problems. More troubling were reports that the virus had apparently grown stronger in recent weeks, and the worst was yet to come. As of April 24th, 263 people worldwide had perished because of SARS—a small number, relatively, but recent studies pointed to a troubling rise in the worldwide death rate, from three percent in the initial weeks to six percent in late April. It is, of course, entirely possible that these numbers were skewed by, if nothing else, China's recent admission of hundreds of previously undocumented SARS cases. However, the fact still remained that hospitals were obviously having problems dealing with the disease (as evidenced by the lack of a decline in the death rate), and a large number of the initial cases dealt with infected hospital workers, who tended to be younger and better capable of fighting the infection. As SARS spread to the general population, however, it might prove far more harmful to children and the elderly. Hypotheses such as this were at least partially substantiated by reports from Hong Kong,

which showed that the death rate among those younger than 55 was 3.6 percent, while 18.9 percent of those aged 65-75, and 28.6 percent of those older than 75 succumbed (Vedantam and Stein 2003). A CNN.com survey conducted on April 28th showed that public perception of the disease was also one of pessimism; in answer to the question, "Have we seen the worst of SARS?" 30,858 of 39,544 voters, or 78%, answered "No".

Yet at the same time, a small but growing number of reports detailed successes. On Tuesday, April 22nd, Hong Kong allowed 200,000 secondary students to return to school after a three-week state-enforced absence, under condition that they wear masks and take their temperatures daily (primary students, however, were told to still remain at home). This decision might have been made in light of reports from Hong Kong's health officials that noted a decline in the numbers of new SARS cases for three days in a row ("CDC team arrives..." 2003). Later that month, Vietnam was given official recognition by the WHO for being the first country to effectively control the disease, with no new cases appearing in two weeks ("How Vietnam beat..." 2003). And in the most promising statement yet, on April 28th a WHO official stated that he believed the worst of SARS was over in Vietnam, Canada, Singapore and Hong Kong (though China still remained a large problem). Canada seemed especially promising, as no new cases had been reported outside of a hospital in twelve days ("WHO: Worst of..." 2003). As a direct result of this, the WHO lifted the travel advisory for Toronto on the last day of the month. Finally, banks around the world reported that SARS had done something they'd struggled to achieve for years; it had led people to do their banking online. This allowed banks to save

costs by “trimming branch networks and cutting payrolls,” as conducting business online was cheaper for banks than business done in person (“SARS drives online...” 2003).

While April’s last issue of *The Lancet* had only two pieces on SARS—a news article and Dr. Carlo Urbani’s obituary, the last issue of the *British Medical Journal* published in April had no fewer than seven pieces about the disease. None of these pieces were peer-reviewed papers—two were “News” pieces, three appeared in the “Personal Views” section, one was a “Letter,” and the last was a review of the websites that various official sources such as the WHO and the CDC had set up to discuss SARS—but every section that had a piece on SARS opened with it. The news reports detailed that the coronavirus had been definitively identified as the source of the outbreak (Parry 2003d), and summarized the disease’s progression in Canada (Spurgeon 2003a)—neither of which offered any great insights into the medical community. However, it was notable that the three pieces in the “Personal Views” section constituted the *entirety* of that section, a clear signal that SARS was uniquely aligning the medical community. One of these “Personal Views” deserves special consideration, for it marked the first time in the *BMJ* that the connection between racism and SARS as promulgated by media sources was openly discussed (Schram 2003). Additionally, the “Letter” that appeared in the same edition noted the problems that Chinese foreign exchange students were having when attempting to return to school after vacations (Wong, Ian 2003). Thus, for the first time since SARS was given a name, the *BMJ* had begun to pay attention to the role of rumors in the progression and effects of the disease.

Still, the disease had not yet been eradicated, and the worldwide economy was suffering as a result of global panic. A poll in early May revealed that almost half of Americans believed an outbreak was likely in their country, though only 8% of respondents were seriously concerned about it ("Poll: SARS epidemic..." 2003). Reports from Hong Kong were mixed, some claiming that the outbreak had peaked, while others discussed concerns scientists had over mutations of the virus and relapses among patients, not to mention the five-fold increase in deaths over the previous month ("SARS relapses stump ..." 2003). In Beijing, the government ordered elementary and middle schools to remain closed for a further two weeks, issuing an additional threat of punishment to those home-quarantined in Taipei who had violated their sentences. Taiwanese hospitals groaned under the strain of SARS cases, which had tripled to 116 in the past ten days. On Sunday, May 4th alone, thirteen new deaths were reported in Asia: seven in China, five in Hong Kong, and one in Singapore (Foreman 2003a).

On May 4th, WHO officials in Hong Kong reported a significant breakthrough in the tracing of disease vectors, as data from recent studies showed that the SARS virus could live for up to four days in human waste—four days for diarrhea and two days for urine or fecal matter. Hong Kong scientists had long suspected that the virus could live in sewage, and was at least partly responsible for the contamination of an entire apartment complex after sewage pipes leaked, but had no proof. The WHO's findings confirmed these suspicions, and necessitated entirely new worldwide containment strategies. Japanese researchers made a similarly important report the same day, recording the presence of live viruses on a chilled plastic surface four days after their placement.

Again, this finding necessitated global changes, as health officials now understood that the virus could survive for dozens of hours on, say, a refrigerated bottle of soda. On a positive note, CNN.com reported that experiments with basic household cleaners demonstrated the virus dying within five minutes of exposure to chlorine bleach, offering a simple household strategy to prevent infection (“WHO sheds new...” 2003).

The brightness of this message apparently failed to find purchase in China, as villagers protesting the local government’s SARS policy in Zhejiang province stormed local offices, breaking windows and office furniture and assaulting officials. Beijing officials, perhaps in fear of mass retribution, sent policemen to guard eighty reservoirs around the capital city to protect the drinking water supply from SARS contamination (Foreman 2003b). Hospitals in the capital also suffered from public fear as scores of support staff quit their jobs. Their timing couldn’t have been worse, as China reported 160 new cases of SARS and nine new deaths at the same time, and there was no indication of a leveling-off of the infection rate. In fact, Chinese officials expressed public concern about rural health-care resources, especially as migrant workers fled the capital for their hometowns, increasing the possibility of new disease vectors (“Hospitals in China...” 2003). Chinese Premier Wen Jiabao called the situation “grave” and warned that “arduous work” was ahead if China was to contain the epidemic. The same day, 138 new cases and eight more deaths were reported in the Chinese media (“China: SARS battle...” 2003). The following afternoon, MSNBC.com reported that Beijing citizens, fearing that domestic animals such as dogs and cats might have been responsible for spreading the virus, had killed or abandoned hundreds of pets in recent weeks; some

communities had apparently begun demanding such action (though these rules were not authorized by local government) ("SARS drives Chinese..." 2003).

Hopeful Asian exchange students felt the repercussions of China's situation, learning on May 6th that the University of California at Berkeley would not be accepting around 500 students from China (as well as Hong Kong, Taiwan, and Singapore) for the summer session ("Berkeley turns away..." 2003). Other U.S. educational facilities soon followed suit. John Holden, president of the National Committee on United States-China Relations, said on May 7th that he was "not aware of any [exchange] programs that are going forward at the moment, or plan to go forward over the summer," and some Asian exchange students already in the U.S. forfeited trips home over fears of not being allowed to return for school in the Fall ("SARS impacting higher..." 2003).

The first two editions of *The Lancet* published in May had eleven SARS-related articles between them, including three fast-tracked and peer-reviewed "Research Letters" that revealed the results of studies designed to investigate optimal diagnosing methods, as well as treatment and preventative measures. News articles made up the bulk of the remaining pieces, as did editorials concerning China's failure to deal adequately with the disease in late 2002 and early 2003. Unlike the *BMJ*, the pages of *The Lancet* had so far remained free of discussions of rumor and narrative in the progression of the outbreak.

In the non-academic world, customs and immigration agents were being trained to watch out for airplane passengers who exhibited SARS-like symptoms, and were given authority to detain anyone suspected of being contagious. Hong Kong led the way in this detection, having installed infrared sensors around its airports to read the body

temperature of all incoming passengers (a high body temperature signaling possible infection). The system seemed to work, as thirty-seven passengers were identified in only a few days. The U.S., however, relied mostly on the abilities of agents to recognize telltale symptoms in passengers—high fever, dry cough, and breathing trouble (“Federal agents trained...” 2003). On May 9th, Italy became the first country in Europe to introduce obligatory checks on all incoming passengers from China, reserving the right to also check those arriving from European countries “where they may have made connections from Asia” (“Italy to check...” 2003).

Global efforts such as these were markedly fewer at this point, but seemed even more necessary within a few days. On Monday, May 12th, the WHO added India to its list of countries with suspected cases of SARS after a man arrived at a hospital in Calcutta with a fever and cough (this after declaring the country free of the disease only a few days earlier) (“One ‘probable’ SARS...” 2003). In China, the number of diagnosed cases passed 5,000 on the same day, with seventy-five new cases and twelve deaths added to the list. Taiwan recorded a record number of new cases, confirming eight deaths and twenty-three infections, “the highest one-day rise for the area since the outbreak two months ago” (“China SARS numbers...” 2003). Taiwan’s information came on the heels of a Taiwanese Interior Ministry report detailing the difficulties in fighting the disease because locals refused to cooperate; forty-two percent of people who were supposed to register with local health officials after arriving at airports neglected such duties. Officials were also having trouble keeping track of the 23,000 people in quarantine (most of whom were disease-free), and had so far spent \$350,000 on 2,000 video cameras that

were installed inside the homes of quarantined residents. In Taipei alone, some 200 residents disappeared, breaking quarantine, after their housing project was closed following the discovery of a body and two people suspected of having SARS. As Loh I-cheng, a former deputy ambassador to the U.S. said in regards to this, "Everyone in Taiwan thinks he's special and smart—why should he observe the rules? He knows the police won't strike him or arrest him" (McNeil Jr. 2003).

Again, however, there were a number of success stories. Though the rest of China was still struggling, Beijing declared on May 9th that its efforts to contain the outbreak appeared to be successful; the number of new reported daily cases had declined from 70-80 per day—a pre-May 2nd plateau—to 30-40 per day. Medical staff were also contracting the disease less frequently, dropping from a daily average of 15.8 percent to 6.3 in the same period ("Beijing hopeful of..." 2003). For the exchange students who had previously been told they would not be accepted into U.S. programs, slight relief came when the University of California at Berkeley rescinded part of their earlier ban and announced it would allow roughly eighty students from China, Hong Kong, and Taiwan to attend school over the summer (though the school still planned on barring over 500 others) ("Berkeley eases SARS..." 2003). China also announced that SARS would not delay the launch of its first manned space flight later in the year ("China: SARS won't..." 2003), and in a public statement covered by Yahoo! News, Russia's Vitaly Zverev, head of Moscow's Virus Research Institute, asserted that the SARS scare was overplayed, that Russia would not have an outbreak, and that "100 grammes of vodka" was the best cure ("Russian experts downplay..." 2003).

Good news also came from the medical front, as a laboratory study in Germany suggested that a modified version of an experimental drug designed originally to treat the common cold might be useful in blocking the SARS virus from reproducing. A similarity in protease enzymes between SARS and the rhinovirus the drug was intended to treat provided the link, though no studies had yet been conducted on the viability of such hypotheses (Recer 2003). The origin of SARS, however, was still very much a puzzle for researchers worldwide. As covered by MSNBC.com, a growing number of experts believed that it might have come from an animal, but had few leads on which animal might be to blame. Some said it might be a bird, drawing such conclusions from a 1997 outbreak of the flu in Hong Kong that was spread by poultry and resulted in the slaughtering of 1.4 million chickens in containment efforts. Other researchers eschewed the animal theory altogether and said that SARS might simply be a mutation of a previously-harmless human virus. Researchers had earlier hoped that the decoding of SARS' genetic makeup would help eliminate such concerns and point to a specific human or non-human origin, but the results proved inconclusive ("Origin of SARS..." 2003).

For Torontonians, probably the best news of all arrived on May 14th, when the WHO officially removed Ontario's capital from its list of areas with "recent local transmission," as twenty days had passed since the last reported case of SARS was isolated in Canada. According to the WHO, this meant that "the chain of transmission [was] considered broken," after 321 probable or suspected cases and twenty-four deaths ("WHO: SARS no longer..." 2003). Only a score of people in the country remained

active caseloads, and five of those were released from hospitals the day before this announcement, leaving only sixteen active cases in Canada (“Canada’s active SARS...” 2003; “Update #57 – Severe...” 2003).

In most of China, neither the news nor the mood seemed as optimistic. In Beijing, despite the successes reported earlier in containing SARS, MSNBC.com reported that the government found it necessary to crack down on rumors about the disease that were being spread by mobile phone messages. A new tracking system helped officials locate those who sent over 100 such rumors an hour—rumors which included that Beijing officials were ready to instate martial law, that crop dusters were spraying the city with disinfectants at night, and that smoking and drinking helped ward off SARS. This new tracking system quickly resulted in the detaining of a dozen people by city police (“China checks SARS...” 2003). At the same time, Yahoo! News covered the government of China’s increasing fight with the populace over widespread use of the occult to ward off the disease. The officially atheist communist government, which had attempted to rely heavily on science, found itself confronted with people who hired sorcerers, lit firecrackers, burned fake money, and practiced other such “magical” rituals to protect themselves. There were even rumors of a child born with the ability to speak who prophesied that “green bean soup” would prevent infection—a rumor that drove the sale of mung beans up sharply in large parts of the country (Ang 2003a).

In the midst of this panic, China’s Supreme Court, faced with the increasing problem of enforcing quarantines, threatened imprisonment for up to seven years for quarantine violators, and a possible death penalty for those who caused death or injury by

deliberately spreading the virus. The first arrest under these new laws came the day of the announcement, when a doctor in the northern city of Linha was charged with having previously violated quarantine, resulting in the infection of more than 100 people. The doctor's punishment was a maximum sentence of three years (Bodeen 2003a). These drastic measures drew immediate criticism from the U.S. and international human rights groups ("US criticised China..." 2003), and China's worldwide standing wasn't helped by a WHO declaration that China's doctors were still under-reporting SARS infections—a criticism that had been plaguing the country since early April (Ansfield and Peng 2003). Perhaps because of this, President Hu Jintao of China said in an interview the following day that "We are ready to further strengthen our cooperation with Russia and the whole international community in prevention and treatment of SARS," acknowledging that more financing, better research, and coordinated efforts would help in stopping the epidemic (Chuang 2003).

At the same time, there were increasing numbers of reports detailing a lack of concern in other areas of the world, or at least a perception that the SARS epidemic had been overblown. While large numbers of Asian exchange students were being denied entrance into U.S. universities, there were American exchange students in China who chose to stay and study, ignoring the calls of parents and educators who urged them to return home. There were also U.S. educators who were frustrated that their universities had cancelled planned research trips to China ("SARS impacting higher..." 2003). In mid-May, two U.S. doctors pointed out to a journalist that the West Nile virus had been more deadly, killing 284 people in the U.S. and Canada in 2002 (SARS, at this point, had

only claimed the lives of twenty-three people in Canada, and none in the U.S.). One of these doctors—Dr. Paul Epstein of the Harvard Medical School Center for Health and the Global Environment—said, “The attention focused in recent weeks on SARS is extraordinary and, it can be argued, excessive” (Fox 2003a).

Reactions such as these may be, at least in the U.S., somewhat understandable; the states had managed to avoid contamination for the most part, and had not seen a single fatality resulting from the epidemic. There was a serious concern among members of the Centers for Disease Control and Prevention over the capacities of U.S. hospitals to deal with a large-scale epidemic, should one occur, as hospitals lacked the necessary quantities of negative pressure rooms/infection control rooms to deal with widespread contamination, but even CDC members admitted that the current measures seemed to be working (“U.S. hospitals ready...” 2003). Public reactions to the disease were influenced in large part by media reports, and many news articles had headlines such as “So Far, U.S. Succeeds in Containing SARS” (Yee 2003a), and “CDC Doctor Suspected of SARS Recovering” (Yee 2003b), all of which painted a positive picture. Judging by the news articles collected during the last half of May, the United States had things under control; there was no need to worry.

Across the border, however, the virus once again reared its head. Canada’s recent thirty-day dearth of outbreaks, which had provided Ontario’s capital city relative freedom from WHO and CDC scrutiny, proved an unreliable measure of success: on May 23rd, Toronto health officials revealed that they were looking into twenty-five possible new cases. This new outbreak covered two hospitals—St. John’s and North York General—

and prompted the CDC to reissue their Toronto travel alert three days after lifting it. Of those infected, two of the North York patients had already died, and three of the St. John's patients were in critical condition. Microbiologists studying the new outbreak were not immediately clear how this new outbreak had spread, and assumed all vectors as potentially infectious: health care workers, family members, even other patients. Toronto officials issued a statement declaring that anyone who had passed through North York between April 22nd and May 13th, and St. John's Hospital since May 1st should commence self-monitoring and immediately call a Toronto Public Health hot line to identify themselves; it was expected that over 1,000 people met these criteria ("Toronto reports 25..." 2003).

Three days later the source of this new outbreak was revealed, taking the form of a ninety-six-year-old man who died on May 1st after two attacks of pneumonia. The man was not isolated from other patients at the time of his admittance because hospital staff did not associate his pneumonia with SARS; indeed, the association was made only after the second outbreak. At the same time, the WHO placed Toronto back on its list of SARS hotspots, having made the decision after eight more probable cases and three new deaths were revealed ("Toronto reveals SARS..." 2003). Toronto officials, investigating the matter, acknowledged that there could have been some thirty to forty cases that had gone undetected during the "dry" period between outbreaks (Huang 2003a).

The last week in May revealed a Toronto once again under worldwide scrutiny. Scarborough Hospital housed about twenty SARS patients, ten of whom were medical staff, while other members were under home quarantine. Hundreds of staff were under

working quarantine, and spent their days wearing N-95 masks—under orders to change them every four hours—and taking their temperatures twice daily, all while interacting with patients. Staff members were also advised not to sit close together in the nurses' lounge, and to keep a seat between themselves in the cafeteria (Gardner 2003).

At Toronto's Rouge Valley Centenary hospital, four patients died during the week, all suspected of being SARS-related (though autopsies hadn't yet revealed the cause). No sign of infection had been seen in urban or suburban areas, but many hospitals bore signs warning of SARS, and had their main doors taped shut, allowing entrance only through their emergency wards. The Canadian Federation of Nurses Unions moved its annual meeting to St. John's, Newfoundland, in response (Wroughton 2003). Province-wide, the number of probable cases rose dramatically: from twelve on Wednesday the 28th, to twenty-nine on Thursday, to forty-three on Friday, and to forty-six on Saturday. Over 150 additional people were being monitored closely as possible victims. Canada's thirtieth victim died on Thursday, and by this time in Toronto, more than 7,000 people had been quarantined, including 440 health care workers and 1,500 people associated with a high school. Still, Canadian Health Minister Ann McLellan reassured the public that "It is not getting worse.... This second cluster has probably peaked and we are on the way out of this" ("Canada fears new..." 2003). Only June would tell whether her predictions were accurate.

In most of Asia and the surrounding areas, the news was mixed. At roughly the same time the UK announced its first confirmed SARS case ("UK has first..." 2003), China reported that the disease had entered the countryside, where millions of people

lived in towns that were almost entirely unprepared and unequipped to fight an outbreak. The worst of it seemed to have been located “in Qingxu, 270 miles southwest of Beijing, where dozens have caught the disease and several have died.” Only twenty miles away in Taiyuan, there were an estimated 300 cases and fifteen deaths, though the provincial government only acknowledged 162 of the cases and seven of the deaths. More telling was a report from a governmental spokesperson who said that Shanxi hospitals needed 453 more respirators—on top of the eighty already existent (Pomfret 2003).

These reports came the day after the Chinese cabinet passed a \$2.56 billion fund to help the impoverished pay for treatment, to help modernize impoverished hospitals, and to support research. However, many people in Qingxu (and, it can be assumed, in other parts of China) doubted they would ever have access to that money: one local interviewee told a reporter from the *Washington Post* that “A peasant’s life in China has never been worth anything,” and referred to a general belief that local officials had stolen funds intended to alleviate poverty. Officials were so worried about such reactions and the spread of SARS that they began to ban migrant workers from returning home. But with 1.3 billion people, enforcing such a ban was almost impossible; there had already been reports of patients known to have SARS fleeing to their homes, preferring to die there than in the hospitals, which many believed were useless (Pomfret 2003).

Also alarming were reports from journalists that rural regions didn’t seem to understand the danger of SARS, and were not following governmental notices to disinfect public buildings. Even in hospitals, those with SARS-like symptoms were kept in waiting rooms with SARS-free patients until doctors were free to see them.

Government officers also seemed to misunderstand the importance of quarantine: in China, local officials were expected to visit party secretaries in hospitals, a tradition that may have led to the initial outbreak in Qingxu. Communist Party secretary Yue Shoubin contracted SARS in Beijing, was hospitalized in Qingxu, and was visited in the hospital by several members of a delegation, at least two of whom subsequently tested positive for SARS, and one of whom died (Pomfret 2003).

Despite their earlier agreement to be more open, China censored a CNN International report on May 15th, refusing to allow it to air because it “positions a negative coverage of China,” according to one official. The seven-minute segment criticized the government’s handling of the SARS crisis, pointed to inadequate health care systems, and accused the government of ordering doctors to underreport the number of SARS cases (FlorCruz 2003). Two days later, Beijing reported four new deaths and nineteen new cases, raising the nationwide total to 282 deaths and 5,219 cases. The WHO, however, warned that these numbers might be higher (“Key Developments With...” 2003).

Less than a week later, the WHO lifted the travel advisory on China’s Guangdong province, demonstrating that at least parts of China were making progress (though Beijing had reported twenty new cases per day for four days straight). The WHO’s actions came on the heels of a possible breakthrough in determining the origin of SARS, as covered by CNN.com: Hong Kong researchers said the virus might have come from civet cats, considered a delicacy by some Chinese (“WHO lifts HK...” 2003). By the end of the month, Yahoo! News was reporting that provincial officials in Guangzhou,

Guangdong had ordered sellers at markets to remove civet cats from their caged wares, as well as snakes, bats, badgers and pangolins, all of which had been identified as possible carriers of the SARS virus. Farms that raised exotic species were told to quarantine their livestock. Violators were threatened with fines of up to \$12,000. Such measures seemed effective; Guangdong province had not reported a single new case of SARS in a week. China as a whole showed signs of improving as well: on the last day of the month, only a single new case was reported, along with four deaths—all in Beijing. The number of new cases had thus dropped by over 90% since the beginning of May, prompting Beijing to cut from its list nine of the sixteen hospitals set aside exclusively to treat SARS. Though it was still too early to make definite conclusions, China appeared to be containing the outbreak (Bodeen 2003b).

May in Hong Kong, although nowhere near as worrisome as in China, still proved hectic. Five people died of SARS on May 17th, raising Hong Kong's total number of deaths to 243 ("Key Developments With..." 2003). The WHO lifted its travel advisory over the region on May 31st, though thirty more deaths had been registered since the 17th. In an odd turn of events, the virus proved a boon for businesses here: managers at restaurants reported that open-air dining patios were at capacity, and some restaurants had to hire additional staff to keep up with demand. According to one news article, this could be traced to locals seeking fresh air and open spaces, two commodities seen as healthful and lacking in the overcrowded cities. Locals seeking less crowded areas also mean that bike rental shops often rented out their entire stock, and park attendance surged

by 75%. At least one business that rented out plots of land for people to try their hands at organic farming said business was up by 700% (Wong, Margaret 2003a).

At the end of May in Hong Kong, the government passed laws designed to promote hygienic practices (and thus ward off SARS) among public housing tenants by punishing them for failing to keep their residences clean. Under these laws, which would come into effect in August of 2003, tenants would face eviction if they received sixteen penalty points in a two-year period. Point-inducing violations included drying clothes in public areas, spitting, littering, throwing objects out of windows, and keeping pets. The Hong Kong Society for the Prevention of Cruelty to Animals viewed the latter of these offences as dangerous—especially since having a pet warranted a five-point penalty—and warned that such laws might lead to a surge in animal abandonment (“HK government defends...” 2003).

Singapore appeared to be one of the bright spots, largely thanks to some of the strictest anti-SARS measures in the world. At the end of April, Singapore had the world’s fourth-highest death rate, with twenty-eight confirmed mortalities. But by the middle of May, the country had gone over two weeks without reporting a new case, and government officials were hopeful the city would be declared SARS-free by the WHO. Such a turnaround came thanks to the quarantining of over 3,000 people, temporary school closures, barring visitors at hospitals, and checking people’s temperatures at borders. Complications arose when twenty-seven people, including three nurses, at the country’s largest mental hospital were isolated with SARS-like symptoms on May 14th (“Fresh SARS outbreaks...” 2003). Three days later, however, there were still no

confirmed cases; the outbreak seemed to have been a false positive (“Key Developments With...” 2003). Then, one day shy of the “twenty days free of new cases” mark set by the WHO to qualify a country as free of SARS, a single Malaysian man was positively diagnosed. Officials were disappointed, but still positive about the development; one case in twenty days was considerably better than the large number of deaths reported in April. “Singapore should take this in its stride,” said Health Minister Lim Hng Kiang (Chuang 2003).

The last two weeks of May did not prove as benevolent in Taiwan. Ranked the second-highest country in the world in terms of number of new cases reported on a daily basis, Taiwan faced increasing criticism over the way authorities were handling the SARS crisis. These complaints concerned “disorganization, lack of effective crisis management planning and political bickering,” and eventually led to Health Minister Twu Shiing-er resigning his position. By mid-month, 274 people had tested positive for SARS in Taiwan, and dozens of new cases were reported daily. Hundreds of doctors and patients in two hospitals in and around Taipei were quarantined, and a hospital in the southern city of Kaohsiung might, by itself, have had dozens of cases, though officers said they couldn’t be sure until the end of a ten-day incubation period. Sources close to the Taiwanese government told reporters that the battle was at a crossroads: “unless officials move quickly to contain the outbreak in hospitals and do a more effective job of tracing contacts of suspected patients, the epidemic risks taking a further turn for the worse, with potentially serious consequences for the country’s health-care system” (“Taiwan health chief...” 2003).

Only four days later, Taiwan became the country with the fastest-growing caseload of SARS patients in the world. On May 20th alone, thirty-nine new cases were reported, and twelve new deaths, the latter bringing the island's toll to fifty-two. This marked the third day in a row where the number of reported cases had set a record. Taiwan was still third on the list of worst-hit countries (following China and Hong Kong), but was the only country where the number of daily cases was still rising ("SARS tally soaring..." 2003). Over the next two days, eight deaths and 120 new cases were reported, but there were 991 suspected cases that had yet to be conclusively diagnosed. Members of U.S. teams assessing Taiwanese SARS control procedures weren't even safe; one man, despite following all recommended precautions, was transferred to the U.S. via air ambulance after developing SARS-like symptoms ("Taiwan SARS crisis..." 2003).

Despite the direness of the situation, Taiwan rejected an offer from China to help control the outbreak, claiming that everything was under control. The rejection came on the same day as health officers announced twenty-two new cases and twelve fatalities, bringing the island's death toll to seventy-two. By comparison, on the same day, China announced seven deaths and sixteen new cases. In its official rejection, Taiwan criticized China for interfering with international attempts to help, as well as blocking Taiwan from becoming a member of the WHO (Huang 2003b). The cases that Taiwan did announce did not include several hospital patients who had not passed the ten-day incubation period, raising the possibility of dozens of new cases ("New SARS deaths..." 2003). The last article in May, dated Monday, May 26th, announced no deaths, but fifteen new cases,

and Taipei's health bureau chief Chiou Shu-ti's resigning over a major outbreak in a city hospital. Shu-ti's departure marked the third official to resign over SARS ("Canada, Taiwan wrestle..." 2003). It did appear, however, that a turning point had passed; the number of cases per day was dropping.

Taiwan was not the only entity negatively affected. Businesses all over the world reported losses, and none worse than the airline industry. Thomas Andrew Drysdale, regional director for the International Air Transport Association, called the situation "A crisis of major proportions," and stated that 9/11, the Iraq war, and Britain's foot-and-mouth-disease combined hadn't done as much damage to the airline industry. Estimated worldwide losses topped \$10 billion, and SARS had only been on the global scene for nine weeks ("Airlines: SARS worse..." 2003). Northwest Airlines alone reported losses of \$1.6 billion between January 1st and May 31st, and had to furlough 1,093 pilots and cut 17,000 other jobs. Just to maintain profitability, the airline was also seeking over \$1 billion in wage, work rule, and benefit concessions from the remaining workers ("SARS triggers more..." 2003).

Airlines were not the only businesses to suffer. Worldwide, tourism was down, and business travel was stymied as workers avoided meetings. A survey of 2,015 Japanese companies that conducted business in Asia revealed that roughly 70% reported financial damage. The largest numbers came from China, where 86% of Japanese businesses had been affected, including the temporary closing of two plants after five workers were diagnosed with SARS. In other areas of Asia, 85% of Japanese businesses

in Hong Kong reported damages, with 84% in Singapore, 39% in Indonesia, and 38% in Thailand making similar claims ("Japan Businesses Report..." 2003).

Internet business, however, was booming, as consumers relied more on methods of shopping that avoided crowded marketplaces. As covered by CNN.com, in China, "Internet sales had risen as much as 60 percent at firms pitching joke books, antiseptic cleaners or DVDs to keep the housebound clean and entertained during the virus-induced panic" ("SARS driving shoppers..." 2003). One store, which in 2002 sold roughly 100 million yuan worth of goods (about \$12 million U.S.), reported daily sales of 500,000 yuan in April and May, or roughly an 182.5% increase in sales. Another business reported April sales doubling from 2002, and expected May sales to triple ("SARS driving shoppers..." 2003).

For the medical community, the last half of May brought breakthroughs in discoveries of viral transmission vectors and origins. Though there were already reports that SARS might prove a reoccurring disease with seasonal patterns, cropping up during flu seasons over the next few years (Miles 2003; Ross 2003), researchers were still hopeful that the virus could be understood and eradicated. By mid-May, some researchers were already focusing on the animal markets in Guangdong Province, theorizing that the virus might have animal origins. Other researchers pointed out the similarities between human air travel and hauling animals long distances in cattle cars; under such conditions, animals often contract "shipping fever," characterized by cough, pneumonia, and mucosal drip, all caused by a coronavirus. Perhaps, these researchers said, we are creating the perfect situation for viral spread: "When animals arrive from other locations

and commingle, you see disease outbreaks,” remarked Linda Saif, professor of food animal health at Ohio State University (Fox 2003b). And there were theories that were seen by most of the virology community as ridiculous, such as the CNN.com report of a British scientist claiming the SARS virus may have outer space origins (Compton 2003). However, these theories could not be entirely ruled out because there was no hard evidence either way.

Such evidence arrived on May 24th, when researchers in Hong Kong announced they had found evidence of the SARS virus in three small mammals, one of which was the civet cat. It was still too early at this point to determine whether the animals gave the virus to humans or caught it from them (though one of the study’s leaders, microbiologist Yuen Kwok-yung, strongly believed it was the former). But WHO expert Dr. Francois Meslin still declared the findings “quite exciting” (“Cat delicacy could...” 2003). Further evidence was added when SARS antibodies were found in five traders of wild animals who had not developed symptoms of the disease, meaning 1) they contracted the disease some time ago, and 2) the virus appeared to have mutated into a more lethal form since the traders caught it (based on genetic studies) (“SARS antibodies found...” 2003). By May 28th, researchers in Hong Kong openly declared that the virus jumped from animals to humans because of these antibodies. Their findings “indicate workers caught the virus from the animals, developed a mild form of the disease, but then the virus mutated into a more virulent form before it was passed to other people,” according to Shenzhen microbiologist He Jianfan (“Evidence SARS...” 2003).

Thus, by May's end, though a vaccine was still a long way off, significant discoveries had enlightened many of the mysteries surrounding SARS. In addition, according to the numbers of new cases reported daily, humans appeared to be containing the epidemic. May certainly ended better than it began.

In *The Lancet*, the last three editions published in May had sixteen SARS-related articles between them, including several research letters, editorials, and commentaries. Once again, all of these articles were clinical in nature. The only glimpse of a piece that might look at the non-medical world's impressions of the disease came in the form of an article titled "SARS, Lay Epidemiology, and Fear," published in the May 17th edition. The article even began promisingly, summarizing the increase in stress and fear in a German hospital's outpatient department, which was said to be due to a graph published in a local newspaper. In this newspaper, a journalist had attempted to lay down an exponential curve on the outbreak, predicting an increasing surge in case numbers over the next few months. However, the remainder of "SARS, Lay Epidemiology, and Fear" was an academic discussion of the failure of the journalist to understand disease prediction methods, including examples of the difference between exponential and linear graphs, and the failure of graphs to take into account basic prevention and intervention measures (Razum et al., 2003).

The *British Medical Journal* has not been mentioned for some time in this timeline. Recall that the last issue published in April of 2003 contained no less than seven pieces on SARS, all of which opened the sections in which they were published. Such proliferation proved almost a last-gasp effort, as the numbers of pieces that appeared

subsequently dropped off greatly. There were only twelve SARS-related pieces in the five issues of *BMJ* that were published in May: nine news articles, two reviews, and one short blurb that appeared in the journal's "Filler" section. Few of these twelve pieces offered any key insights into SARS. Even the May 3rd edition of the journal, published only a week after the SARS-heavy edition of late April, contained only news articles about the outbreak: one noting that SARS may have peaked in Canada, Hong Kong, and Vietnam (Parry 2003e), one covering Canada's assurance that it was a safe place to visit (Spurgeon 2003b), and the last covering UK Health Secretary Alan Milburn's warning that SARS could still affect the UK (Eaton 2003). None of these articles mentioned rumors, legends, or gossip. Only two weeks later, the May 17th edition of the *BMJ* contained only one news article and one "Review," (actually a short, personal account of life in China by a senior lecturer in international health at the Institute of Child Health in London, England; see Hesketh 2003), and both of these pieces were located in the bottom two entries in their categories. The news that the UK had its first case of SARS (Parry 2003f) did appear as the second news story in the May 24th edition, but another news piece in the same edition—this one about Chinese scientists testing wild animals to find the host of SARS (Gottlieb 2003)—was almost the last entry. And the final May edition of the *BMJ* only had one SARS-related entry: a news story that detailed the resurgence of the virus in Toronto (Spurgeon 2003c).

June brought a breath of fresh air to many countries, as worldwide the SARS epidemic was in decline. Taiwan, after becoming the only country in the world with growing caseloads, successfully adopted quarantine and monitoring policies and brought

its numbers down drastically. One of the more stringent measures adopted made news on June 1, when Taiwan instituted a nationwide ten-day temperature check policy. Families everywhere—80% of which had thermometers, and nearly as many were willing to cooperate, according to surveys—were asked to monitor themselves daily and report anomalies. For those few who didn't have thermometers, there were 6,000 designated community pharmacies that would provide the service. Only four people were diagnosed with SARS on the first day of the month—demonstrating that the virus was already in decline—and the numbers went down from there (“Taiwan launches national...” 2003).

By the middle of the month, the WHO lifted the travel advisory against Taiwan. The UN health body commended Taiwan for its recent proactive stance, a large difference from the widespread condemnation of Taiwanese infection control systems that were handed down some five weeks earlier (“WHO lifts Taiwan...” 2003). Lastly, and almost a coda to Taiwan's struggle with SARS, on the 18th of June two Taipei doctors were charged with “covering up SARS cases that allowed the deadly virus to spread through a Taipei hospital, leading to the island's first and worst outbreak” (“Taiwan Doctors Charged...” 2003). Prosecutors sought an eight-year sentence for both Wu Kang-wen, former superintendent of the Taipei Municipal Ho Ping Hospital, and Lin Jung-ti, the same hospital's head of infectious diseases. According to Taipei District Court prosecutor Chen Hon-da, “The investigation shows the defendants neglected their duties and failed to take necessary infection control measures, causing the deaths of several medical workers and allowing the epidemic to spread” (“Taiwan Doctors Charged...” 2003).

Wednesday, June 18th also marked the third day in a row Taiwan had not reported any new SARS infections. There would be three more cases and one more death before Taiwan was given the all-clear on July 5th, but for now the tally stood at 697 infected and eighty-three dead, making the island the third-worst hit area behind mainland China and Hong Kong (“Taiwan Doctors Charged...” 2003).

In Hong Kong, June began ominously, with three new infections and three new deaths reported on the first day of the month. One of the fatalities was a female ward attendant who was involved in treating some of the city’s first victims. These new numbers brought Hong Kong’s total to 281 deaths from 1,743 cases. 1,318 of those patients had been released from the hospital, leaving eighty-three still in treatment, and twenty-seven of those in intensive care (“Hong Kong reports...” 2003).

Over the next nineteen days, fifteen people perished. There were also twelve new cases reported, but all of those came on the second day of the month, meaning that by June 20th, Hong Kong was only days away from receiving the WHO’s twenty-day “all clear” stamp of approval. June 20th was also the day Hong Kong and Chinese health officials met to discuss a system wherein the former would receive prompt health reports from the mainland, hopefully thus avoiding future epidemics (“HK, China Discuss...” 2003).

On Monday, June 23rd, the WHO removed Hong Kong from its list of SARS-infected areas. At the same time, the WHO warned Hong Kong’s health officials of the possible reoccurrences of SARS if guards were let down too early, drawing a direct comparison to Toronto’s resurgence of disease (Wong, Margaret 2003b). All that

remained now was for the region to revamp and re-stimulate its damaged economy. According to MSNBC.com, Hong Kong's unemployment levels had recently reached a record 8.3 percent, and businesses all over the city were feeling the impact of the diminished tourism industry. To combat the fear still present among locals and tourists, Hong Kong's government installed dispensers filled with antibacterial sprays in government buildings and busy areas, and carted in high-tech temperature scanning devices to major areas of activity such as jewelry trade fairs, airports, and border crossings (Allen 2003). It took time, but Hong Kong did recover.

China, once the most-infected nation in the world, ended May with an entire week of single-digit reports of SARS cases, and began June by going twenty-four hours without a new case—the first day since April 20th it had been able to do so. No one died during the period either, and so China's figures remained at 5,328 infected and 332 dead. Life returned to normal as well, with Yahoo! News reports confirming regular traffic jams and a distinct lack of face masks on buses and in crowded areas (“No China SARS...” 2003).

In mid-June, while not officially removing China from the list of SARS-infected countries, WHO members said that China appeared to have SARS under control. This did not mean that there had been no reported cases since the first of the month; indeed, there was one reported case the day before the WHO statement surfaced, and roughly one person had died every day in China from SARS since the beginning of the month. The WHO statement in this case was based on data that suggested that China was no longer exporting SARS; its borders had been made impermeable to the disease. The WHO did

state that there was still much work to be done in China, however. There were still many questions as to the disease's origin, and contagion vectors—that is, who gave the virus to whom—were murkier in China than almost anywhere else. Some 70% of patients diagnosed with SARS in Beijing since May 1st did not know from whom they had contracted the virus (“SARS under control...” 2003).

What didn't appear to need work was controlling the apparent source of the virus: the wild game markets and concomitant businesses. Wild game restaurants in Shenzhen, south China, had been virtually empty for two weeks, some of them despite entirely new menus that did not feature their standard exotic fare. The markets themselves had faced similar fortunes: Xinyuan, Guangzhou's largest wild game market, was now composed of empty cages, and not of eager buyers, a scene that pleased those who monitored and attempted to halt wildlife trade (Young 2003a).

A scene that pleased the WHO was that of Singapore, which was removed from the list of SARS-affected countries on the last day of May. Singapore had only 206 cases and thirty-one deaths before controlling the outbreak, and June was mostly given over to planning contingencies for future outbreaks. Singapore was especially proactive in attempting to stymie future reoccurrences of SARS, and planned on implementing mandatory temperature checks for workers at shipyards, factories, and construction sites in mid-June, as well as revamping health forms to include recent travel itineraries, possible contact with SARS-infected people, and current health states. Providing false information on such forms could result in fines of up to \$5,797 and six months' jail time (“Singapore May Jail...” 2003).

So successful were the attempts in Asia to control the epidemic that on June 12th the WHO stated that SARS might be coming to an end. Worldwide, only seven new cases were reported on June 11th, and though there were still a few places in the world where the disease remained uncontrolled, the general consensus was that the end was near (Grauwels 2003).

June's successes, however, were not equal for every area of the world. While Asia seemed to have its problems mostly under wraps, Toronto was still in the middle of its second resurgence of disease. On the first day of the month, fifteen people had suspected cases of SARS, bringing the number of second-resurgence probable cases to forty-six, and 150 others were closely monitored as possible victims ("Canada waits for..." 2003). By Monday, the number of active cases jumped to fifty-two, and the death toll rose by one. The number of people in quarantine did drop by 2,000 people, bringing that total down to 5,300, but Ontario's public health commissioner, Dr. Colin D'Cunha, still said that the province was in a state of "hypervigilance," and earlier had acknowledged that at least some of those quarantined had violated their isolation orders ("Another SARS death..." 2003).

These problems with quarantine violators continued, bringing constant threat of public exposure to the virus. Ontario health minister Tony Clement became so frustrated that at one point in early June he threatened to chain people to their beds if they didn't follow their isolation orders. He wasn't serious, but his concerns highlighted the problems Toronto was facing in controlling the outbreak, and new laws did provide for fines of up to \$3,650 for violators. By the 10th of June the number of active cases had

risen to over sixty, and some 6,800 people—an additional 1,500 since the first of the month—were in quarantine. These figures did not, however, include the 5,000 health care employees under working quarantine who were required to wear masks, gowns, and gloves in public, and remain isolated during off-hours (“Penalize quarantine violators” 2003).

Almost unbelievably, the Ontario Ministry of Health had to issue a warning to Toronto hospitals in early June reminding them to comply with provincial anti-SARS directives. Officials in the Ministry had received reports from nurses at Mount Sinai Hospital complaining that they had been ordered not to comply with directives that required them to wear masks, gowns, and gloves—contradictions that meant the possible exposure to and quarantining of infants, new mothers, and one hundred health-care employees. At North York General Hospital, nurses complained that their concerns about SARS re-emerging had been largely ignored by senior staff, and a nursing association official additionally reported that staff had been ordered to tell callers that facilities were SARS-free, even if said staff believed otherwise (“Editorial: Eves needs...” 2003).

More bad news arrived on the 10th of June when provincial officials reported that they had been investigating a new possible SARS cluster in Whitby, Ontario, located roughly fifty kilometers east of Toronto. If positive, this would have been the third cluster in Ontario (the first two being the primary and secondary Toronto outbreaks). This new group of suspected SARS victims consisted of fifteen people who were at the Lakeridge Health Corporation dialysis unit, all of whom had developed fevers and respiratory problems. Adding to the severity of this news was the report that a North Carolina man

had developed SARS-like symptoms after visiting a Toronto hospital in mid-May, making this the first possible case of SARS being exported from Canada. All total, Canada now had seventy-five active SARS cases, sixty-six of which were probable, and another 260 under observation (“Health officials concerned...” 2003).

Over the next few days, the investigation into the Whitby cluster continued, and officials discovered that, for at least a few of the cases, SARS was not the infecting agent. By late Wednesday, June 11th, eight of the fifteen suspects were cleared. Good news also came from investigations into the North Carolina SARS victim: though the man was confirmed as SARS-positive, doctors were able to trace his infector to a known case. This eased fears that the man might have contracted the virus from a previously unknown victim (Sekhri 2003).

It also appeared that Toronto was gaining control of the second outbreak. The number of cases declined daily, Toronto reporting only thirty-seven probable cases on June 17th—down from sixty-four a week earlier. Thirty-six of those active cases were hospitalized patients, eighteen of whom were in critical condition. June 17th also brought about the SARS-related death of a sixty-seven-year-old man from the Toronto area, which marked the first SARS death in Canada in ten days. The toll now stood at thirty-four (Hodgson 2003). By the 22nd of June, another four people had died, but the number of cases continued to decline: only twenty-eight active cases remained (“SARS kills two...” 2003). Only one more person perished by month’s end, but cases were so few—and no new cases had been reported in long enough—that the WHO removed Toronto from its list of SARS-infected areas on July 2nd (“WHO gives Toronto...” 2003). Only

Taiwan remained on the list at this point, and as stated earlier, it was cleared three days later. The epidemic was contained.

It should come as no surprise, then, that few articles about SARS appeared in the *British Medical Journal* in June, and July brought only a single entry: a news story in the July 12th edition covering the WHO's announcement that SARS was over (Fleck 2003). There was one major discrepancy to these statements: the June 21st edition of the *BMJ* was SARS-themed, the cover sporting magnified photographs of the virus and bearing the heading, "SARS: understanding the coronavirus." The journal carried only a single news article relating to the disease (evidence that the outbreak was waning), but it did bear two peer-reviewed papers, nine "Letters," and two reviews. The papers and "Letters" were all clinical in nature and tone, discussing the positive and negative strategies adopted by various organizations in dealing with the outbreak, and lessons that could be applied to future diseases in light of what had been learned on a global level in dealing with SARS. This SARS-themed *BMJ*, however, seems out of place when looked at in the context of the surrounding editions, few of which mentioned the disease (in fact, only one out of the next five issues referenced it: the aforementioned July 12th news entry).

The Lancet did continue to print SARS-related articles throughout June and July, though in increasingly smaller numbers. The first two issues in June had four articles each (though two of these eight articles were "News In Brief" blurbs). But the last two issues only had three articles between them, and one of those merely mentioned SARS in the context of a recent series of attacks on the WHO's health system performance since

2000 (Brundtland, Frenk, and Murray 2003). July's first two issues seemed to revamp interest in SARS, with five articles written directly on the disease, one "News In Brief" blurb, and two other articles that mentioned SARS (though it was not the focus of those articles). But the third issue of the month lacked even a single article on the subject, and while the last issue in July did have two articles, one was a full-length, peer-reviewed research paper confirming the coronavirus as the source of the outbreak—information that was old news by this point, but had not been published earlier due to the considerable legwork involved in creating a research paper. Aside from the news blurbs, every article that focused on SARS during June and July was scientific in nature, summarizing the various attempts that had been made to unravel the virus's genome, or prevent it from spreading via various biochemical efforts, etc. Once again, none of these articles mentioned rumor or legend, and few of them—including the news briefs—gave more than the most cursory summarization of the outbreak.

The effects of SARS were felt for months, in areas and countries all over the world. Even businesses thousands of miles away from the outbreak's epicenter suffered losses, such as Finland's Nokia, which forecasted that 2003's second-quarter sales could be weaker than expected due in part to SARS ("Nokia sinks on..." 2003). In Nokia's case, such low sales were directly related to cell phone sales dropping by 20-30% in Hong Kong and parts of China, but company representatives were confident in a strong third quarter with the worldwide decline in cases ("SARS hits Nokia..." 2003). Texas Instruments suffered similarly, as its stock shares plummeted almost 10% after it reported troubles selling stockpiled wireless semiconductors in Asian markets. Motorola also

reported problems moving wares in Asia, noting that cell phone and semiconductor sales were at new lows ("Global tech giants..." 2003). In Singapore, consumer prices as a whole fell .7 percent in June, despite retailers offering massive sales to lure customers ("Singapore prices fall..." 2003).

In Canada, the \$52-billion-dollar tourism industry was heavily shaken by the WHO's travel advisories against Toronto. But Toronto was not the only city affected, nor was Ontario the only province to suffer. PEI, New Brunswick, Manitoba, Alberta, and British Columbia also saw a decline in tourism, and hotels, restaurants, and tourist attractions in all five provinces showed lower profits. Even the Formula One race in Montreal—an event that normally filled all 20,000 of Montreal's hotel rooms with fans—wasn't able to draw its regular crowd. Altogether, Canadian Tourism Commission spokeswoman Isabelle Des Chenes estimated nationwide losses at \$300-500 million over the short term, with larger losses probable over the next year ("Canadian tourist industry..." 2003).

Air Canada might have been able to claim the largest Canadian losses from the epidemic, and was definitely the hardest-hit airline in the world. Air Canada filed for bankruptcy protection in April after reporting \$150 million in losses due to flight cancellations, and May brought a further \$200 million drop in gross receipts, with similar losses expected for June. Summer bookings were also weak, leading many to believe that the losses might continue to come for some months ("SARS fears continue..." 2003).

June did, however, look bright for further research on the origins and developments of SARS. Chinese animals were already strongly suspected as having

passed the virus to humans, and in mid-June Yahoo! News covered the WHO's launching of a new series of studies designed to test the connection between SARS and other animal species. The civet cat was already strongly suspected as being the antagonist in the equation ("WHO to conduct..." 2003). The same day also brought an announcement from Chinese researchers that a potential test for SARS, using antibodies to diagnose the virus, had been created. Until this point, doctors had been forced to rely on signs of the disease, such as high white blood cell counts and damaged lungs—signs which could be misleading (Young 2003b).

Mid-June also marked a two-day gathering of health officials from around the world to discuss how to deal with future viral epidemics. Much had been learned from SARS in terms of controlling outbreaks, but delegates were quick to point out that things could have gone better: Shigeru Omi, director for the WHO in the Western Pacific Region, said, "The SARS epidemic is now coming under control but the fight is by no means over. SARS is not defeated, other new diseases will threaten us in the future, we must be better prepared next time" ("Health officials ponder..." 2003). The success of this gathering was mixed, as the 1,000-plus attendees left with few new ideas on the origin of the virus or how it should be eradicated (Krishnan 2003).

What did come of the studies taking place around the world were warnings that future outbreaks of SARS might be entirely possible, some perhaps as early as a few months away. Some theories suggested that there might be a large reservoir of SARS viruses in China's animal population that could cross over into the human population at any given time. Other theories said that the disease was now so widespread that it might

be impossible to entirely contain, and that it might spring up again during flu seasons, such as wintertime. Many people also pointed to the recent increases in global trade of animals and plants, and the cross-contamination that occurs from species unintentionally let loose in foreign countries as problematic (Chinoy 2003; Lodge 2003).

Whether or not such theories were valid, what was clear was that SARS had changed the way the world thought about disease. One example of this lay in attempts to network thousands of personal computers around the world to form a massive supercomputer that could be put to the task of crunching drug molecules. Under such a volunteer-based program, the computers in people's homes and offices could, during spare cycles, be downloaded with software that would allow them to look for drug molecules that would bind with disease-associated proteins—in essence, to look for vaccines and cures. Such networking was projected to cut the time needed to find promising drugs from 1.5 years to a few months (Buckler 2003).

This reconceptualization of disease was widespread. In Singapore, a popular television character named Phua Chu Kang released, with the support of the Health Ministry, an anti-SARS rap CD. The lyrics encouraged locals to maintain good hygiene to stop the spread of viral agents through phrases such as “SARS is the virus that I just want to minus” and “Don't ‘kak-pui’ [spit] all over the place, you might as well ‘kak-pui’ on my face” (“Singapore's hip-hop...” 2003). Rarely, if ever, had governments utilized such methods to spread knowledge. The CD was released just after a series of crackdowns on public spitting, which had long been a fineable offence in Singapore—

one CNN.com news story detailed a man who was fined \$290 for spitting in a shopping district (Szep 2003a).

Public efforts to increase awareness and hygiene hadn't just stopped at spitting. In Singapore, workers at food stalls and construction sites were given twice-daily temperature readings, as were staff at more than one hundred of the city's hotels. Widespread public leaflets encouraged people to wash their hands. The government also launched a "Happy Toilet" program which gave starred ratings to all public toilets, informing people of those facilities that did not meet cleanliness standards. And earlier in June, in a move that brought mass criticism, health officials began culling the city's 80,000-plus stray cats in response to China's civet cat-SARS link studies (Szep 2003a).

On July 5th, the WHO declared the global SARS outbreak over after removing Taiwan from its list. WHO Director General Gro Harlem Brundtland was quick to remind people, however, that the virus could undergo resurgence just as quickly if people were not careful; there were still some 200 SARS patients in hospitals around the world, any one of whom could infect a visitor or staff member ("WHO: Global..." 2003). These warnings were underscored by a health scare in Taiwan later that month when a twelve-year-old girl returned from a trip to China complaining of SARS-like symptoms. She was quickly ruled out as carrying the virus, but not before twenty people were sent into precautionary quarantine ("Taiwanese girl ruled..." 2003).

Worldwide, SARS had killed 812 people, though a few more would perish before the dust finally settled. Toronto claimed another fatality on July 14th, for example, when a seventy-six-year-old woman succumbed ("Toronto SARS Death..." 2003). But the road

to recovery seemed clear, and even more likely as Roche Holding AG, the world's biggest diagnostic firm, developed a long-sought-after test for SARS in mid-July (Shields 2003). Fast-forward a month, and articles were already bearing headlines such as "The vanished virus," a piece in *The Guardian* that came out the same day that China released its last two SARS patients from the hospital ("The vanished virus" 2003). Warnings about viral resurgence still abounded, but for many, life had already returned to normal.

Despite these warnings, there were no new SARS cases for the rest of 2003. The one case that initially appeared to be an exception to this was announced in Singapore on September 9th ("Timeline: Sars [sic] virus" 2003). The case involved a postdoctoral student who worked as a laboratory technician on the West Nile virus. Reaction to this possible new infection was immediate, but WHO officials were initially unsure of not only how the man contracted the virus—since his work did not include contact with SARS—but whether he actually had the disease, as his symptoms did not include lung infections or respiratory problems ("Q&A: Sars [sic]" 2003). Health officials in Singapore confirmed the case as SARS-related, but simultaneously stated their uncertainty about whether this new case signalled a return of SARS, or whether it was merely an isolated incident resulting from a laboratory accident (Szep 2003b).

Because of these uncertainties and the lack of classic symptoms, the WHO declared their refusal to classify the man's illness as SARS. Instead of reassuring the public, this action in some ways only served to increase tension, drawing worldwide attention towards the difficulties of diagnosing the disease. Singapore stood behind their positive diagnosis, citing the two rounds of polymerase chain reaction and serology tests

conducted on the patient. The WHO, countering such claims, pointed to the small margin of error endemic to such tests. Singapore's minister of state for health added to the muddle by showing studies that demonstrated that five percent of SARS patients during the last outbreak developed a fever, but did not go on to develop the disease (Szep 2003b).

A local investigation into the two laboratories in which the postdoctoral student worked revealed that one of them did, indeed, also conduct research on SARS, and thus it was possible that the student had come into contact with the virus. Logs showed that the student visited this lab three days before becoming ill. Both labs were closed in response, and forty-one people were quarantined. The WHO, however, still maintained its position and declared the case "not an international public health concern," saying travel to Singapore was safe (Szep 2003c). Their position seemed validated the next day when the student continued to recover from his illness. He had no fever for five days, and the hospital slated him to be released within a few days—a rapid recovery that only further confirmed the WHO's suspicions that the man did not have full-blown SARS (Szep 2003d).

In response to the case—and despite the WHO's declarations—a team of international experts was sent to Singapore on September 15th to investigate the matter. The team consisted of an eleven-member panel chaired by a WHO biosafety expert, but also contained members of the U.S. Centers for Disease Control and Prevention ("Singapore, Foreign Experts..." 2003). The results of their study, released a week later, stated the case the result of a lab accident and verified that the student contracted the

virus while on the job. Genome sequencing confirmed the similarities between the lab sample and the strain that infected the researcher. The student himself had fully recovered by this point and had been discharged from the hospital, but the lab where he contracted the disease was shut down, and the SARS virus samples contained therein ordered destroyed (Wong, Jacqueline 2003).

The study also pointed to a few troubling details. The accident that caused the student's infection was the result of cross-contamination between West Nile and SARS viral samples, indicating inappropriate procedures in handling samples. Antony Della-Porta, the WHO biosafety expert, stated that "It's obvious the labs put in enormous effort and did a fantastic job during the SARS outbreak, but it led to some inconsistencies where labs were not really prepared to handle organisms at that level," and recommended stricter guidelines for lab researchers (Wong, Jacqueline 2003).

At roughly the same time that Singapore was dealing with these problems, Hong Kong's Chinese University announced it would be financing a top-level SARS laboratory, designed to be fully mobile and available for use within a few months. Such a lab would hopefully make dealing with future outbreaks far easier, and the planned level-three status (the highest international safety grade) would prevent such occurrences as Singapore's leak ("Hong Kong university..." 2003). Additional safety measures taken by Hong Kong as a whole included an alert system and increased numbers of staff at border checkpoints to screen travelers, in addition to building a center for disease control to "speed up laboratory tests, strengthen contact tracing and disease investigations," all of which was planned to be built by year's end. Hospitals were also taking precautionary

measures against future outbreaks, making sure there were at least 300 rooms with isolation facilities and an extra 1,290 beds (Luk 2003).

But perhaps the best news to come from Hong Kong arrived on September 25th, when CNN.com covered the announcement that the HIV drug Kaletra, when used in combination with ribavirin, had been shown to significantly reduce mortality rates among SARS victims. Hong Kong hospitals immediately announced that all future SARS patients would be treated with this cocktail for this reason, as well as the drug combination reducing the need for steroid use. These announcements came on the tail of a series of criticisms of Hong Kong's earlier methods of treatment, which centered around a cocktail of steroids and ribavirin—not including Kaletra—which many experts deemed ineffective ("Hong Kong to use..." 2003). The new drug combination seemed to silence critics.

Such a development was no doubt welcome after continued reports that SARS would likely resurface in future months (Walsh 2003). The WHO only added fuel to the fire by announcing that many SARS-like diseases were likely to crop up in the next century, and that mankind needed to prepare for them (Kataria 2003). As if proving this statement true, Hong Kong had a small scare in the last few days of the month when seven men were quarantined after developing high fevers and upper-respiratory-tract infections. Though all seven were soon cleared—their symptoms were not SARS-related—the incident did underline the possibility of a real situation (Sisci 2003).

One of the immediately noticeable themes in post-SARS media reports concerned the assignation of fault and blame. One example of this came from Canada, whose nurses

declared Ontario unprepared to deal with a future outbreak due to lack of governmental direction (“Nurses Say Toronto...” 2003). Such finger-pointing was not isolated to North America. A report released in early October, 2003, chided Hong Kong for “significant shortcomings” in the early phases of SARS, implying that had Hong Kong’s airports been better controlled, the virus might not have escaped as it did to more than thirty nations worldwide. Hong Kong residents specifically criticized their government and Chief Executive Tung Chee-hwa for their slow responses, but the report—put together by “an outside panel of experts”—avoided giving specific names, listing instead Hong Kong’s “poor links between the health department and private and public hospitals, ineffective chains of command, a lack of contingency plans, poor infection control in hospitals and staff that were not properly trained,” while at the same time recognizing that China’s secrecy concerning the virus played a large part in these shortcomings (Bray 2003; “SARS report faults...” 2003).

Other reports faulted the treatments given to patients. By the second week in October—barely three months after the WHO declared the outbreak contained—dozens of former SARS patients in Hong Kong and China were found to be suffering from avascular necrosis, a form of bone degeneration caused by the ribavirin/steroid cocktail administered to all infected victims (Lyn 2003b).

Still other reports pointed to China’s animal trade market. Banned in May by the Chinese government after reports that the SARS virus may have come from wild animals, the markets and concomitant animal trade industry were legalized again in August after Chinese experts failed to verify the animal-origin theory. In post-SARS China, the

markets were as large as ever. Even the civet cat, which was almost singled out as the source of the virus earlier in the year, reappeared on restaurant menus in Guangdong (though restaurant managers reported that requests for the delicacy had decreased greatly). Such regression led many outsiders to fear that the virus could make the cross-species jump again ("Bloody Animal Trade..." 2003; Lynch 2003).

A second common theme found in media reports was one of hope, specifically as it related to medical advances. This theme was not new to the post-SARS period, however; it began weeks earlier with the preliminary studies on the origins of SARS. October of 2003 merely continued the trend, though reports were even more positive now than in earlier months. Singapore, for example, announced in early October that it was developing an electronic chip that, using sputum or nasal fluid, could tell almost instantly whether a patient had SARS (as well as flu, dengue fever, and other respiratory illnesses). The chip was expected to be available in early 2004, and would completely negate the long wait periods doctors experienced in receiving laboratory results ("Chip to detect ..." 2003).

Other breakthroughs in October dealt with infection rates and transmission vectors of the virus. In a report released on October 20th, the WHO declared that there was no evidence to support the theory that SARS was an airborne virus. Instead, the disease was transmitted through direct contact with infectious respiratory droplets, usually through the eyes, nose, and mouth. The same report stated that those infected were at the greatest risk of infecting others around day ten, when viral loads excreted through the respiratory tract were at their greatest. Interestingly, there were only two

reported cases of children transmitting the virus to adults, no evidence of infected mothers transmitting the virus to their unborn children, and no incidences of children infecting other children ("Report: SARS..." 2003).

The last two days of October brought a flurry of news, the most optimistic of which came from the CDC, who stated that the chances of containing a new outbreak of SARS were much improved, thanks largely to improved global alert systems ("Chances of Containing..." 2003). At the same time, they cautioned others not to relax their vigilance, re-emphasizing the possibility that the virus could return in the winter months. Additional warnings took the form of cautionary reminders that there was yet no test that would positively identify SARS in the first days of infection ("Keep up the guard..." 2003).

A second series of reports had a decidedly pessimistic tone. First came a study from the U.S. Centers for Disease Control and Prevention that stated China unnecessarily quarantined thousands of people in its efforts to prevent the spread of SARS. According to the study, it was unnecessary to quarantine some two-thirds of the 30,000 people ultimately isolated in Beijing ("China Quarantined Too Many..." 2003). A second study found that house cats and ferrets could become infected and pass the disease on to other animals. No evidence was found in the study to prove or disprove that the virus could be transmitted to humans from these animals, and researchers argued publicly for both sides (Kahn 2003).

The final cautionary tales for October came from Taiwan, whose doctors worried that SARS could easily return among the three million people expected to fall ill during

flu season. Su Ih-jen, the director-general of Taiwan's Center for Disease Control, stated that the peak of the season was December 15th, and Taiwan would resume temperature checks in public places by that date to watch out for early signs of an outbreak ("Taiwan Says SARS..." 2003). At the same time, Health Minister Chen Chien-jen decided to retract earlier laws requiring compulsory face masks and blanket quarantines. Such measures had earlier proved so frightening that one man committed suicide after learning that his family had been diagnosed with SARS, and a woman had threatened to jump out of her hospital window when faced with Taiwan's mandatory ten-day quarantine (Wu 2003). October seemed to end in ambivalence, the number of positive and cautionary articles roughly balancing.

Considering this, the rest of 2003 seemed mild. Indeed, news reports seemed to lessen considerably in November and December. The only major report I was able to gather for these months concerned a SARS vaccine trial in China. Announced in late November, the human trials (scheduled to commence in 2004) came after weeks of studying the effects of weakened coronaviruses on animals—studies that had shown the vaccine very effective on monkeys ("China plans SARS..." 2003). In the first phases of animal testing, the six rhesus macaques that were infected all showed "a detectable immune system response" against the SARS coronaviruses—a result promising enough to warrant testing the vaccine on animals more susceptible to the virus, such as ferrets. The vaccine not only showed promise, but could be produced cheaply. Dr. Andrea Gambotto, head of the research team charged with developing the vaccine, said that "it

can be produced in a million vaccine doses easily at very low cost” (“SARS trials lift...” 2003). If October had ended in ambivalence, December ended in victory.

January of 2004, however, began in fear. By the 12th day of the month, there were three new cases of SARS in China, all in the Guangdong province, and two scientists researching the disease in Taiwan and Singapore had also contracted the disease. The first Chinese case appeared on January 5th, when a thirty-two-year-old television producer somehow contracted the disease. Doctors were puzzled by his case as he had no regular contact with wild animals. The second case—though it was still only suspected as SARS—was a twenty-year-old waitress who worked at a restaurant that served dishes containing exotic foods such as the civet cat. By the time the third case arrived—a thirty-five-year-old male suspected of contracting the virus—the T.V. producer had been discharged from the hospital, but the fear of a new outbreak had already spread. Guangdong officials had already begun a mass culling of civet cats—an effort started in late 2003 with the revelation of a possible link between the animals and SARS—but the exterminations redoubled in effort to the point that one official at the Guangzhou Anti-SARS Office told a CNN.com reporter that “Basically, most of the civet cats in Guangdong have been slaughtered” (“Third suspected SARS...” 2004).

Mass culling of civet cats was not the only precautionary measure taken in light of the new human cases: city cleaners made regular street-sweeping excursions, and exterminators targeted rats, cockroaches, flies, and mosquitoes as potential disease spreaders. The Guangzhou newspaper *Yangcheng Evening News* reported that a city-wide effort to eliminate rats drew over 10,000 people, and warned that more than ten tons of

poison-laced grain had been deployed in “millions of places” throughout Guangzhou to aid in the efforts. Anyone encountering a rat carcass was told to “exercise caution” to avoid becoming infected. The city government also banned the breeding, sale, distribution, and consumption of civet cat, raccoon dog, and badger (“Third suspected SARS...” 2004).

Two days later, the WHO investigators who had visited China in 2003 to search for the origins of SARS returned to Guangdong. One of their first visits included a live-animal market, where they examined chickens, ducks, and other “edible creatures” to better determine the source of SARS, though the investigators were quick to point out that there was no evidence linking poultry to the virus (a statement no doubt influenced greatly by the recent problems with Avian Bird flu that had been cropping up throughout the area) (Anthony 2004). On the same day, a SARS expert at the University of Hong Kong stated that the current strain infecting the three victims in Guangdong was not only *not* a descendent of the virus that killed the 800-plus victims in 2003, but also appeared to be far less contagious and deadly. This new strain of coronavirus appeared to be ill-adapted to the human body, which explained why no one who had come into contact with the three victims had yet exhibited SARS-like symptoms. The virus was too weak to create a “superspreader.” But Dr. Robert Breiman, head of the WHO team in Guangzhou, retorted, “Last year, among the thousands of cases of SARS, they included many, many people who didn’t transmit and many, many people who had a reasonably mild disease. And so it may just be a mathematical thing” (Ansfield 2004).

The uncertainty surrounding this new series of infections did little to curtail public consternation. In a new series of mass cullings, thousands of raccoon dogs were gathered and exterminated to prevent future outbreaks. The WHO team, having barely arrived in the province, had yet to determine any connections between the three extant cases, and Dr. Robert Breiman did little to assuage fear when he said, “There is certainly no smoking gun at the moment with any of the three cases that would enable us to say precisely where they got it.... It’s still a little bit of a mystery, a bit of what you might call a jigsaw puzzle and at some point I have a feeling this will all come together and maybe be fairly obvious, but at the moment it’s not clear” (“Origin of new...” 2004).

Public perception of this new strain of coronavirus was only exacerbated when two China Southern Airline flight attendants were quarantined in a Sydney hospital after returning from China with sore throats and a fever (“Australia probes two...” 2004). Their story quickly turned positive, as they were released only two days later, on January 16th. Also on that day, Dr. Robert Breiman announced his WHO team’s initial findings, which pointed strongly toward an animal origin for this new strain of coronavirus. Their virologic forays uncovered traces of the virus in the restaurant where the twenty-year-old waitress worked, and animal cages in the back of the restaurant that were known to contain civet cats all tested positive for SARS. Breiman also countered his own earlier public statement in the same interview, stating that the one confirmed case of SARS in 2004—the TV producer—seemed “milder” than the 2003 strain (McDonald 2004; “SARS virus uncovered...” 2004).

More good news quickly followed, as on January 19th China approved the first human trials of its experimental SARS vaccine (though WHO officials rapidly pointed out that surveillance, early diagnosis, quarantines, and free exchange of information were still the best ways to combat the virus). Some thirty people immediately volunteered to be test subjects for the first phase of the study, which would determine whether the vaccine was safe for humans. It would still, however, be months before any vaccine could be mass-produced (Hoo 2004).

Additional promise in the fight against SARS arrived in late March, when researchers at the National Institute of Allergy and Infectious Diseases announced that they had developed a gene-based vaccine that had proven effective in mice. Though they cautioned that it would still be some time before this new approach was determined to work in humans, it had significantly reduced the level of coronaviruses in the lungs of mice exposed to the disease. In the same article, however, researchers not connected with the study noted that such results should not be overstated; no DNA vaccine such as this had been shown to effectively treat any viral disease, and the approach was still considered unconventional (“Study: SARS vaccine...” 2004).

All was quiet on the SARS front for over three months following January’s series of outbreaks. Then, on April 23, China admitted to two new SARS patients: a twenty-year-old female nurse at a Beijing disease research laboratory, and her mother. Response was immediate upon confirmation of SARS: 171 people were quarantined in Beijing, including five of the nurse’s coworkers, who were placed under close observation (but only one of whom would become infected). Another eighty-eight were quarantined in

Anhui, where the mother lived. By the time this news became public knowledge, however, both cases were actually weeks old: the nurse contracted SARS on April 5th, and the mother died of SARS-related complications on April 19th (though the Chinese Ministry of Health didn't publicly confirm this death until the last day of the month). Once again, China had kept its outbreak secret for a period of time, and news reports were quick to point out the consequences of such secrecy in the 2002-2003 outbreak ("China admits first..." 2004; "Two SARS cases..." 2004).

These new cases would prove to be the last. There was little SARS-related news in May, save one report that the Chinese human vaccine trials had been successful, the study's four volunteers in good condition four days after inoculation ("SARS: Human vaccine..." 2004), and a second report that Toronto's tourism industry was recovering rapidly ("Toronto is back..." 2004).

June's news was equally light. On the first day of the month, China announced it would discontinue its daily SARS report as there had been no new cases since the April outbreaks, and the last SARS-related patient was discharged from the hospital on May 31st ("China to stop..." 2004). Beijing shut down its anti-SARS headquarters the same day ("Beijing shuts anti-SARS..." 2004).

The rest of the month's reports were congratulatory in nature: a review of Toronto's 2003 measures to control the outbreak applauded the city on its efforts (Doheny 2004); an announcement that scientists had developed a new method of detecting SARS utilizing a chip that would reduce the length of molecular testing from one week down to three days ("Scientists Say Develop..." 2004); and an Associated

Press Writer's report that the Hong Kong apartment block that was so heavily infected in 2003 because of sewage leaks was almost entirely recovered from the outbreak (Wong, Margaret 2004).

The last two articles I gathered during my near-daily searches of media outlets both came from early July. The first detailed a report released in Hong Kong on July 5th that found severe fault with the government's handling of the 2003 outbreak. Released only days after hundreds of thousands of protestors marched on the capital to demand more democracy, the report put immediate pressure on the administration, specifically criticizing Secretary for Health Yeoh Eng-kiong, former Director of Health Margaret Chan, and Hospital Authority Chairman Leong Che-hung for their inaction. Yeoh was singled out among these three, the report stating he "did not show sufficient alertness" when atypical pneumonia was reported in Guangdong province, and gave the public "confusing and misleading" messages concerning the virus's spread. All three, as well as other authorities, were given blanket criticisms for permitting the admittance of SARS-infected patients into otherwise uncontaminated hospital rooms, effectively creating an epicenter from which the disease would eventually spread ("Report blasts HK..." 2004). The second, and last report I gathered, detailed Yeoh Eng-kiong's official resignation two days later ("HK health chief..." 2004).

It is, of course, foolish to declare that no additional news reports concerning SARS were released after this point in 2004. However, according to my research, they were few and far between, and at least for the purposes of this dissertation, bore little relevance to my thesis, mainly detailing scientific and medical advances. I feel it is safe

to leave them out as my arguments deal mainly with public narratives, and because the narratives that I did recover do not extend past this point in time. My purpose in creating such an extended (though admittedly incomplete) history as this was to create a corkboard on which I can now proceed to pin the narratives that will become the focus of the remaining chapters of this work. It is unnecessary to continue expanding this corkboard, as there are no narratives past this point in time that deal with the limited topics with which the media continued to report.

There is still one final aspect to consider before we move on, and that is the differences between the media and medical timelines. Though I only examined the articles that comprised the medical timeline between late March of 2003 and the end of July four months later, it should be obvious that the pages of the *British Medical Journal* and *The Lancet* were almost entirely absent of the rumors, legends, and gossip that so permeated newspapers and televised news reports. This is, of course, to be expected: these journals are scientific in nature, their articles peer-reviewed and carefully selected. Still, it is odd that even the news reports that appeared in these journals were free of disease narratives, focusing instead on an unbiased, accurate representation of facts as expressed through raw data and summarizations of key events. Such reporting stands in sharp contrast to the news stories published by Yahoo! News, MSNBC.com, and CNN.com, all of which relayed vernacular narratives. While the media's timeline obviously draws in part on the medical establishment's telling of the outbreak, the medical establishment can hardly be said to reciprocate. These differences in focus coincide with what Peter Washer has noted: that "beyond the *realist* global epidemic of

(the disease) SARS lies the globalization of the *phenomenon* of the SARS panic, where the saturation and speed of the world news media's coverage leads to the (supposed) risk posed by SARS being *socially constructed* on a global scale" (2004, 2570). This is not to say that the medical timeline is the "realist" version, but it does point out that the media's construction of events contributed far more to the social construction of the disease than did its counterpart.

If media sources did not exist, or were severely weakened in influence, and humans were forced to turn to the pages of academic journals to retrieve news on epidemics, would there be as many rumors? The answers to a question such as this can only ever be speculative, and would no doubt vary widely and be argued over vehemently. But the very fact that a question such as this could be asked points to the correlation between media sources and rumors. Keeping this in mind, let's move into our first study.

Chapter 4: SARS and AIDS: A Comparison of Etiological Legends

From Aesop's fables to Navajo Trickster stories, Serbo-Croatian epic poems to the works of Homer, humankind has always been interested in the concepts of "how" "why" and "where": "How did the sun get up in the sky?" "Why does the fox have a white-tipped tail?" "Where do we come from?" In the field of medicine, questions of origin are not only critical, but can mean the difference between life and death: Where did the patient contract this disease? How did the patient contract the disease—from animal, human, rusty nail? How long ago? Where was (s)he? and so forth. Questions such as these occupied central theses in the 2003 SARS epidemic, WHO researchers putting forth considerable effort to finally trace the source of the virus back to the Chinese civet cat.

As intelligent as humans are to ask these questions, however, we sometimes fall short in patiently waiting for the response. We want our answers, and we want them now. And if no answer is immediately forthcoming, we sometimes create our own hypotheses to fill the vacuum. At times these hypotheses prove ultimately correct: researchers suspected the animal-human SARS link as early as 24 March 2003, though they did not prove it until 28 May 2003. At other times, the hypotheses ultimately fall far short of the mark, such as in the conspiracy theory that Saddam Hussein had released SARS as part of a biological warfare campaign.

Questions of etiology are found in almost every type of SARS narrative—rumor, legend, gossip, joke—and are so distinct and varied that they merit their own chapter. It is

also true that origin stories have been present in other disease outbreaks. AIDS etiological narratives have focused on “government conspiracies, African or Haitian AIDS, ‘patient zero’ type characteristics, superbugs transmitting the virus through bites, [and] hundred-year-old AIDS cases” (Goldstein 2004, 77), and arguments over where AIDS came from and who is to blame for it parallel similar speculations about “the bubonic plague, smallpox, syphilis, and...influenza” (Goldstein 2004, 78). It is the purpose of this chapter to explore the similarities between these narratives—primarily between AIDS and SARS, though other diseases will not be ignored—pointing out how, in many cases, the narratives are so analogous as to make it seem that the differences lie *only* in the name of the disease.

We begin with a look at AIDS. Being a disease that has made newspaper headlines for a quarter of a century, it should come as no surprise that AIDS has spawned more origin theories than would comfortably fit in even a largish book. And there have been dozens of these largish books published about them. Goldstein’s *Once Upon a Virus* contains a litany of etiological legends, and the bibliographic entries in chapter 4 of that book alone constitute an extraordinary panoply of sources. Specifically, Goldstein states that there have been three main theories concerning the origins of AIDS:

1. that AIDS has developed from a natural disease previously existing only in some other species of animal, which has recently managed to infect humans thus triggering the epidemic...;
2. that AIDS has developed from a much older human disease not previously noted by science, either because it has always been confined to a small group with an acquired immunity or because it has only recently become virulent...;
- [and] 3. that AIDS is a man-made virus manufactured either accidentally or deliberately in a laboratory. (Goldstein 2004, 80)

Bonnie Blair O'Connor's *Healing Traditions*, while primarily focusing on the alternative medicinal responses of the public to AIDS, still mentions the beliefs that 1) the disease came from God, whether as a punishment (as in for the gay community as penalty for the licentiousness of their lifestyle) or a test of faith, and 2) the disease is the result of witchcraft practiced against the inflicted, including actions of "evil spirits, demons, the Devil and witches" (1995, 152). Paula Treichler, in *How to Have Theory in an Epidemic*, notes humankind's continued attempts to blame AIDS on someone else: African countries blaming other African countries; the U.S. blaming Africa; Russia considering the disease a foreign problem attributable to the CIA or Africa; Caribbean and American peoples believing the disease came from U.S. biological testing; and the French saying it originated from an American pollutant (1999, 29-30). Patricia Turner's 1993 *I Heard It through the Grapevine: Rumor in African American Culture* discusses the beliefs held by African-Americans that AIDS was created as a CIA bioweapon (mirroring the Russian belief noted in Treichler), and Gary Alan Fine has extensively discussed "the allegations that government conspiracies exist to create or spread the HIV virus" (2005, 5). So numerous are AIDS "origins" that early attempts to categorize the supposed sources often referred to them as the "4 Hs": homosexuals (especially men), hypodermic needles, hemophiliacs, and Haitians (see Bennett 2005a, 128-9).

Many of these narratives share threads of conspiratorial paranoia. There are numerous examples of stories that revolve around notions of purposeful germ warfare, where man-made bio-weapons have been set upon certain ethnicities, countries, and even age groups. Paul Smith, in "'AIDS—Don't Die of Ignorance': Exploring the Cultural

Complex of a Pandemic,” summarizes examples of what he calls a “whole belief system which focuses on how AIDS developed,” some of which include that it “...is an out-of-control germ warfare virus...it has been put in the fluoride in our water...[and] in the U.S.A., the Centre for Disease Control put it in K-Y Jelly to get at all the homosexuals” (1990, 74). Another example of this line of thought can be found in Vanessa Gamble’s “Under the Shadow of Tuskegee: African Americans and Health Care,” published in the *American Journal of Public Health*, in which appears the following:

Beliefs about the connection between AIDS and the purposeful destruction of African Americans should not be cavalierly dismissed as bizarre and paranoid. They are held by a significant number of Black people. For example, a 1990 survey conducted by the Southern Christian Leadership Conference found that 35% of the 1056 Black church members who responded believed that AIDS was a form of genocide. (1997, 1775)

The beliefs of these respondents, by the way, are justified by history: one of the more infamous experiments in the last one hundred years was the 1932-1972 Tuskegee Syphilis Study, “in which [400] African American men who had syphilis were studied to follow the natural course of the disease, without being given any information about it nor any treatment even after antibiotics became available” (Whatley & Henken 2000, 83). Thus, for African Americans, believing in AIDS as a bio-weapon could be seen as little more than a shift in terminology.

Again, AIDS is not the only disease other than SARS to boast etiological legends, nor are such legends confined to modern epidemics. Pre-Revolutionary France’s bouts with plague, and the nineteenth century’s cholera problems generated many accusations of “voluntary spreaders of the illness, poisoners of fountains, greasers of door knobs, perverse doctors, nurses or grave diggers, killing vaccines” (Bercé 2003, as quoted in

Campion-Vincent 2005, 109), many of which bear strong resemblances to claims made about AIDS. The distrust of other, especially lower classes seen here was echoed during the polio epidemic when the healthy and rich blamed the impoverished for spreading the disease: it had to come from the poor, or so the logic went, because the healthy and rich lived clean, honorable lives.

Though many diseases have warranted warnings not to touch or come close to those infected (bubonic plague, polio, influenza, etc.), none is perhaps more infamous than Hansen's disease. Laurie Stanley-Blackwell's aforementioned 1993 article on Acadian good-Samaritan Legends and the New Brunswick epidemic of Hansen's disease in the 1840's deals in part with the narratives created to deal with this disease, and once again we find in them the concept of "othering": of emphasizing the disease as having come from somewhere else. In this case, the New Brunswick people created the narratives in question to temper harsher, outside claims that the disease was somehow merited by or born of those infected. The narratives created a distance between the origin of the disease and the infected, stating that the "poisonous virus was not the growth of this spot, but was brought here by some traveler" (Stanley-Blackwell 1993, 39). In doing so, these stories "demystified the disease, mitigated its harshness, and combated the pervasive notion that the disease was an hereditary scourge among the Acadian population" (Stanley-Blackwell 1993, 33), and helped explain why Hansen's disease was present.

Even a cursory glance such as this should be sufficient to support my claim that other diseases have been rife with narrative. The above list could, in fact, be continued

for several pages, but it is not my intention to give an example of every type of etiological legend found in the history of disease, nor is it to re-hash what has already been discussed at length by numerous authors. It is my intention to demonstrate in this chapter that SARS is also bursting with story, and has many of the same tales told of it that other diseases share. I am not, it should be made clear, claiming that there is a SARS-related narrative that corresponds to any given narrative from any given disease. I am stating that SARS has, in its short life, gained a number of etiological legends, all of which bear striking resemblances to those narratives found in other diseases.

I collected origin narratives from the Internet, from published news sources, and from personal interviews in the course of my research. Few of these narratives are similar at the sentence level—meaning that individual details vary widely and little resemble those found in other narratives—but at the story level they fall mainly under three headings: “Conspiracy Theories,” “Experiments Gone Wrong” (recognizing the oft-times thin line that can separate these two categories), and “Animal Origins.”

In fact, I have so few concrete examples that do not fit into these categories that only one seems discussable: that SARS is extraterrestrial in origin. This theory comes from Cardiff University’s Chandra Wickramasinghe and late astronomer Fred Hoyle. The story—reported in the British tabloid *The Sun*—is that SARS is an outer-space microbe that entered Earth’s atmosphere via a comet or meteorite. This is actually an extension of a long-debated and non-mainstream scientific theory known as “panspermia,” or the hypothesis that life on Earth began from an extra-solar source. What is perhaps most interesting about this origin theory is that it did gain some credit in the scientific

community: microbiologist Milton Wainwright from Sheffield University has stated that the expansion of the SARS virus appears to follow general schemes laid down by panspermic theorists.

In an email to MSNBC's Cosmic Log, Brig Klyce of the Cosmic Ancestry Website furthers his belief in Hoyle and Wickramasinghe's hypothesis, writing that the two scientists "proposed that the link between new flus and China was caused by the jet stream's bump over the Himalayas a long time ago.... I think it's quite plausible, and could account for the SARS epidemic as well" (Boyle 2003). Klyce likens the spread of SARS to that of the Spanish Flu, which "first struck soldiers in outdoor training camps in the Midwest. Later, it struck around the world almost simultaneously, but took weeks to travel from N.Y. to Boston.... And it spread to isolated individuals who never came into contact with any infected person" (Boyle 2003).

Also interesting in relation to this is a statement from Francis Plummer, director of Canada's National Microbiology, who voices his doubts concerning the coronavirus origin of SARS. Plummer's statements, made in April of 2003, revealed that laboratory work had only been able to find evidence of the SARS microbe in 40% of Canada's SARS patients, and that some who tested positive for SARS showed no symptoms (Boyle 2003). Plummer's work was later proven incorrect, with more advanced testing resulting from better knowledge of the disease, but such statements seemed only to fuel the "SARS from the stars" movement for a short time.

When it comes to conspiracy theories and experiments gone wrong, however, SARS bulges at the seams. Even the acronym by which the disease is referred to has been

appropriated in the popular medium to fit in with conspiratorial musings, the letters said to stand for “Saddam’s Awesome Retaliation Strategy” instead of “Severe Acute Respiratory Syndrome” (Glazer 2003). While this appropriation seems to be done mostly for humorous reasons—as an SMS, or Short Message Service, joke—it still demonstrates the possibilities inherent in conspiracy. AIDS, too, has such acronymic examples: in 1986, young men in Zaire rewrote “SIDA,” the French word for AIDS, to stand for “‘Syndrome Imaginaire pour Decourager l’Amour’ (Imaginary Syndrome to Discourage Love)” (Whatley & Henken 2000, 82). The motivation behind this was twofold, some believing “that Europeans were using stories of an imaginary disease to discourage Africans from being lovers and that [their] motivation stemmed from jealousy,” while in America, African-American communities used much the same redefinition to discuss a belief that they were being given misinformation to prevent them from reproducing (Whatley & Henken 2000, 82).

The appropriation of the SARS acronym does not seem to be the result of any real fear of Middle-Eastern retaliation (even the one that directly references Saddam Hussein seems more humorous than fearful), but there are other conspiracy theories that do appear to stem from genuine concern, and these range from concerns over governmental control to fears of bioweapons. An excellent example of the former comes from the website “Educate-Yourself,” which contains a section on “Emerging Diseases.” In this, the author—“Montalk”—specifically states that SARS is “simply part of a hostile agenda implemented by the world’s political and military elite to keep earth’s population locked down and under control” (Montalk 2003). Discussions of the methodologies implemented

by the government to enable such an outcome center around the extreme measures taken by health officials to prevent mass outbreaks in Toronto in 2003. Montalk's view, however, is that SARS was not dangerous at all, but was promoted as such by the government—with the help of the WHO—to “tenderize” the public into “accepting increasingly restrictive curbs upon their freedoms” (Montalk 2003). This SARS “test run,” as Montalk refers to it, was a means by which the American government could pass laws that would allow them to quarantine anyone suspected of being infected, as well as lockdown entire cities—laws that could be reinforced at any time with only the slightest “clever media hype of any manufactured disease” (Montalk 2003). The entire Toronto epidemic is furthermore claimed to be nothing more than a test-targeting exercise in economic destruction (though the webpage does not state why the US government would specifically target a Canadian city for this purpose).

This, however, is not the only SARS conspiracy theory found on this webpage. One of the other two examples relates to a larger concept of disease being the possible result of “vibrational frequencies” broadcast to a target population via “audio or microwave subliminals” (Montalk 2003). This theory does fit into the “fear of bioweapon” category, Montalk stating at length that:

Because one's mental and emotional states play a large part in immunity, these subliminal programming techniques would merely have **to implant negative thoughts and emotions** in order to pry open a gap in a person's awareness for viruses to then successfully invade the physical body. Also, through sheer hysteria psychosomatic illness can result, a phenomenon which I don't doubt has played a hand in Asian SARS cases. (Montalk 2003, emphasis in original)

The website is not clear on who is broadcasting these signals, or their purpose in doing so. The only hint comes from a suggestion that we are all “supporting the medical

society” by watching television—the primary tool used to broadcast these vibrational frequencies.

The second conspiracy theory forwarded by Montalk entails “chemtrails,” or chemicals that the military has been spraying in our skies since, according to Educate-Yourself, 1998. Visible as vapor-trail-appearing streaks of white in the sky, Montalk claims these chemtrails contain many harmful substances purposely placed there by the military, including “immune suppressing chemicals, such as ethylene dibromide...radar and microwave reflective metallic substance [sic], like barium or aluminum...dielectric hollow polymer fibers...[and] viral and bacterial vectors remnants [sic] of genetic engineering and replication procedures used to construct the pathogenic vectors,” the ultimate purpose of which is to “suppress human evolution on a physical, mental, and spiritual level” by performing “‘gene therapy’ upon targeted populations by spraying them with viral vectors capable of shutting down the DNA activation process in those infected” (Montalk 2003). SARS is not specifically stated in this section as being the result of chemtrails, but it seems clear that the author does link the two in terms of the immune-suppressing effects of the chemtrail chemicals: we contract SARS because our immune systems have been artificially lowered to sub-standard levels.

Not all SARS-related conspiracy theories exhibit the same level of organization-specific blame and paranoia as do those of Montalk. In fact, concern over the vague nature of the virus was so widespread in the early stage of the disease that “health officials were initially forced to quell conspiracy theories about SARS being an act of terrorism” or biological warfare (“SARS outbreak...” 2003), a fact noted in a high-profile

Australian newspaper. And while some of these rumors did place the blame for the virus on a specific source, others left the question open-ended, or merely pointed fingers in the general direction of a geographical region, such as the Middle East or Asian continent.

An excellent example of this latter form of non-specific blaming comes from a blog entitled “SARS Paranoia,” wherein the author refutes rumors of the virus being man-made and a biological weapon. The rumor in question quotes Nikolai Filatov, head of Moscow’s epidemiological services, who gives the following as grounds for SARS being man-made: “the composition of SARS is unkown [sic]...there is no vaccine available for SARS.... ‘The virus, according to Academy of Medicine member Sergei Kolesnikov, is a cocktail of mumps and measles, whose mix could never appear in nature’” (Cindy 2003). Nowhere is there a mention of who or which organization could have masterminded such a fusion of diseases—simply an announcement that it couldn’t have been done without man’s help.

Astutely, the author of this article—“Cindy”—points out firstly that the composition of SARS is known, presenting the reader with a link to a .pdf document of the virus’s genome, and secondly, makes a direct comparison of this conspiracy theory to a mid-1980’s rumor that the government had released a “gay” virus (i.e. AIDS) into bathhouses to rid the world of homosexuals. “Of course,” she says, “that wasn’t the case. If HIV had gotten as much publicity in it’s [sic] first six months of known infection, we might have a cure by now. Personally, I have a greater fear of coming down with a plain old cold then [sic] of contracting the SARS virus” (Cindy 2003). Regardless of the dubitable nature of the HIV-publicity claims, it is very apparent that by the time this blog

was published—9 May 2003—SARS-as-conspiracy was already entrenched in the public consciousness, and at least a few people were noticing similarities between these new narratives and those they'd heard about other diseases.

A second example of this non-specific blaming comes from The Rumor Mill News Reading Room. In an article entitled "SARS Kills 50% Patients Over 65 – Perfect Age-Specific Weapon," the author—"Izakovic"—begins by quoting legitimate WHO data showing that the SARS death rate was higher than originally estimated, and mortality rates varied by age: "50% for patients of 65 years or older, 15% for people from 45-64, 6% for patients from 25-44, and below 1% for patients old [sic] 25 years or younger" (Izakovic 2003). Further legitimate data is then presented in the form of summarizations of studies published in the UK medical journal *The Lancet*, which found that the SARS "corona virus [sic] samples collected from patients do not show the mutations and are remarkably stable" (Izakovic 2003), though Izakovic does not make the nature of these mutations clear. What he does clearly summarize are *The Lancet*-reported findings that the stability of the virus points to the strong possibility of a viable vaccine being soon developed.

From this point in Izakovic's thread, speculation takes over, and I find it necessary to reprint the entirety of his three-paragraph conclusion, exactly as it appears in his essay:

From this report it is clear that SARS is not a Chinese bioweapon designed to target enemy forces because it, practically, does not affect population below 25 which makes bulk of any armed forces. Even commanding structure that is made mostly of people under 44 is safe without any special measures.

On the other hand, stability of virus shows that it is not a natural mutation and allows for secure vaccine for those in targeted age group that must not become victims.

Stability and age specific death rate, an perfect weapon for age selective culling of older population world-wide. (Izakovic 2003, errors in original)

Again, there is no specific mention of the origin of the virus—simply that it could not have been naturally formed. Interestingly, Izakovic's website, www.deepspace4.com, mentions not only the chemtrails-as-disease-origin theory spoken of by Montalk, but the theory that AIDS was developed by the U.S. government as a method of thinning the black population—another example of a single author using roughly the same narrative to describe multiple disease origins.

So far, the examples I have used implement non-specific blame—that is, they say that while someone somewhere is clearly responsible, the authors either do not know whom to blame, or decline to speculate. There are, however, equally as many examples that do point a figurative finger at a specific group.

The first example here comes again from the Rumor Mill News Reading Room, and is actually a response to Montalk's discussions of chemtrails. On the 29th of December, 2003, "Hobie" posted an article declaring that viruses are in fact solvents: that man-made chemicals in our environment are causing disease. Hobie's information comes from an article by "Aajunos [sic; actually Aajonus] Vonderplanitz," in which this author claims that viruses don't destroy cells, they merely show up when cells are destroyed, and exist primarily as solvents that "carry toxins into the bloodstream for disposal" (Hobie 2003). Hobie further quotes an article by Jim West, who states: "The orthodox SARS paradigm completely omits and avoids toxicology for good reason: SARS disease

symptoms are identical to pesticide and air pollution disease symptoms. And these poisons correlate in time and place with SARS epidemics" (Hobie 2003).

The pointed finger in this article is found later in the extensive quote from Jim West's article: airlines are the ones responsible for the outbreak. The reason? "Airlines routinely apply pesticides to airplanes, especially those on Asian routes" (Hobie 2003), and these pesticides are causing people to become ill. At least part of West's claim can be confirmed: a CDC "Travelers' Health" release does state that many countries require disinfection of inbound flights, and that the acceptable methods of disinfecting planes are to "either spray the aircraft cabin with an aerosolized insecticide (usually 2% phenothrin) while passengers are on board, or treat the aircraft-s [sic] interior surfaces with a residual insecticide while the aircraft is empty" (Centers 2006). This CDC release does note that some flight crew members have reported reactions to the spraying—rashes, lung irritations, tingling and numbness of extremities—but is quick to note "there are no data to support a cause-and-effect relationship" (Centers 2006), and that the WHO declared this method of disinfection safe in 1995.

A second example of a blame-specific conspiracy theory—again from the Rumor Mill News Reading Room—comes from author "Rayelan," whose chosen title for his 28 April 2003 article details many of the underlying issues: "Is SARS the Bio-Weapon I Was Told About in the Early 90s?" Rayelan begins his article by quoting from legitimate news sources such as the *Birmingham Post-Herald*, who stated in an article "It may be that some individuals have a genetic quirk that makes them more efficient spreaders of the virus, some have said. Others speculate that some ethnic or environmental difference

may account for the hot spots” (Rayelan 2003). A second quote from a legitimate source comes from the journal *Science*, which has a detailed paper in its March 1997 edition concerning a successful genetic reconstruction of the virus responsible for the 1918 flu epidemic that killed between 20 and 40 million people worldwide. Using information such as this, Rayelan builds an hypothesis that SARS is, in fact, the newly-cultured 1918 flu virus, and has been genetically altered to infect primarily people of Asian descent.

From here, Rayelan reminds us that many of the North American peoples might have Asian DNA as well, as a Discovery Channel program he recently watched suggested that North, Central and South America might have been settled by Asian peoples crossing the “Alutian [sic] Islands” during the last Ice Age. Thus, it is entirely possible that many North Americans who do not appear to have any Asian blood in them will be affected by the virus, and so SARS might be part of what Rayelan terms “The Great Dying”: an Armageddon-like scenario in which four-fifths of the world’s population perish. Under this scenario, SARS might only be the first in a series of viral waves sent crashing against the shores of humanity (Rayelan 2003).

Those responsible for these viral waves varies, depending largely (apparently) on who and how many are affected: if the virus stays mainly within China’s borders, then it was released there by the United States in an attempt to slow the progression of China’s economic and political importance. However, if the virus spreads to other nations and proves fatal for millions, then it was created and released by what Rayelan terms the “NWO”—New World Order—whose purpose is to weaken the world’s population to the point where no nation will be able to withstand the installment of a “One World

Government.” For reasons not fully fleshed out in this article, Rayelan claims that China and the former Soviet Union are the primary members of this New World Order, and their main target is the United States—the only nation strong enough to withstand their geopolitical advances.

A conspiracy theory that in many ways echoes the cataclysmic suspicion present in Rayelan’s narrative comes from Dr. Leonard Horowitz, DMD, MA, MPH. Dr. Horowitz’s contributions to these proceedings are in many ways singular, for he brings to the table not only an impressive list of degrees, but is a Harvard graduate in public health, an “expert in the fields of medical sociology, behavioral science, and emerging diseases” (Horowitz 2004), and claims ten bestselling books on the subjects of conspiracy. In the latest of these works, *Emerging Viruses: AIDS & Ebola—Nature, Accidental or Intentional?*, he claims to have reprinted for the first time U.S. Government documents that prove AIDS- and Ebola-like viruses were bioengineered by a branch of the U.S. Army. The weight of such a man’s arguments are no doubt taken as anything but light by conspiracy theorists.

Dr. Horowitz’s theories concerning SARS are just as controversial as the arguments he forwards over AIDS, and follow the same suit: that SARS has been bioengineered, and is being used to control the global population. The culprit behind these viral attacks is not specifically named—that is, no company or business name enters the discussions—but Dr. Horowitz does mention that the only suspect with the means and methods to execute such an attack is the “global military-medical-petrochemical-pharmaceutical cartel” (Horowitz 2004). The purpose behind these attacks is also very

similar to what Rayelan mentions: that their “likeliest purpose is in facilitating evolving economic and political agendas that ultimately include targeting approximately half the world’s current population for elimination” (Horowitz 2004). This is a required step in achieving global domination because a smaller, more frightened population is easier to control; as Dr. Horowitz points out, we have already learned via the Homeland Security Act that populations under duress are more likely to agree to limitations in freedom in exchange for greater protection—i.e. governmental power and control.

Not all blame-specific conspiracy theories exhibit this level of cataclysmic paranoia. The last two examples in this section are rather mild in comparison to Rayelan’s and Dr. Horowitz’s narratives, as neither of them involve global attempts at world domination. The first comes from the Association for Asian Research, which published an article in late May of 2003 concerning a rumor created by Beijing officials that SARS was not Chinese in origin, but had in fact appeared in the United States in February of 2002. The rumor appeared in at least four major Hong Kong newspapers in early May of 2003, at least one of which—the *Wen Wei Po*—is a recognized mouthpiece for the Chinese Communist Party. According to the rumor, an American woman in either New Jersey or Philadelphia (depending on the newspaper) fell ill with flu-like symptoms, then developed acute pneumonia and expired within hours of hospitalization. The *Wen Wei Po* was the chief source for the transmission of this rumor, which persisted among Communist party officials in Hong Kong despite repeated denials not only by the U.S., but by other Hong Kong newspapers, some of whom accurately reported that the U.S. case was not SARS, but meningitis. The rumor even made its way to the Guangdong

province, where Provincial Governor Huang Huahua mentioned the 2002 American-based case of “SARS” during a governmental meeting in early May (Lin 2003).

The last case of a blame-specific conspiracy theory comes from the interview I conducted with Angel Lim in July of 2005:

Angel: Yeah. I had a friend, we used to get together during Saturday, and he used to tell me, told me once that SARS originated from the States, the U.S. The reason is because Canada is not a friend of U.S. Like, when they go to war in Iraq, Canada didn't go to war to Iraq with the U.S. So that's why the U.S. hates Canadian. So they produce this SARS to kill some people in Canada.

Jon: Okay. And the second part of that had to do with the Philippines.

Angel: Oh, the Philippines, yes. He also told me that the Philippines is very close to China, and also very close to Hong Kong. And, I think there's only two people died during the SARS outbreak, right? And again, the reason is only two people has died is because the Philippines and the U.S. are friends. And that's the reason too.

Jon: So [in] both of these, the U.S. is almost trying to get revenge on the Canadians.

Angel: Yes, yes. Right, right. (laughs)

Jon: And because the Philippines are good friends with us, we protect them.

Angel: Very good friends, yes. They are protected. (2005)

Echoed in Angel's narrative are many of the concerns that have fueled the conspiracy theories we have looked at in this chapter: distrust of governments and overly-powerful organizations, fear of the unknown, concern over one's own mortality (as well as friends and family), and apprehension at the loss of personal privacy, all intermingled with points of blame and counterblame.

The final category of etiological legends is “Animal Origins.” Diane Goldstein gives us a succinct summary of the types of beasts that have been associated with the spread of the AIDS virus: “...monkeys of various types, regional origins, and colors (African green monkeys, blue monkeys, red monkeys, green-eyes monkeys,

chimpanzees, baboons, tree monkeys, and rhesus monkeys); insects of various types (fleas, flies, mosquitoes, and cockroaches); and finally sheep, lambs, and even the [colo-] rectal gerbil” (2004, 81).

Tracking and summarizing the animal origins of SARS is an interesting task. Recall from the previous chapter that the disease was formally introduced on February 26th, 2003, and by March 24th, with the discovery that a coronavirus might be the cause of the disease, the possibilities of animal origins had already arisen in the minds of medical researchers (coronaviruses affect animals and humans). By May 23rd the virus was traced back to the civet cat, the animal that is still the most likely source.⁵ Thus there is very little time in the development of the SARS story for animal origin legends to have arisen.

Still, in that short time numerous animals were blamed. Summarizing only those relevant points from the previous chapter, we quickly come up with the following list of suspects. The cockroach appears to have been one of the first nominees for disease-carrier, suspected as early as April 8th as the prime candidate for explaining the migration of the virus between residences in Hong Kong. On the 7th of May, residents of Beijing either killed or abandoned hundreds of dogs and cats, fearing them as spreaders of disease. On the 12th of May, a newspaper reported that some scientists believed that a bird might be the cause. Again, the civet cat was named as the prime suspect on the 23rd of the month, but that didn’t stop provincial officials from banning other animals from sale in southern China, including snakes, bats, badgers and pangolins. In late October,

⁵ Though in October of 2005, one Chinese health expert claimed that the civet cat was itself originally infected by the horseshoe bat—another animal that is a delicacy in southern Chinese cuisine (see “Bats...” 2005).

house cats and ferrets were named as potential spreaders of the disease. And still the list grew: in January of 2004, in response to the threat of a new outbreak, Guangzhou officials ordered exterminators to sweep the city's streets clean, focusing especially on rats, cockroaches, flies, and mosquitoes. Finally, at the same time, government officials also banned the breeding, sale, distribution, and consumption of civet cat, raccoon dog, and badger.

My interviewees were also asked if they had heard any origin stories concerning SARS. Only four of them recollected any of these that involved animals, and they were surprisingly unified: all four narratives circulated around China's exotic animal markets. Three of those four interviewees—Angel and Rosita Lim, and Seny Zamora—even specifically mentioned the civet cat as the animal associated with the spread of the virus.⁶ The fourth interviewee, Jennifer Lim, had this to say: "I think the one that stayed with me, with regards to the origin, was that it came from animals, that it had to do with the...close contact with exotic animals in China, like monkeys or geese or something like that. Just exotic animals, that they were being eaten, or that they were being kept as pets, or for medicinal uses" (Lim, Jennifer 2005). Later in the same interview, Jennifer defended her belief in these narratives by comparing their veracity to established fact concerning the origins of other diseases:

Just because...I guess Ebola I think has been sort of linked with monkeys, if I'm correct, and that I think I sort of also know that there are certain viruses or diseases that run through animals and don't affect them, but then due to the sort of

⁶ Technically, Angel and Rosita said "civet rats" and Seny said "cavot cat," but it seems obvious that they all meant "civet cat," the errors in terminology no doubt due to my asking them in 2005 to recollect the name of an animal they probably hadn't heard in over a year.

increasingly, increasing contact between humans and animals, that we're all of a sudden being exposed to things that have, that might lay dormant in animals, but somehow affect us differently. (Lim, Jennifer 2005)

So while my informants ultimately only came up with a few sources, they do seem unified in their ideas, no doubt the result of having heard this information from the local media. And at least one of those informants recognizes that her narrative has been shaped by her exposures to similar narratives about other diseases.

The purpose of this chapter has been to point out the similarities between these etiological legends, both within a single epidemic such as SARS and across the disease spectrum. It should be clear after these investigations that disease-related conspiracy theories and animal origin legends do indeed share much in common, and that many of the narratives found within a single epidemic closely resemble narratives that have sprung from other infectious outbreaks.

There is one final point that can be made concerning the narratives examined here. While SARS and AIDS legends do share much in common, there is at least one critical difference: while the conspiracy theories that are seen with other diseases are relevant and similar to the ones that are found with SARS, SARS does have specific characteristics that shape those theories in specific ways, being that it waxed and waned with such rapidity that it became difficult to identify a potential target group. SARS was never present on a global scale long enough to be directly linked to one group of people, a fact reflected in the ever-shifting "targets" mentioned in conspiracy theories: SARS was created to kill the elderly; SARS was created to kill the Chinese; SARS was created to kill Canadians; SARS was created to kill everyone. In contrast, AIDS, in its early stages,

was linked almost exclusively to the homosexual population, creating a direct sense of “target,” if not “creator” (though this, too, could be argued as definite, considering the number of legends surrounding the divine origin of AIDS). The amorphousness of the legends present in SARS may be due to the sense that the disease never had a chance to run its full course: even into the summer of 2004, newspapers were still running stories about the big outbreaks of SARS expected during the upcoming winter—outbreaks that never came. Whatever the cause, the effect was definite: a series of conspiracy theories that stumble over each other—and sometimes themselves, as with Rayelan’s narrative—in attempts to place blame and merit. The consequent multiplicity of potentially targeted peoples, while confusing, does by itself reveal an interesting underlying facet of conspiracy theories: that even if there is not a clear sense of who is being targeted, there is always a passion for the conspiracy itself.

Chapter 5: We Gather Together: SARS and Public Space

The common threads between SARS narratives and the genre of contemporary legend as a whole are not limited to AIDS, or to diseases in general. While the previous chapter focused on etiological legends and the commonalities between those related to SARS and other diseases, the current chapter focuses on issues of physical locations where large numbers of people congregate. These gathering places, especially those pertaining to and involving people of Asian descent, were the nexus of many SARS narratives, providing a seeming feeding ground for public rumors. Especially relevant are Asian food establishments, such as Toronto's Ruby Chinese Restaurant, which collapsed financially due to rumors of a SARS-infected chef.

For the purposes of this chapter, I define a gathering place as any stable business, organization, or conglomerate of smaller businesses that are fixed in space. Restaurants, marketplaces, bars, and malls fit under this definition, as do schools and hospitals. Meaghan Morris has noted exactly this in "Things To Do With Shopping Centres," wherein she states, "The use of centres as meeting places (and sometimes for free warmth and shelter) by young people, pensioners, the unemployed and the homeless is a familiar part of the social function [of those locales] – often planned for, now, by centre management (distribution of benches, video games, security guards)" (1999, 397). I leave aside for the moment discussions of mobile locations and businesses such as airplanes, busses, and taxicabs, as those will be a central focus of the following chapter. Also temporarily set aside will be those buildings that constitute integral parts of these motile

businesses, such as airports and bus terminals. A non-motile gathering place may thus be thought of as a building or collection of businesses that are largely immobile or temporally stable: they are located at the same physical space at any point in time (assuming the businesses are still viable), and do not, as a critical part of their operations, offer transportation services to the public.

Such businesses are widely present in contemporary legends, and many specific examples of legends center around persons of Asian descent—such as the numerous narratives involving the discovery of various parts of rodents or domestic pets in the refrigerators or meals of Chinese restaurants. Just as one of the underlying concerns present in the “Chinese Restaurant” legend (and its variants) is the contraction of disease, SARS brought about the creation of dozens, if not hundreds of rumors concerning the dangerous potential juxtaposition of large numbers of people, Asian or otherwise, and the coronavirus. These new SARS legends not only bear striking resemblances to the versions that have been around for decades, but carry the same basic warning: beware of other people.

There are also, as we have seen in the previous chapters, numerous legends concerning the contraction of AIDS by an unwitting victim. One of the key differences between AIDS and SARS is that, while the former is almost exclusively contracted through bodily fluid exchange—mainly blood and semen—the latter virus is airborne, and thus it is possible for a person to become infected by only being in the same physical location as a carrier. No matter how unlikely the chances of this happening (one newsletter proclaimed that the average person had a better chance of winning the

PowerBall lottery than of contracting SARS from standing next to a coughing stranger—see New Milford Visiting Nurse Association 2003), the possibility is there, and this seems to have mutated the nature of many of the “gathering place” narratives that SARS borrowed from the contemporary legend genre.

First, however, we take a look at non-SARS gathering place legends as a whole, examining the key features and stories that make up these narratives. An easy way to start such an examination is through an example, and so I offer the following, being an extract from an 1888 poem titled “My Other Chinee Cook,” by James Brunton Stephens:

“Go, do as you are bid,” I cried, “we wait for no reply;
Go! let us have tea early, and another rabbit pie!”
Oh, that I had stopped his answer! But it came out with a run;
“Last-a week-a plenty puppy; this-a week-a puppy done!”
Just then my wife, my love, my life, the apple of mine eye,
Was seized with what seemed “mal-de-mer,”—“sick transit” rabbit pie!
(Brunvand 1986, 102)

This poem is admittedly problematic as an opening example for several reasons, mainly that the action does not occur in a gathering place, and there is not an explicit mention of disease as a consequence of action (though the wife’s becoming ill after learning the species of animal she has been eating hints in that direction). However, the overt stereotyping and racism present here does closely resemble what might be found in a more modern version of the legend, and we still have the basic theme of Asian people serving forbidden (by Western standards) foods to unsuspecting patrons.

An example that more closely resembles the gathering-place narratives outlined above comes from author Mark Twain, who related in Chapter 54 of *Roughing It*, a near-encounter with rodents at the grocery store of one Mr. Ah Sing in Virginia City, Nevada.

After sampling and enjoying Mr. Sing's brandies, Twain and his companions were offered "a mess of birds'-nests; also, small, neat sausages, of which we could have swallowed several yards if we had chosen to try, but we suspected that each link contained the corpse of a mouse, and therefore refrained" (2003, 353). J.A.G. Roberts, in *China to Chinatown*, offers an even more modern and exemplary narrative, gathered from the pages of *Saga Magazine*, where a reader recalls her husband wanting to get Chinese takeout despite stories which were "rife of people who ate Chinese food getting bones stuck in their throats which were later identified not as chicken bones, but cats' or even rats' bones" (2002, 178).

These last two narratives very adequately summarize the Chinese restaurant legend as it has appeared for several decades now. Paul Smith, in *The Book of Nasty Legends*, gives what might be the ideal, Platonic form of the narrative: a group of friends are at a Chinese restaurant enjoying their food when one of them begins to choke. The victim is rushed to a local hospital where a surgeon removes a small bone from his or her throat. The bone is sent for analysis, and the returned report states that it came from a rat. As Smith concludes the story, "The public health department immediately visited the restaurant to inspect the kitchens and in the fridge they found numerous tins of cat food, half an Alsatian dog and several rats all waiting to be served up" (Smith 1984, 54).

The ending to this version of the story neatly ties together the mystery of the rat bone's origin with the distrust of foreigners that seems to plague contemporary legends, or what Smith calls "our irrational fear of the unknown and exotic impinging on our traditional way of life" (Smith 1984, 54). Even better, Smith's ending gives the reader a

sense of the true disgusting nature of Chinese restaurants: that they not only eat rats, but dogs and cat food as well. This legend, as Smith states, has been circulating in the British Isles since the 1950's, and is well-known through Europe as a whole—though the ethnicity of the offending restaurateurs does vary, as does the denouement: sometimes the meat served to the patrons is in fact their own pet dog, cooked up for them as the result of a language barrier with a foreign waiter who interpreted “Feed my dog” as “Feed me my dog.”

In the examples given so far, the connection between gathering place and disease has been inferred, for the most part; the closest any victim has gotten to being “ill” involved choking or vomiting, both of which are conditions that can be easily and relatively quickly remedied. Other legends are not so timorous about the dangers of gathering places. A search in July of 2007 of snopes.com's index using only the word “AIDS” turned up at least five examples. Consider, for instance, the legends about AIDS-infected needles stuck into the seats at movie theaters at just the precise angles so as to penetrate into unsuspecting patrons' derrieres. Variants of this legend that involve needles in payphone coin slots, or taped to gas pump handles would also apply, if telephone booths and gas stations are considered as temporally-displaced gathering places (i.e. while at any given time only one person may be occupying the space, over the course of a day several dozen people will have occupied it).⁷ A fourth example (counting the payphone slot and gas pump handle variants as separate narratives) involves HIV-

⁷ For an examination of this phenomenon as recognized and utilized in traditional practice, see Lynne McNeill's upcoming article “Portable Places: Serial Collaboration and the Creation of a New Sense of Place” in *Western Folklore* 66.3/4.

positive blood being slipped into ketchup dispensers at restaurants, and a fifth involves HIV-positive semen turning up in the garlic sauce at a local pizza joint. Clearly, gathering places and AIDS go hand-in-hand: what better way for the antagonist to infect others but to place the virus in a location where dozens of people can't help but come into contact with it every day? It is this same logic that might be found in legends surrounding Church's Chicken, as detailed by Patricia A. Turner in *I Heard It Through the Grapevine*: that the Ku Klux Klan had put either spices or drugs into the chicken "that would cause sterility in black male eaters" (1993, 139).

It should be explicitly stated here that the consequential results of being in a gathering place are not always intended. Many legends do involve victims coming to intentional harm at the hands of an antagonist—i.e. AIDS-infected needles left in public places—but others involve victims suffering unintended misfortune. The Chinese restaurant stories might fall under this category, depending on how the story is told and where it is set. Rats, cats, and dogs all have long and recognized histories as foodstuffs in China—especially in the southern provinces (c.f. Roberts, J.A.G. 2002, 20)—and some restaurants in China still serve rats in modern times, as reported in the *Wall Street Journal* in 1991 (c.f. "Chinese restaurant rats..." 1994). It is conceivable for a Westerner to wander into this restaurant and order a dish without knowing its nature, and the logical reverse of this happens in some legends: that a Chinese cook in North America, not knowing that rats are *not* eaten here, perhaps because he does not speak English, simply continues to use them in his meals as he has always done.

It is also entirely possible that the relevancy of the danger in the gathering place has little to do with disease. Many contemporary legends detail public-space harm that is devoid of mention (or inference) of viruses or bacteria, but specifically mention dangerous animals, such as "The Hapless Waterskier," or "The Incautious Swimmer," both of which involve water-sport participants at local lakes or swimming holes who dive or fall into a bed of water moccasins (or some other species of water-bound poisonous snake). Also included in this category are the multiple variants of animal-in-store-merchandise legends: "The Snake in the Blanket," "The Spider in the Yucca," "Spiders in Cacti," "Snakes in Dry Goods," "The Creeping Comforter," and "Snakes Alive!," to name a few (c.f. Brunvand 1986; Brunvand 2004).

Finally, contemporary legend is also full of narratives that involve non-disease-related public-space harm caused by other humans. Because the numbers of legends that fall under this category are numerous, I will limit my examples to only a few, and focus specifically on those that occur in shopping malls. Outside of the workplace, malls are one of the most commonly-visited public gathering places for the general populace. The larger malls in North America are designed to easily accommodate several thousand people at any given point in time, and even small-scale malls can comfortably fit a hundred patrons. Such spots as these are rife for legend. It is human nature to be suspicious of those we don't know (de Vos 1996), and in malls, we are surrounded by scores upon scores of unfamiliar souls, any of whom may—at least in legend—turn out to have ulterior motives. So it should come as no surprise that narratives such as this one have been making the rounds:

I just heard on the radio about a lady that was asked to sniff a bottle of perfume that another woman was selling for \$8.00 (In a mall parking lot). She told the story that it was her last bottle of perfume that sells for \$49.00 but she was getting rid of it for only \$8.00, sound legitimate?

That's what the victim thought, but when she awoke she found out that her car had been moved to another parking area and she was missing all her money that was in her wallet (total of \$800.00). Pretty steep for a sniff of perfume!

Anyway, the perfume wasn't perfume at all, it was some kind of ether or strong substance to cause anyone who breathes the fumes to black out. (Brunvand 2004, 245)

The protagonist's ultimate motive in this story—robbery—is fairly benign, when compared to some of the other fates that befall people in shopping malls. Take, for example, the following plots of legends: women getting abducted after being lured into the parking lot with promises of cash and fame if they'll appear in a commercial being filmed outside; ankle-slashers hiding under people's cars; the man who helps fix the woman's mysteriously flat tire turns out to have a knife and length of rope in his briefcase; small girls go missing, to be found a half-hour later drugged, disguised, and being smuggled out of the mall to be sold into white slavery rings; and a small boy goes missing, to be found minutes later in the bathroom, surrounded by black gang members who have kidnapped him so they can castrate him. The list could extend for pages and pages.

What is clear, however, is that gathering places are commonly equated with danger in contemporary legends. Nowhere is this more present than in SARS, though it should be immediately noted that the narratives that will follow are not limited to the legend genre, but include hoaxes, rumor, and gossip; the critical commonality is the gathering place. One crucial difference between the legends that have been discussed so far in this chapter and what is to follow is that while the link between gathering places

and danger in contemporary legend may be either overt or merely suggested, and while the nature of that danger may be human, animal, or viral in origin, SARS narratives are marked by a *lack* of ambivalence: the danger is definite, the danger is here, and the danger is other people.

As chapter three's timeline detailed, widespread public knowledge of the existence of SARS can be definitively traced to February 26th, 2003, when an emerging Chinese disease was given its now-infamous name. The earliest any citizen of Canada could have come into personal contact with the disease inside that country was roughly two weeks later, the first reports of SARS coming from Toronto on the 14th of March. Two weeks after that, Chinese businesses in Toronto were already feeling the effects. An article in the *Toronto Star* on the 29th of March noted that Toronto's Pacific Mall—North America's largest indoor Asian shopping mall—was virtually empty, with some stores claiming sales drops of seventy percent (Oliveira 2003). This is quite a feat for a 400-store strong complex, and that within a larger complex containing an additional 500 stores. Moreover, the article in the *Star* noted that staff of the Pacific Mall had been complaining about business being worse than usual for “about two weeks” (Oliveira 2003). In other words, business at the mall began to drop within *hours* of the first cases of SARS appearing in Toronto (and in North America). The connection in the public mind between Asians, gathering places, and danger was immediate, as was public reaction.

The numbers at this point in time do not seem to justify such a response: by the 29th of March only three Canadians had died from the disease, two of whom were Chinese (a mother and her son) (Oliveira 2003). Recall, however, that by the end of

March, thousands of Ontarians had been ordered into self-quarantine, and the WHO had asked Canada to begin screening passengers for SARS. Despite the low numbers of Canadian cases and deaths, the public had learned from local and worldwide governmental warnings that the potential for SARS was massive, and responded in kind. Part of this response included the dissemination of rumors, and according to merchants at the Pacific Mall, the single largest source of rumors was the Internet (Oliveira 2003).

Also affected by this point in time was Toronto's Ruby Chinese Restaurant, and again the staff pointed towards email as the source of their problems: "Some lawless people spread rumours through the Internet that a staff member from our restaurant contracted the virus," said Frankie Lee, a spokesperson for the restaurant. "In addition to attacking our business' image, they caused unnecessary public panic and affected the whole community.... Not many Chinese people want to go out to eat and many people are staying at home" (Oliveira 2003). Lee estimated that the Ruby's business had dropped by eighty percent in two weeks, for a total loss of revenue in the \$15-\$20,000 range. Rumors such as this would ultimately lead Canadian Prime Ministers Paul Martin and Jean Chrétien, along with several Liberal MPs, to dine at Chinese restaurants in Toronto in mid-April, inviting members of the press along to witness that there was no danger in visiting the establishments ("PM hopes meal..." 2003).

April's rumors, however, were only getting started. On the 1st of the month, a Hong Kong teenager placed on his website a prank message which stated that the SARS virus was sweeping through the city, forcing the government to declare the entire municipality, along with its seven million inhabitants, "an infected place" that would be

placed under immediate quarantine. The hoax triggered massive and widespread panic: already frightened by the March 31st news that an entire apartment complex had been placed under quarantine, Hong Kong residents swept grocery store shelves dry of canned and preserved goods, and financial and stock markets plummeted—including the Hong Kong dollar. Local authorities were forced into immediate action to counter the rumors, Director of Health Margaret Chan making a public statement that there was “no plan to declare Hong Kong an infected area. We have adequate supplies to provide the needs of Hong Kong citizens and there is no need for any panic run on food” (Lyn 2003c).

The same day, a reporter for CNN residing in Hong Kong noted the drastic changes in the public that had happened in only the last week. The presence of surgical facemasks, he noted, had increased from near-zero to near-ubiquitous; he had even taken to wearing one, despite his initial skepticism of their usefulness. Most telling for the perception of danger in gathering places was an account from a Hong Kong friend of his who had traveled to his company’s Singapore offices for business. Upon arriving, he was “politely requested” not to enter the offices, as news of his arrival had frightened local employees (Havely 2003). In the desire to provide for the safety of those who were forced to gather in groups because of business, even the most remote possibility of infection had to be countered.

Back in North America, an apparent April Fool’s joke posted on a Massachusetts Institute of Technology website in Boston, Massachusetts, caused an uproar similar in nature—though not in scope—to the one in Hong Kong. The website claimed that an employee of the China Pearl restaurant had been infected with SARS, and advised against

visiting Chinatown in general. Again, those who read the warning heeded its advice and passed it on to others—though it is unclear whether that was out of belief or a simple “better safe than sorry” mindset. The effect on the Chinese community was immediate, the China Pearl restaurant’s business dropping by seventy percent overnight, and other businesses in the area reporting similar damage. As one article put it, “There can actually be legal parking spaces found in Chinatown throughout the day, a clear sign that the April Fool’s joke has damaged the normally bustling business community” (“Chinatown businesses hurt...” 2003). Local business leaders were, after a few weeks, able to correct the situation, thanks in part to a seminar conducted at the China Pearl to denounce the rumors, and fact sheets printed up by health officials and disseminated to Boston’s businesses and schools.

Next door to Massachusetts, New York’s Chinatowns reported similar rumors, some of which were also attributed to April Fool’s jokes. Though none were considered humorous by the business owners who were affected by them, one in particular was immediately damaging:

For those of you who eat in chinatown [sic], please be advised for that [sic] SARS has hit that area. As of today I heard that the owner’s son(s) & the entire staff of the restaurant BO KY located on Bayard st. [sic] b/t Mott & Mulberry Sts. has been infected with the SARS [sic]. The owner was infected & has passed away recently due to what have seemed to be flu like symptoms. I think its [sic] best that you either stay away from that area or eat in.

Please pass this along for those who I might have missed. (Emery, David 2003)

This rumor, circulated not only on the Internet, but by New York’s Chinese press, who had picked it up off the web, came as quite a shock to Mr. Chivy Ngo, owner of the Bo Ky, who received condolence calls and flowers from even close friends. Though all of the

rumors were quickly dealt with, the damage had been done: the public stopped coming. Even store owners were prey to the fear. Kay Cheng, the manager of New York's Excellent Pork Chop House, admitted to a reporter that he stayed in his house on his days off, too afraid to leave lest he catch the bug (Saulny 2003).

Businesses continued to falter around the globe as April marched on. On the third day of the month, *The Age*, an Australian newspaper, picked up a Reuters story that carefully detailed the Hong Kong scenario. The picture it painted was grim: businesses of all types were being forced to drastically alter their daily routines because of customer losses. California Red, one of Hong Kong's largest karaoke bars, normally bustling with activity, was forced to temporarily close three of its twelve outlets—and this *after* spending HK \$1 million (US \$128,200) to disinfect the parlors, buy disposable paper caps for their microphones, and publicize their clean-up efforts. Normally-crowded marketplaces like the Causeway Bay were now populated by sparse, mask-wearing and fast-moving groups. Local gyms were nearly empty, and the few clients who did still exercise wore masks while doing so. Receipts at bars and restaurants in the trendy Lan Kwai Fong district were down by forty percent or more from the same period a year earlier—normally one of the busiest tourist seasons, as visitors come from overseas to watch the Hong Kong Sevens rugby tournament. Restaurants of all types reported so few customers that many establishments closed down their buffets to stem food spoilage. City-wide, employees worked half-shifts or took unpaid leaves of absence to avoid being laid off because of the losses. Yu Pang Chun, chairman of the Hong Kong Retail Management Association, called it “the worst crisis we’ve had, worse than the Asian

financial crisis, the bursting of the dotcom bubble and the 9/11 attacks in the US" ("Hong Kongers shun..." 2003).

On April 8 of 2003, ABC News reported on the economic losses in Boston, New York, and San Francisco, revisiting many of the businesses reported on earlier in this chapter. Their investigations still showed widespread fear of public places, as evidenced by mostly-empty stores across the nation. Chinatowns in many major cities were hit especially hard. Boston's China Pearl restaurant was still at this point suffering from the April Fool's joke mentioned earlier, and estimated their business was still suffering from seventy percent losses. Surrounding stores were experiencing a similar backlash by association. Across the country, San Francisco sales of surgical masks, rubbing alcohol swabs, and latex gloves were brisk, but restaurants, grocery stores and tourist shops weren't faring well. The only positive note was that Chivy Ngo's Bo Ky restaurant in New York had rebounded from its initial losses, thanks to community leaders and news reports exposing the hoax (Emery, Theo 2003).

April's news also brought reports of other Asian markets suffering losses in California. The first of these arose in Sacramento County, the rumors this time focusing on Welco's Fruitridge and Del Rio Avenue stores, both owned by brothers Jimmy and Tommy Phong. Spread initially and predominantly by email, the hoax claimed that Tommy had died of SARS, his wife was in critical condition in the hospital, the employees at both stores were all infected, and police had been forced to shut the businesses down. Sacramento County Health Officer Glennah Trochet was quick to stymie the rumor in an interview, noting that Sacramento County as a whole had only a

single case of SARS, and that case 1) was unrelated to any Asian market, and 2) had been handled efficiently, with the patient recovering well. Nevertheless, locals began avoiding not only the Phong brothers' businesses, but surrounding establishments as well. Hoang Van Nguyen, a resident of the area, stated that he had stopped shopping in local stores because the message frightened him: "Since this stuff is going on, I have been reluctant to go there as much as I used to" (Griffith 2003).

The second California-related rumor sprung up several hundred miles south in the city of San Gabriel, located in Los Angeles county. An email version of the rumor closely matches that found in relation to Mr. Ngo's Bo Ky restaurant in New York, though with different details and a longer plea for action:

The SARS disease has spread to our neighbor. Today 4-3-2003, the police has [sic] shut down Hawaii and San Gabriel Supermarket due to the employee somehow got hit by this virus. Also one of the chief [sic] at Capital restaurant in Alhambra also got this virus. The Sam Woo restaurant in the FOCUS plaza was close [sic] early today to avoid getting it.

Friends, please take care of yourself [sic] and your family. Avoid going to ASIAN areas!!! This is very serious about life and death and spreading them to the love [sic] one. Pay close attention to the Chinese newspaper and be alert about this deadly virus. Please pass this message to all of your friends so they can protect their love [sic] one too. (Emery, David 2003)

The article that covered this story—gathered from the debunking website urbanlegends.about.com—opened its comments section with a quote from an Agence France-Presse dispatch: "Fear of the SARS virus is becoming a more dangerous epidemic than the disease itself." This indeed seems true, as the article went on to note that, as of mid-April, not only had all of the rumors been found wanting for truth, but "no cases of SARS [had] been found in any Chinatown in the United States" (Emery, David 2003). Despite this, versions of "SARS in Chinatown!" rumors had been collected in San

Francisco, Las Vegas, Sacramento, and Boston (Emery, David 2003), as well as Honolulu, Hawaii (New Milford Visiting Nurse Association 2003). Canada had also been hit by rumor emails at this point, of course, and the narrative popped up across the Atlantic only a few days later, when Britain's Chinese restaurants began suffering losses in customers, prompting at least one establishment to place an advertisement in a Chinese newspaper denying that staff members had contracted the virus (Vasagar 2003).

This wasn't to be the end of the SARS rumor mill's run. Possibly the worst of the individual scenarios I collected happened at the end of April 2003, when a man at the Taipei Municipal Heping Hospital (TMHH)—already beleaguered by rumors of SARS deaths—reacted to an apparently untrue story that his wife had contracted SARS by hanging himself. TMHH staff, reacting to both the untrue SARS rumors and the true suicide rumor, attempted to force their way out of the hospital when authorities sealed it off to investigate the man's death. Within a matter of hours the incident was brought to the attention of a US CDC official staying in Taiwan, who immediately reported back to his headquarters that the entire city was "out of order." It took the intervention of Lee Lung-teng, Deputy Director-General of the Department of Health in Taipei, to set matters straight, though that only happened after two CDC officials visited the TMHH to assess the situation (Chen 2003).

Rumors such as these spread throughout Asia, but affected China most heavily. Hospitals in Beijing were quarantined on what seemed a weekly basis in April, and workers refused to show up for shifts. Restaurants, theaters and shopping malls stood empty. Elementary and middle schools closed for two weeks. Some universities confined

students to campus to prevent anyone from bringing in the virus. Entire villages near the city were blockaded by citizens who refused to allow outsiders to enter, fearing the possibility of an outbreak. Those who were able left the city, and possibly the country. So devastating were the rumors and concomitant fear that by early May, Citigroup had lowered its estimate of China's 2003 economic growth from 8% to 6.5% (Beech 2003). Nowhere in the world was the link between gathering places and fear so omnipresent.

The SARS narratives used in this chapter have to this point been gathered from media sources and the Internet, and have been placed in a rough chronological order. I will stop my examination of rumors from these sources at this point—both in this chapter and in the SARS timeline—as it should be obvious by now that many SARS narratives do exhibit a correlation between danger and gathering places. In addition, most of the collected narratives from media and Internet sources that arose after early May of 2003 follow the same basic format as the examples I have already listed: empty shopping malls, grocery stores, and restaurants, most of which are located in predominantly Asian sections of large cities.

There is still one group of narratives remaining to be examined: those gathered from my informants. Some of these narratives follow the same basic format as those that have already been listed, but there are a few that stand out, whether they are unique or simply excellent examples of their kind. One informant, Mike, was working as an EMT in Toronto during the outbreak. Mike mentioned the abandoned nature of Chinatown (though he could not recall avoiding it himself, nor could he remember any of his friends purposely not going to those areas), but most pressing are his experiences as a paramedic

during this time, and how he was perceived by the public. Some of Mike's narratives were second-hand: stories from other medical personnel concerning patients in hospitals and nursing homes whose families did not visit them during the outbreak. But the larger number of his stories involved personal experiences, especially when he was working in his capacity as a paramedic.

Mike was quarantined in mid-March because he had entered Scarborough Grace hospital without wearing a mask and gown. He had been authorized to do this, but was informed a few days later that all personnel who had not been protected, despite the authorization, were to enter into quarantine. When he returned to work "about seven-and-a-half days" later, his working environment "progressed sort of from wearing masks in all calls to wearing a mask and gown; up to mask, gown, gloves; then double-gowning, double-gloving, face shields, hoods; and then other calls we wore full Tyvek suits, so full head-to-toe, sort of like the fellows in the *E.T.* movie" (Larsen 2005). Aside from the hot and stifling nature of such protection, Mike commented that public reaction to medical personnel was affected dramatically by these suits: "There was sort of an air of apprehension, there was an 'I don't know' to it, and of course media, all the footage, the transfer footage, the response footage, we're the guys outside, so we're the easiest ones to videotape, to record in our big hoods and gowns and masks, and so there's the association there" (Larsen 2005). Additionally, Mike recalled "people...walking towards me, and crossing the street, even though I was by myself and there were no patients around, there was no one ill. Or people covering their face in their elbow, sort of the pit of their elbow, or holding their jacket sleeves and whatnot over their face, sort of to prevent themselves

from breathing in near me” (Larsen 2005). Mike’s mother, by simple dint of association, was also treated differently at work, as she was constantly questioned by coworkers and managers as to when was the last time she had seen Mike, as her answer could mean possible endangerment for people in her office building.

But the most extreme cases of fear were reported to me by my interviewees Angel and Rosita Lim. Angel freely reported being so concerned about contracting SARS that his fears went well beyond mere gathering places, and included quite literally any public space outside of his house. For “around six or seven months” Angel and Rosita “basically...stayed home. Like even Saturday we never [went] out,” and they “tried to avoid people coming to the house” (Lim, Angel and Rosita 2005) as well. Angel seems to have been the main source of these actions, as described by his wife: “For me, I’m not a worrier, but it affected me because it affected [Angel], pretty much, because he...so he, we didn’t go out anymore. He stocked up on water. He had this great big sign posted on the house: ‘Wash your hands.’ (laugh) Even the children’s friends, if they came, please wash their hands” (Lim, Angel and Rosita 2005). Rosita, however, was not without her own sources of concern, admitting that she would have been wary to enter funeral parlors during the outbreak.

Angel, on the other hand, offered a large list of places he avoided: malls, movie houses, restaurants, and medical facilities: “So one thing, you know, I’m afraid to go to the clinic, like if you are sick, like if you have colds, you would avoid going to see the doctors, because who knows, somebody before you has seen the doctors and left something, and then you go to see the doctors and you might have SARS” (Lim, Angel

and Rosita 2005). Angel's avoidance of public places was made easier by the fact that he had retired by this point, a fact he used to his advantage when grocery shopping—the one activity he could not avoid: “I go to [get] groceries, but during not the rush hour. I try to avoid when there are times that there are lots of people” (Lim, Angel and Rosita 2005). Angel did recall a friend of his—also retired—whose fear even outstripped his own: “A good friend, he didn't go to see his barber, and he was, his hair was long and he had so many, because he was afraid” (Lim, Angel and Rosita 2005).

So great was public fear of SARS that even sneezing in a gathering place was likely to cause a reaction, as related to me by Jonathan Gould:

I was studying at Robart's Library at the University of Toronto, and it was a packed room, and I sneezed, and I heard a girl under her breath at the table say, “SARS,” this panic everyone had. And it was hard to tell how much it was just a pure joke on her part, if she was just goofing around, or if she really...I mean, when you're in this enclosed space, I can imagine that, there is that kernel of fear, you know, you're kidding but...who knows what's around? (2005)

Jonathan's narrative is exemplary for its revelation of the nature of fear. As Jeannie Thomas remarked in *Featherless Chickens, Laughing Women, and Serious Stories*, laughter can be caused by “the broaching of the taboo and emotionally charged topic of death” (1997, 46). Joking behavior can come from the same wellspring of emotion, and Jonathan's remarks make this clear: was the girl who said “SARS” really joking, or was she serious? Or was it a little of both?

Another issue that is relevant to many of the narratives presented in this chapter is that of “popular epidemiology,” defined by Phil Brown as “the process by which laypersons gather scientific data and other information, and also direct and marshal the knowledge and resources of experts in order to understand the epidemiology of disease”

(Brown 1992, 269). Brown points out that a key difference in interpreting disease between “professionals” and “laypeople” is that the former focus on disease processes, while the latter are more concerned with personal experiences of the illness. These divergent approaches to disease often result in considerable discord between the two parties, where neither is entirely willing to meet the other at that group’s worldview. Professionals are proclaimed as being too clinical and detached in their focus, while laypeople are accused of being too unscientific and subjective. Laypeople, however, can be extremely aggressive in their demands for data, and in situations where the scientific world fails to meet those needs, they will search for data from other groups, and even create their own groups (sometimes comprised at least partially of sympathetic professionals) to conduct studies appropriate to their demands.

Brown even presents a set of stages that are common to popular epidemiology. These stages reflect processes that occur during investigations of correlations between pollutants and health effects—not diseases and health effects—but many of the stages still apply. They are as follows:

- 1) A group of people in a contaminated community notice separately both health effects and pollutants.
- 2) These residents hypothesize something out of the ordinary, typically a connection between health effects and pollutants.
- 3) Community residents share information, creating a common perspective.
- 4) Community residents, now a more cohesive group, read about, ask around, and talk to government officials and scientific experts about the health effects and the putative contaminants.
- 5) Residents organize groups to pursue their investigation.
- 6) Government agencies conduct official studies in response to community groups’ pressure. These studies usually find no association between contaminants and health effects.
- 7) Community groups bring in their own experts to conduct a health study and to investigate pollutant sources and pathways.

- 8) Community groups engage in litigation and confrontation.
- 9) Community groups press for corroboration of their findings by official experts and agencies. (Brown 1992, 269-70)

In the SARS narratives that have been presented in this chapter, many of these stages appear—especially if, in addition to “government officials” and “scientific experts,” media sources are added to the list of groups consulted and brought in by laypersons. What also needs to be made explicit is that, in many cases, there is only the need for there to be a *perceived* correlation between cause and effect.

Under these criteria, the stages may be applied to SARS narratives as follows:

- 1) A group of people notice separately a set of well-publicized health data associating SARS with people living in China, and the existence of local people of Asian ethnicity.
- 2) These people hypothesize something out of the ordinary, namely a connection between SARS and any person of Asian ethnicity.
- 3) People share this information via oral and electronic means, creating a common connection and a community based around fear.
- 4) This new community, now a more cohesive group, reads about, asks around, and talks to media sources, local officials, and other group members about the correlation between Asian peoples and SARS.
- 5) The community reorganizes the media, via supply and demand economics, into an entity dedicated to providing information about Asian peoples and SARS.

- 6) Government agencies, in response to waxing xenophobic pressure, issue official denials of the presence of SARS in local Chinatowns and Asian neighborhoods.
- 7) Community groups bring in further examples from their own experts—i.e. media sources and first-hand and/or “friend-of-a-friend” testimony—to respond to the denials.
- 8) Community groups continue to engage in confrontation with Asian peoples, mostly via avoidance of them, their businesses, and their neighborhoods.
- 9) Community groups may press for corroboration of their findings by official experts and agencies, but may also simply see the desertedness of Asian restaurants and neighborhoods as ample evidence of the veracity of the link between Asian peoples and SARS.

The comparison of SARS narratives to the rubric created by Brown is perhaps forced, and the resulting schema doesn't function as linearly as does the original. Many of the SARS stages may be happening simultaneously, while Brown stated that his stages usually occurred sequentially. This is largely because Brown is writing about a situation where the perceived connection between health effects and pollutants turned out, on official examination, to be an *actual* connection. As such, he does not consider the ramifications to his set of stages that would come from the connection being proven false. In other words, his stance does not deal with false-positive narratives, and thus he is never forced into a situation where his theories must take into account why disease narratives can exist despite their incorrectness. What comes from taking such factors into

account is a realization that disease narratives can form their own authoritative gravity. That is, the existence of a rumor about SARS being located in an Asian neighborhood or business can be seen by laypersons as providing its own proof: the narrative wouldn't exist if it weren't true (or, at least, if it weren't true *somewhere*). Brown does concede that "lay investigators may pursue specific inquiries with their own agenda in mind...[emphasizing] certain health data and [minimizing] other reports" (Brown 1992, 278), but he never considers the ramifications to his theories that would come from the collected data being incorrect, but not recognized as such. Popular epidemiology can be based on the gathering of accurate, provable data, but it does not have to be.

This is not to say that Brown's conclusions and theories are without merit, for he does present rubrics that are valuable in studying disease narratives. Especially relevant are his comments on the question of how it is possible to know whether lay investigations provide accurate information. Though even in this section Brown limits his comments to defending the layperson's findings, rather than discussing what would happen if they were proven incorrect, he still offers a positive message about the importance of paying attention to lay investigations. He states:

Public health officials worry that some communities might exaggerate the risks of a hazard, or be wrong about the effects of a substance. Yet if this occurs, it must be seen in context: community fears are too often brushed aside and data has been withheld. Given the increasing cases (or at least recognition of those cases) of technological disasters, drug side effects, and scientific fraud, public sentiment has become more critical of science. In response, lay claims may be erroneous. But this is the price paid for past failures and problems, and is a countervailing force in democratic participation.... Exaggerated fears may be understood as signs of the need to expand public health protection, rather than justifications to oppose lay involvement. Even if a community makes incorrect conclusions, their data base may still remain useful for different analyses. (Brown 1992, 278)

Relating these comments back to SARS, we might say that Brown would be of the opinion that disease narratives are important to study because 1) they offer a glimpse into lay understandings of disease, and 2) the study of such a database can reveal to medical professionals methods of better interacting with the public. We will return to these two points again and again throughout the remaining chapters, expanding them to offer examples of the insights that can be gained, and how professionals can use these insights to improve their communicative skills.

Though the full scope of narratives that arose around SARS contains many entries that do not involve fear of gathering places, there are a significant number that do, as has been seen by the previous discussions. The very nature of SARS facilitated and exacerbated the creation of these stories, being an airborne virus that was, even early in its existence, already humming with real stories of the now-deceased who had done nothing more endangering than occupying the same elevator space as a contagious individual. Many of my informants reported feeling “trapped” by fear; a sentiment that seems to run throughout the narratives I collected from the Internet and from media sources. Reaction was immediate and widespread, to the extent that within a month’s time of the word “SARS” making its first newspaper headline, rumors and hoaxes concerning infected individuals working in restaurants, malls, and other gathering places arose in places as distant and different from each other as Beijing and New York. I close this chapter with a quote from my informant Luis Tan, who perhaps best summarized what it was like to live in fear of gathering places:

It was a really scary time for everybody. It limits your movement, and you’re not free. You feel you’re not free when you go outside the door. You want to go here

and then you think, “Oh, because of SARS let’s avoid this.” If somebody put the chain on you that you are [on] the leash, you know, you can only go so far and so much, that’s how you feel. (Tan 2005)

Chapter 6: Private Actions in Public Spaces: SARS and Paradigm Violations

According to Linda C. Garro, “to understand the impact of illness...on a person’s life, it is necessary to develop an understanding of the narrative context” (1992, 133). In other words, any true study of the actions undertaken by a group suffering from an illness must take into account “the meaning that they place on these actions” (Calnan 1987, 8). In the SARS epidemic of 2003, public transportation became anathema, with airports in Toronto, Singapore, Australia, and numerous other countries showing marked decreases in passengers. Many narratives expressed fear and concern over long-distance and intercontinental travel. Plane, train, and bus-related services suffered as a result. However, the flow of information between countries, due largely to the Internet and media sources, increased greatly. This led to a curious situation in which, though informational globalization waxed prolific, cultural and social globalization was stilted: the widespread diffusion of technology that enabled public knowledge of foreign affairs only served to make people wary of other cultures at best. At its worst, this technology made possible the circulation of narratives that proved entirely counterproductive to cultural globalization through the rapid diffusion of inaccurate ethnic information. Many of these erroneous narratives ultimately dealt with the concept of private actions performed in public spaces as sources of endangerment, and these narratives will be the focus of this study. The ultimate goal of this chapter is to demonstrate that the anti-globalization narratives present in SARS were intricately and inseparably linked with

incorrect cultural stereotypes, and these were ultimately the result of widespread incompetence in determining the meanings other ethnicities placed on actions.

As James L. Watson said, “Globalization is a process that is replete with ironies. One of those ironies hides behind the SARS crisis: a premodern agricultural system—based on pigs, ducks, chickens, and centuries-old technology—could well turn out to be the greatest threat to the postmodern global system” (2005, 202). A second irony is that the ultimate tally of SARS—the 916 fatalities—is in hindsight highly disproportionate to the reactions and conspiracy theories, as indeed these reactions are in response to most diseases. Our conceptions of global security are thus largely skewed. Jeanne Guillemin, in discussions on the nature and realities of bioterrorism, notes that biological warfare “by humans against humans has been rare and historically inconsequential” (qtd. in Watson 2005, 202), and that by far the larger number of disease-related deaths come from nature.

Given these two ironies, we can quickly establish that diseases such as SARS are not only a consequence of globalization, but are in fact to be expected because of it. Many of the largest novel epidemics of the last one hundred years—AIDS, SARS, Avian Influenza, Ebola—and still more of the most common historical and modern diseases—malaria, rabies, salmonellosis, trichinosis, typhus—are all zoonotic in nature, resulting from human-animal microbial transfer. Those parts of the world where such transfers are the most likely to take place are developing world—“premodern,” as Watson calls them above—areas, places like China’s Guangdong province or Africa’s Congo. Historically, these places were isolated from other parts of the world, and thus non-airborne infectious

diseases had far fewer chances to spread. Today, it takes little more than a plane ride for these diseases to spread halfway around the globe. So while globalization theorists in the 1990s spent much of their time writing about the border-and-nation shattering nature of the Internet (c.f. Kelly 1998; Rosecrance 1999), it now seems that they should have focused less on the spread of bits of information, and more on the spread of bits of viral DNA. Globalization has not resulted in a utopia, but a worldwide hot zone. As Ann Marie Kimball succinctly states, “More remarkable than the recent emergence of SARS and the H5N1 virus [in China], perhaps, is the fact that we have not seen more of such events in this region” (2006, 62).

The harsh realities of globalization—that it is not the cure-all many assumed it would be—come as no surprise. Ralph Peters states, somewhat cynically, that “Those who imagine that greater understanding, courtesy of the Internet, will deliver an idyllic peace don't know humanity.... Just as hippie communes fell apart because somebody had to do the dishes, predictions that war will become ‘unthinkable’ fail because they embrace a dream and ignore human reality” (Peters 2005). And so it seems apparent that even within the field of globalization theory there is discord as to the ultimate benefits and drawbacks of the shrinking of the sociocultural world. However, there seems to be little argument that SARS is definitely a marker of the dangers that can come of it. Those theorists who have studied the disease unanimously point at the unpreparedness of the global community to deal with such an outbreak.

Many of the examples that are given to support such arguments within the academic community are the same narratives that circulated so widely among the general

population while SARS was waxing and waning: contaminated flights, busses, airports, hotels, etc. If one of the markers of globalization is the increased ability to travel quickly to distant places, then businesses and modes of transportation that support this ability cannot help but be inexorably intertwined with the narratives—both good and bad—that surround globalization.

Of course, one consequence of placing these businesses at the center of the problem is that the employees of these businesses are also placed there. Rumors and realities involving so-called SARS “superspreaders” who worked for the airline industry were common in newspapers, and as such were spread orally by those who read about them. One such case involved a single airline attendant named Esther Mok who is believed to be the “index case” for more than 160 of the Singapore infections in April of 2003. Infected herself by a man who caught the disease in Hong Kong, this flight attendant is known to have unsuspectingly passed on the virus to dozens of passengers, including one man whose general poor health, including diabetes and kidney disease, masked his symptoms, making it possible for him to infect at least forty doctors, nurses, patients, and guests in two wards of the Singapore General Hospital before his SARS-positive status was caught (“Are some better...” 2003).⁸

⁸ Mok’s story parallels that of another superspreader: Gaetan Dugas, the so-called “patient zero” of the AIDS outbreak, who used his capacities as a flight attendant for Air Canada to travel the world and purposely infect people with the AIDS virus. At least one report states that seventeen percent of the first 248 AIDS cases in the U.S. were linked to Dugas (see Goldstein 2004, 113-115). Though Mok did not purposely infect people with SARS, the consequences of her actions were just as severe, and the fact that she, like Dugas, was a flight attendant provides the two narratives with an eerie similarity.

Mok's direct relationship to the high number of Singapore cases is paralleled by an earlier Hong Kong case involving an unnamed airport worker admitted to the Prince of Wales Hospital in early March. This patient quickly became the biggest superspreader of the time—replaced only by Mok a month later—infecting 112 people, including every doctor and nurse assigned to him. In this man's case, the ultimate cause of his infectiousness was traced back to a jet nebulizer: a device that sprays medicated mist directly into the lungs, expanding the phlegm-filled passages to allow for easier breathing. Unfortunately, while this does help the patient, the larger lung passages and resulting breathing capacity result in the increased exhalation of viral materials (McNeil Jr. and Altman 2003). From the perspective of rumor, however, in both this man's and Mok's cases, the “superspreader” worked for the airline industry, and together these two people infected almost three hundred others within a matter of days.

Employees of these businesses constitute only a small part of the larger body of narratives. Many stories involve passengers on flights who spread the virus. As has been seen already, SARS was brought to Canada by an airline passenger—itself a damning piece of evidence for anti-globalization. Other established infection vectors include Air China's March 15th Flight 112, which included as a passenger a seventy-two-year-old man who infected twenty-one of the flight's patrons, directly resulting in SARS' presence in both Inner Mongolia and Thailand (Lakshmanan 2003). Even scares that ultimately turned out to be false alarms pointed their figurative fingers directly at the airline industry—scares such as the March 18th New York-to-Singapore flight which was grounded and quarantined in Frankfurt, Germany after it was learned that one of the

passengers was a doctor who had been treating SARS patients in Singapore only days earlier. Ultimately none of the flight's four hundred passengers tested positive for SARS, but the story still made headlines (Cohen, Naik, and Pottinger 2003). Looking at the history of SARS, it may easily be said that had the airline industry not existed, the disease would have never had the impact it did.

My own research has turned up several narratives concerning the negative effects of globalization on ethnic identities and disease panic. Many of the people I interviewed mentioned general fears of traveling by bus, plane, and train, but two interviews in particular stand out as exemplary. The first was conducted in late September of 2005 with Heather Read. During 2003, Heather was living in Hamilton, Ontario, attending university, but making regular trips to see both her brother in Toronto (roughly an hour's drive northeast) and her parents in Ajax, Ontario (an additional half-hour's drive northeast).

Heather reported that Toronto's outbreak had very little effect on her day-to-day life, Hamilton being far enough away that its residents only "got the tail end of the paranoia" (Read 2005). Her visits to her family, however, were another matter, especially since her mother worked in a caretaking capacity at the time. Heather described her mother as "a little bit of a hypochondriac, I think because of her medical training.... She works in a nursing home, so she had to go through the whole experience of gowning up, putting on mask [sic] every day that she went to work" (Read 2005). This constant reinforcement of care and precaution, as well as natural parental instincts, led Heather's mother to request her children take as much care in their lives as she was forced to in

hers. Among other details, one care package Heather received from her parents included “socks, some barbecue sauce, some jam...a book I had left behind...a hairbrush,” and a package of medical-grade filtering masks accompanied by a note that read “I’d like you to please wear them when you go outside” (Read 2005).

The largest response, however, came when Heather wanted to go home for a weekend. In Heather’s words:

To do that I’d have to take a GO bus, which is the common public transit system between Hamilton and Toronto, and I think [mother] had just been reading about how they had been tracing SARS to the initial spread being on an airplane, and so she got really paranoid about me taking any kind of public transit, and said, “No, you’re not allowed to come home. If you’re gonna come home, we’ll come get you in the car.” (Read 2005)

In total, the drive her parents made to have Heather avoid the public transit system totaled six hours: 1.5 hours’ drive from Ajax to Hamilton times four. This is double the time it would have taken Heather to make the trip by bus, but the security her mother felt in having Heather avoid this method of transport was worth the time and effort.

This first narrative deals heavily with disease panic and the length to which some people went to protect themselves and loved ones, but Heather’s second narrative combines this panic with ethnic identity, creating a narrative that reveals much about the mindset of the general population. During 2003, Heather was living with two roommates: one male, one female, both Chinese. As Heather says, “it was interesting going out with them because...if they coughed ever they’d get some strange looks” (Read 2005). These reactions didn’t seem to bother the male roommate, who because of allergies would sneeze often in public, and would immediately afterwards engage Heather in a joking banter that Heather recounts as beginning with “Ha ha ha: you have SARS” (Read 2005).

But Heather's female roommate, "Rita," was more heavily affected by the situation, especially concerning how she was perceived by the public. Even though this roommate was not overly concerned about the outbreak, laughing at Heather's mother's contributions of face masks to her daughter's care package, she was still stigmatized because of her ethnic identity:

She lived in downtown Toronto, and would go back between Hamilton and Toronto frequently. She, when she was on the subway, she'd sit, she'd describe several times sitting down beside somebody and having them get up and move over. And so I think that's...she started driving her car a little bit more often because that just started to make her uncomfortable. (Read 2005)

The effects of this stigmatization were not isolated to Rita; the rest of her family also experienced similar reactions (as did some of my Filipino-Chinese informants). In Rita's family's case, reactions against their being Chinese were strong enough that the whole family postponed an important trip to China to attend a wedding because of fears that they would not be allowed back into the country.

The second of my interviews that is particularly pertinent to the current discussions was with a man named Benjamin, who at the time I interviewed him in mid-2005 was working as a bartender in San Francisco, California. According to Benjamin, there was not a great reaction against SARS in the San Francisco area, other than Chinatown experiencing "somewhat of a lull" (Sandler 2005), as was common in many Chinatowns across North America. But during the summer of 2003—from roughly May 15th to June 15th—Benjamin was traveling through China's Hubei province and its neighbor, Chongqing municipality. Benjamin admits that many of his friends and family in the States had urged him to cancel his trip, and it had taken him quite some time to

convince them that his travels would not lead him into any viral danger. His family had fallen into the general mindset that anything Asian was dangerous, and it took Benjamin's intervention to show them how their fears were "exacerbated by their lack of knowledge of China and how big it is, and maybe the lack of preciseness about how concentrated the cases were" (Sandler 2005).

Benjamin's purpose in China was to pursue a personal project of his involving the Three Gorges Dam. Though a bartender by trade, Benjamin had a keen interest in the fate of the people who lived along the banks of the Yangtze River, and since December of 2001 had made several trips to China to take videos for a photo-documentary. His 2003 trip was especially important for him as it allowed him to witness the closing of the sluice gates at the Three Gorges Dam on June 1st, which permanently blocked the natural flow of the Yangtze and started the buildup of the reservoir behind the dam—a reservoir that didn't completely fill until late 2008, and now ultimately stretches some 375 miles, covers over 1,300 archaeological sites, and has resulted in the displacement of between one and two million people (wikipedia.org).

Benjamin's documentation of this act and the consequences that would eventually come of it meant that he spent May and June of 2003 traveling along the length of the Yangtze, encountering dozens of villages that had rarely seen outsiders. He had read that many of these small villages were actively blockading their streets to prevent foreigners and travelers from entering because of the SARS outbreak, and the fact that "travelers were dubbed the carriers of the disease" (Sandler 2005) by locals weighed heavily on his mind:

That was something that really fueled my fears at first, because I was going to be going to a lot of small towns in rural China that don't see a lot of foreigners, and I was worried that I would see a lot of, that I would be met with fear of getting SARS, you know, from me.... Well that was what I was worried about. I mean, because I was dubbed, I would be a traveler, coming, going from one place to another place, possibly picking something up from one place and bringing it to another. As would any traveler within China, you know, a Chinese traveler as well. (Sandler 2005)

On the other hand, once inside those towns, Benjamin recalled rarely seeing anyone wearing a face mask. He placed the number at "maybe one out of every 10,000," and quite often the masks people were wearing were "dirty and falling off" (Sandler 2005).

According to these reports, people in China evidenced the same reactions to foreigners as did people in North America: people of different ethnic identity, or strangers in general, were suspect; local, familiar people were less so. This is especially apparent in Benjamin's descriptions of traveling along the Yangtze. Villages far preferred having outsiders stay as outsiders—even to the point of openly barricading their borders—but people inside those villages were free to do as they chose, and were not considered harmful.

This sharp division is in contradiction of the realities of viruses and disease vectors, for it takes little effort for an airborne disease to cross a man-made barricade. Even blood-borne diseases may cross through the actions of insects and rodents. As in Edgar Allen Poe's "The Masque of the Red Death," no barrier is impenetrable, and disease can creep inside even the best-maintained walls. Worse, once inside that barrier, the virus can multiply quickly and easily. The common cold is more present in winter precisely because humans spend so much time indoors and in contact with other people

during the cold months, and this situation provides the perfect breeding ground for disease.

We have to, however, draw the line somewhere, and attempt to make as much of a division between those who are potentially diseased and those who are “known” to be healthy. In the case of small villages in central China, the locations for these lines are obvious: the town limits. These lines are seemingly independent of race, age, and sex. All that needs to be known is who is from the town and who is not. Even if it is recognized that such geographical barriers are frail, their existence still provides relief, and may in fact help greatly to keep out that which is not wanted. In large cities, the possibilities of such geographical barriers grow exceedingly small. It is possible to quarantine houses or apartment complexes or even whole cities, but the people living inside those cities still have to go about their daily duties, including working, shopping, and even using public transportation to access the more remote parts of the city. People living in these circumstances will thus be constantly surrounded by the potentially diseased. Where geographical barriers fail or are impossible, lines are instead drawn around those who are unknown or different, and around race, sex, and age, and so strangers and other ethnicities become the targets of suspicion.

The basic ideas behind these separations were recognized and laid out as early as 1959 by William Hugh Jansen, who designated his theory the “esoteric-exoteric factor in folklore.” According to this, “the esoteric applies to what one group thinks of itself and what it supposes others think of it. The exoteric is what one group thinks of another and what it thinks that other group thinks it thinks” (Jansen 1959, 206-7). Esoteric thoughts,

then, are turned inwards, pondering the self; exoteric thoughts are about others.

Furthermore, esoteric thoughts stem “from the group sense of belonging and [serve] to defend and strengthen that sense” (Jansen 1959, 207). As a result of this, Jansen claims that smaller groups are more likely to have stronger esoteric elements.

These arguments are visible within the narratives given by Heather and Benjamin. Heather’s statement—in itself a collection of smaller narratives about several people—demonstrates especially well how Jansen’s theories apply to at least two different ethnicities. On the one hand, we have Heather’s interactions with her mother (assuming a family constitutes a folk group, as per Dundes’ definition of “folk” as “*any group of people whatsoever* who share at least one common factor” (qtd. in Oring 1986, 1, emphasis in original)), which demonstrate her mother’s perceptions of her own family as “safe,” and Torontonians as a whole as “dangerous.” Interesting in this case is the grouping of, including Toronto’s Census Metropolitan Area, roughly 5 million people into a single category, regardless of age, sex, or race. On the other hand, we have Heather’s reports of what her Chinese roommates experienced during the SARS outbreak, i.e. the incidences of people avoiding them on busses and subways, which are clearly cases of Asians as a whole being stigmatized as potential carriers of disease.

Benjamin’s reports show similar flexibilities in the lines between who is considered safe and who is considered unsafe. The very comments that Benjamin chose to open his story with—“I was worried...that I would be met with fear of getting SARS, you know, from me”—are an excellent summarization of the esoteric factor, Benjamin knowing his own SARS-negative status, but recognizing that the people he would

encounter might possibly see him as dangerous. Switching groups for a moment, it is perfectly clear from Benjamin's narratives what the exoteric thoughts of the small villages he encountered along the Yangtze were, namely that other people are dangerous, regardless of who they are. Here, as in the case of Heather's discussions with her mother, age, sex, and race are irrelevant.

In both cases involving the dissolution of racial and ethnic lines in the determination of who is possibly diseased and who is not, we find that the groups making the determinations are relatively small: Heather's family and Chinese fishing villages. The absolute determinations of Asians as potentially diseased that were experienced by Heather's roommates occurred in situations where the deciding group was amorphous, and large. Not just a bus-full of people made the determination, but Torontonians society as a whole. Jansen's original esoteric-exoteric arguments did not include discussions of disease, but it does seem that they apply. Small groups have stronger esoteric elements, and are more easily capable of grouping large numbers of people of varying identities into an "other" category, while large groups have weaker esoteric elements (perhaps a consequence of the amorphous nature of the group, where it is more difficult for one member of the group to know what every other member is thinking or doing), and more frequently draw lines along race and ethnic borders.

These narratives may also reflect a different kind of fear, as discussed by Mikel J. Koven in his article "'Buzz Off!': The Killer Bee Movie as Modern Belief Narrative." Koven hypothesizes that "killer bee" movies, which involve swarms of genetically-altered bees racing up from South America and attacking U.S. border towns, may reflect

racial undertones and anxieties. Moreover, there are at least two races of people alluded to in these stories as being fearful and Other. One of these races is obvious, given that the bees in question are often referred to as “Africanized” or “Brazilian,” and so Koven states that “Specifically with Irwin Allen’s [movie] *The Swarm*..., the Brazilian honeybee seems to act as a metaphor for white paranoia about African-Americans in the U.S.” (Koven 2001, 6). However, Koven states that a second race may be alluded to in these stories, if certain key contextual facts are noted—specifically that the decade in which many of the killer bee movies and books were popularized (the 1970s) was also the end of the Vietnam War. As such, Allen’s *The Swarm* (1978) and Jack Laflin’s novel *The Bees* (1975) may also be reflections of the American people’s growing hesitation with Vietnam, as well as their embarrassment at not having secured a conclusive victory.

Koven states:

Implicit in these narratives is the idea that the United States needs a military victory to counter their defeat in South East Asia. Seen racially, the bees could even be seen to represent the Viet Cong themselves—the bees’ yellow and black markings representing both the racial stereotyping of East Asians as “yellow”-skin colored and the black of the Viet Cong uniforms. These military victories over the bees [in the movie and the novel] can therefore be seen as symbolic victories against a Vietnamese that the American military machine could not defeat in reality. (Koven 2001, 10)

If SARS narratives are examined in the same vein, then it becomes immediately apparent that many of Koven’s conclusions can be applied. Not only are many of the SARS narratives overtly racist in tone and message, but even in those narratives that exclude mention of race and focus specifically on transmission vectors—such as Heather’s mother’s concern over the virus being spread by airplane and bus—racial undertones may

still be present because SARS *came from China*. In fact, it may be said that the coronavirus is a metaphor for the Chinese, or perhaps Asian peoples as a whole.

Such a hypothesis stands in line with many of the sentiments pervading the United States today, revealing deep-seated distrust of the Chinese. While the U.S. has not had a major military battle with China, it has several other factors that influence public perception. First among these is the ever-present reminder that China is a Communist country, and as anyone who grew up during the Cold War was taught, “Communist countries are evil.” Then there are the frequent news stories relating China’s Human Rights violations. A quick Google.com search for “China human rights violation,” for example (though without the quotation marks), resulted in a staggering 9.5 million webpages. Economic concerns also come into play here, such as the increasing amounts of money the U.S. government borrows from China, or the outsourcing of jobs by U.S. businesses to Asian countries. And, of course, there are the perennial concerns with immigrants—Asian or otherwise—moving into U.S. cities and taking jobs from U.S. citizens. Other examples could be brought in to strengthen these ties further, but such efforts are hardly needed. These few illustrations alone evidence the strained relations between the U.S. and China. Like killer bee stories being a metaphor for U.S. relations with Vietnam, SARS narratives reflect American opinions about the Chinese.

Examined under yet another light, these narratives reveal concern over actions performed out of place, or more specifically, private actions performed in public places. Mary Douglas, in discussing the concept of dirt and its relative metaphor—uncleanliness—notes that the very notions society holds about hygiene are relative:

“Shoes are not dirty in themselves, but it is dirty to place them on the dining table; food is not dirty in itself, but it is dirty to leave cooking utensils in the bedroom, or food bespattered on clothing; similarly, bathroom equipment in the drawing room...out-door things in-doors; upstairs things downstairs...” (Douglas 1988, 35-36). In SARS narratives, many of the underlying fears involve similar matters of sanitation and objects out of proper place. What separates SARS narratives—and disease narratives in general—is the object which is considered to be out of its proper place: the infecting agent, in this case the SARS virus.

Though disease narratives have many forms and come in multiple varieties, they can all be ultimately traced back to this infecting agent, whether it appears on a needle or razor blade, is present in semen or saliva, or can be transmitted only through bodily fluids or through the very air we breathe. It is interesting to note that, while Douglas states that food is dirty when present in the bedroom or on clothing (implying that food is sanitary when located in the kitchen and on plates), there are no such definite lines for infecting agents. The SARS virus is clearly seen as dirty in all the narratives collected for this study, but the best line that can be drawn to identify where it does and does not belong is between *anywhere else* and *me*. That is, while the “improper” location for the virus can be definitely identified as the narrator’s personal space, or perhaps the personal spaces of a small group of people surrounding the narrator, the “proper” location is rarely spoken, and is instead left as an ambiguous, amorphous location that is to be found anywhere other than where the narrator currently stands.

If the location of the narrator is sacrosanct, and is the “improper” location for the virus, then it stands to reason that any actions that cause a virus to enter the personal space of the narrator are also improper. Sneezing and coughing, for example, are widely recognized as methods of transmitting diseases. Even small children are told to cover their mouths and noses when performing such actions. Public and widespread knowledge of scientific germ theory may be inaccurate and incomplete by medical standards, but it is sufficient to recognize that sudden expulsions of breath from the lungs can result in the airborne dispersion of disease-causing materials, which is one reason why people prefer not to shake the hand of someone who has just sneezed into that hand.

Sneezing is, in addition, a private action. Not only is it recognized as a potential spreader of disease, and thus something that should be shielded from the rest of the world by the hand or handkerchief, but it is an involuntary action—something that cannot be controlled. Sneezing results in the temporary loss of the sneezer’s hold over his or her own body. The eyes involuntarily squeeze shut, and the respiratory system is subverted from its normal job of supplying the body with oxygen and is instead given over to the single, uncontrollable work of expelling a large amount of air forcefully and rapidly. Sneezing leaves a person at his or her most vulnerable: sightless and powerless. To a great extent, the only action a person is capable of performing while sneezing is, in fact, sneezing. Speech, vision, and activities involving highly-controlled muscle movements (painting, running, playing a musical instrument, typing, etc.) are all greatly hindered, if not made outright impossible, and it may be argued that even thought processes are retarded. Sneezing leaves us naked. It should come as no surprise that we hide our faces

when we sneeze, or excuse ourselves from conversations to turn around (if given sufficient warning), and sometimes apologize for our actions afterwards.

In SARS narratives, the private nature of actions such as sneezing or coughing (the latter also marked by a socially-imposed covering of the mouth) are made all the more relevant because they are performed in public spaces. Heather's interactions with her male Chinese roommate upon his sneezing in public—"Ha ha ha: you have SARS"—show at least some level of awareness concerning the danger of such an action. Heather mentions that such an exchange was "trivializing" the otherwise serious nature of a sneeze in the middle of an epidemic, an action that fits three of Jeannie B. Thomas' four functions of laughter, in this case "incongruity," "superiority," and "recognition of a taboo topic" (Thomas 1997, 43). Thomas' definition of "incongruity" is especially relevant in relation to this scenario: "this thing that is out of place here" (Thomas 1997, 48). The juxtaposition of private action and public space creates the same recognition of uncleanness as is present in Mary Douglas' quote, i.e. things that are out-of-place are dirty. And while a sneeze by itself might not bring about a large response, when combined with its disease-spreading potential *and* the outbreak and general panic over SARS, the action creates an immediate and noticeable reaction.

The final layer in these narratives is that of stereotyping ethnicities, or outsiders and strangers, as diseased or disease carriers. The attribution to an ethnic group of either careless or purposeful introduction of a disease into a previously-safe community adds the final nail to the coffin, as it were. Not only are these people different, but they are dirty, they act inappropriately, and they are harming us. The stereotypes and reactions

present in SARS narratives are laid out especially well by Jen, a Chinese-Filipino informant I interviewed in Toronto in 2005:

There was one time I was on a bus and...at that point we were living in Scarborough, which is, it's made up of a lot of immigrant communities, and there are a lot of Chinese peoples who are primarily in the northern area of Scarborough, going into Markham—Markham is a huge Chinese community, I think primarily from Hong Kong and Taiwan—and I was on the bus one day, and I was sitting beside this Caucasian girl, and this black guy sitting beside her, and they, I think were teenagers, thereabouts, and I think I coughed. No, I didn't cough, the girl started, like, fake coughing beside me, and the guy beside her was kind of giggling, but in an uncomfortable way, and I felt that to be sort of a joke, like because I was Asian, and because we were in Scarborough, and because we were on a bus, they were making fun of the fact that I was Chinese, I could possibly have SARS.... Maybe it was an opportunity to...a reason for their stereotypes. Like for them to have certain stereotypes, it was a perfect opportunity for them to come out with jokes about it. (Lim, Jen 2005)

In this particular instance, there was not even a specific action such as a cough or sneeze to incite the response. All that was needed was simply the presence of an individual perceived to be from a dangerous group.

The ultimate causes of narratives such as this are many, and depend on social as well as familial factors, but sociologist Stephen L. Muzzatti places much of the blame squarely on informational globalization as it is present in the media. In an examination of media reports of SARS, Muzzatti notes that many of the articles present in popular newspapers were sensationalistic at best, reporting exclusively on negative occurrences such as deaths, quarantines, business failures, and masses of masked faces. He states, “this type of coverage made SARS appear far more widespread, contagious, and dangerous than it truly was. It also served to tear away the thin and flimsy veneer of ‘tolerance’ in America, revealing deep-seated racism and xenophobia” (2005, 123). Asians as a whole became “folk devils,” or what Stanley Cohen calls “unambiguously

unfavorable symbols” (2002, 41) because of their association with the disease. Thus, it may be argued that experiences such as the ones suffered by Jen and Rita (Heather’s female roommate) are direct consequences of living in an era when a news report filed in China can appear in an American newspaper only hours later.

Terry Ann Knopf pointed out over thirty years ago that rumor often begets violence, prejudice, and discrimination, and as legend overlaps rumor (1975), the same qualities can be said of it. In the modern era, where rumor and legend spread—for the first time in history—faster than the speed of sound, the realities of Knopf’s claims become ever-more apparent. Narratives such as the ones present in this chapter represent the worst of legend and rumor. The ease with which information is passed between disparate parts of the modern world has at times resulted in significant benefits for humankind, but it has also enabled the widespread and rapid diffusion of panic and negative stereotypes. The public reactions and revulsions experienced by Jen, Rita, and Benjamin were no doubt fueled, at least in part, by rumor and legend. Similar reactions occurred around the world, where it was only a matter of weeks, perhaps days, before SARS became inextricably, globally linked with Asians. The resulting narratives left Asian-Americans who had never set foot outside North America accused (however lightly or humorously) of being potential infectors. In cases such as these, informational globalization *promulgated* pejorative stereotypes. In other cases, knowledge of the existence of SARS resulted in the mass-labeling of strangers and outsiders as dangerous, sometimes resulting in the literal barricading of those peoples from entering into towns. By “racializing illness” (Muzatti 2005, 125) in this manner, the world was left in the

midst of a wave of racism that was not only widely practiced by “official” news sources, but publicly encouraged and tolerated.

Chapter 7: “Please Receive Communion Through Your Hands”: Personal and Communal Mediation of Stigma in the 2003 SARS Epidemic

The 2003 SARS epidemic in Toronto, Canada, brought about the stigmatization of ethnic groups, neighbourhoods, and eventually the entire city. The effects of this stigmatization included, on a widespread level, the virtual consumer abandonment of Asian businesses, city-wide losses in tourist-generated income, and public avoidance of hospitals. On the level of individuals, reactions ranged from mild cautiousness to self-imposed quarantine, at least one collected instance of which lasted more than six months. As Arthur Kleinman and Sing Lee point out, social stigma is intimately tied to health system responses (2005, 173-195). Yet despite the well-publicized narratives of loss and panic, the larger portion of Toronto continued about their daily business as much as was possible. People still had to buy groceries, go to work, and attend church. Individuals from stigmatized ethnic groups in stigmatized communities traveled every day to their offices via subway and bus lines, nestled tightly beside people from relatively “innocent” neighbourhoods. This chapter will examine closely narratives such as these, filling a gap in stigma research by looking at the methods used by individuals in the SARS outbreak to mediate the fears associated with stigmas. Focusing mainly on jokes, as well as narratives collected about church-related activities, it is my contention that these attempts at mediation evidence a paradigmatic need for security, as reflected in the changing of personal actions and behaviours, and simultaneously a syntagmatic need for stability, as the intended meanings behind the actions remain constant despite the changes.

Furthermore, it is my contention that many of the collected narratives do not fit neatly into the categories assigned by stigma literature, especially as seen in the work of Erving Goffman.

“Stigmas,” archaically, were brands burned into the skins of slaves or criminals for identification purposes. Modern definitions of the word have branched out denotatively, referring to several types of blemishes ranging from crucifixion wounds to common birthmarks. However, the connotations of these modern renditions still evidence many of the term’s negative archaic implications. To be stigmatized—to be marked—is to be labeled as somehow wrong or impure. Especially as the term is used in reference to medicine and disease, stigma is characterized by discrimination, negative labelling, ostracism, and exclusion (Goffman 1963; Kleinman and Lee 2005). Stigma, in this sense, affect all levels of society, and results in such varied problems as workplace losses in productivity, violations of basic human rights, medical non-compliance, the scapegoating of marginal groups, familial breakdown, and individual suffering (Kleinman and Lee 2005). At best, being stigmatized means being perceived differently. At worst, it means personal and financial ruin, and can lead to suicide.

Various definitions of the more modern meanings of “stigma” have been forwarded, some of the earliest attempts coming from Erving Goffman: first, “The term stigma...will be used to refer to an attribute that is deeply discrediting” (Goffman 1963, 3); and second, from later in the same book, “an undesired differentness from what we had anticipated” (Goffman 1963, 5). Gerhard Falk expands on this by explaining the most common modern American uses of the word, where “‘stigma’ and ‘stigmatization’ refers

to an invisible sign of disapproval which permits insiders to draw a line around 'outsiders' in order to demarcate the limits of inclusion in any group" (Falk 2001, 17). Though not actually providing a dictionary definition of the word, Falk's comments do clearly demonstrate the nature of what it is to be stigmatized: it is to be set apart and marked somehow as unclean or unhealthy.

The initial statements in this chapter regarding the nature and discussion of stigma are based on Goffman's 1963 book *Stigma: Notes on the Management of Spoiled Identity*. At the time Goffman wrote his book, stigma studies were relatively new. The preface to *Stigma* states that much of what had been done in the field before the publication of Goffman's book had come from social psychology, and even there the field was hardly "over a decade" old (Goffman 1963, n.p.). The footnote on the same page that summarizes the previous decade's work on stigma references five psychologists, but only one sociologist, and tellingly, it is one of the psychologists whom Goffman specifically highlights as having provided the most useful data (Goffman 1963). Goffman's efforts were thus in many ways the seminal attempts to introduce the field of stigma to the discipline of sociology. The arguments throughout the remainder of this chapter are based largely on *Stigma* not only because it was perhaps the first book to attempt to codify and set down rules for the academic study of stigma, but because almost every more-recently-written source I consulted for the preparation of this chapter referenced Goffman's work.

Unfortunately, Goffman's meditations on the nature and mechanisms of stigma do not, in several key ways, include discussions of the types of stigma that were associated

with SARS. For instance, Goffman gives the following as the three main “types” of stigma:

First there are abominations of the body—the various physical deformities. Next there are blemishes of individual character perceived as weak will, domineering or unnatural passions, treacherous and rigid beliefs, and dishonesty, these being inferred from a known record of, for example, mental disorder, imprisonment, addiction, alcoholism, homosexuality, unemployment, suicidal attempts, and radical political behaviour. Finally there are the tribal stigma of race, nation, and religion, these being stigma that can be transmitted through lineages and equally contaminate all members of a family. (Goffman 1963, 4)

I give the full quote here, rather than a summarization, to show exactly the arguments Goffman makes and the types of stigma that he lists, carefully broken down into their sections and supporting examples. But even a cursory glimpse should suffice to show that Goffman’s list does not include the stigma that is associated with many diseases.

Briefly summarized, the types of stigma above can be broken into the categories of 1) *physical deformities*, 2) *character flaws*, and 3) *tribal association*. Polio and Hansen’s disease, both of which Goffman uses as examples of the first category, are indeed diseases, but in these instances physical deformities occur as a side effect of an untreated viral or bacterial infection, respectively. In other words, Goffman’s inclusion of these diseases into his spectrum seems based not on the presence of the infecting agent—to wit, the poliovirus or the *Mycobacterium leprae* that causes Hansen’s disease—but on the presence of the disfigurements that come about as the result of these infecting agents. There can be little argument that those who contracted SARS in 2003 were stigmatized, but the SARS virus did not cause the kinds of physical disfigurements or deformities present in Goffman’s categories. Like those infected with AIDS, SARS victims initially appeared on the surface to be no different than anyone else. It was not until very late in

the progression of the disease that the similarities ceased, and even then this was not due to physical deformities, but to high fevers and respiratory problems. SARS victims, then, were stigmatized not because of the presence of any visually-distinguishing features, but simply because of the presence of an invisible infecting agent. Thus it seems that Goffman's types of stigma merits a fourth category: *the infected*, which includes anyone who is currently (or, we could argue, has ever been) host to any virus, bacterium, fungus, parasite, etc., deemed in some way offensive, dangerous, contagious, or disgusting by the public.

But even with the inclusion of this fourth category, there is still at least one key form of stigma within the SARS epidemic that is not adequately described: the stigmatization of perfectly healthy individuals such as healthcare workers and Asians. The stories of these groups of people have been discussed elsewhere in this work, so I see no point to reiterate them here, except to say that healthcare workers and Asians *were* stigmatized—most of them wrongly—as potential disease carriers. It is this last concept that is missing from Goffman's list: the *potential* of someone to belong to a stigmatized category. All of the examples used by Goffman to support his arguments come from people who are *already* recognized as members of the stigmatized categories into which they have been placed, and actually have the conditions for which they have been stigmatized: people with Hansen's disease and amputees for being "deformed"; suicides and drug addicts for having recognized character flaws; African-Americans for belonging to a different race. None of Goffman's examples incorporate the idea of *potentiality*, or the fear or worry that someone who is not immediately recognized as being a member of

a stigmatized community *might* belong to a category of people who are somehow different or discredited. And so we must add a fifth category of people to Goffman's list: the *potentially discreditable*.

Asians especially fell into this category during the SARS outbreak. As seen in the previous chapter, many of my informants (or their friends) who appeared in any manner whatsoever to be a member of that broad category of people classified as "Asian" felt stigmatized, despite their SARS-negative status. At least one Caucasian informant reported much the same feelings while traveling through China (Benjamin, from the previous chapter), and a second Caucasian informant—Mike, the Torontonion EMT—felt stigmatized not because of his race, but because of his profession. All of these people occupied liminal places in the public perceptions of the SARS epidemic. They were not identifiably sick, but at the same time, they were not identifiably healthy. Their being stigmatized came about not as the result of their being identified as *not* being a member of the latter category, but as the result of their *potentially* belonging to the former.

This is not to say that Goffman never conceived of the potential nature of stigma being associated with the non-stigmatic. He does introduce what he terms "courtesy stigma," the best explanation of which comes from Kleinman and Lee: "Traditionally, stigma extended to those who it was believed had become morally polluted by their suffering, and whose moral pollution, it was also believed, might be contagious to others, so that they and their family members also bore this kind of personal and collective loss of face" (Kleinman and Lee 2005, 180). Goffman did accept that, in this manner, stigma

could affect large numbers of people, because his arguments indicate that the range of this “courtesy stigma” extended only to the reaches of the family.

Goffman also approaches the concept of the potentially discreditable in his discussions of the differences between the “discredited” and the “discreditable” (from which arguments I constructed the term “potentially discreditable”). According to Goffman, the “discredited” label can be applied to someone whose “differentness” from a “normal” person is immediately visible or already known about. People suffering from Hansen’s disease easily fall into this category because of the disfiguring nature of the disease, as do people who are widely and publicly recognized as homosexuals, murderers, unemployed, etc. The label “discreditable” is applied to someone whose differentness “is neither known about by those present nor immediately perceivable by them” (Goffman 1963, 4), i.e. a person with Hansen’s disease who is able to hide his disfigurements under his clothes, or a murderer (homosexual, unemployed person, etc.) who is not suspected of being such. While this latter category of the “discreditable” does admit the possibilities of the unseen stigmatic, it is still based on the *presence* of a differentness. The discreditable person is only someone whose discrediting attributes have not yet been discovered. Nowhere in this two-part paradigm exists the possibility of a perfectly healthy, unsullied person being wrongly stigmatized.

The narrowness of this view has since been updated. Kleinman and Lee, for instance, state that it is not “surprising that stigma associated with SARS quickly transferred to ethnically Chinese communities in many parts of the world” (Kleinman and Lee 2005, 181), and note the historical commonness of such transferences. Among other

examples, Kleinman and Lee point to a study sponsored by the American Medical Association in the late 1800s which investigated “the hypothesis that Chinese women were spreading a unique and particularly virulent strain of so-called Chinese syphilis” (Kleinman and Lee 2005, 181). They also note the torching and razing of Chinese neighbourhoods in both Hawaii and San Francisco after the bubonic plague surfaced in those areas in 1899 and 1900, respectively, despite the lack of any evidence of an Asian origin of the disease. Gerhard Falk describes this kind of stigma as “societal deviance”: “a condition widely perceived, in advance and in general, as being deviant” (Falk 2001, 22). In the two examples cited by Kleinman and Lee, this societal deviance is apparent in the automatic assumption of Chinese culpability. In these cases, the condition perceived as being deviant is simply the condition of being Chinese. Falk’s descriptions of the nature and origin of stigma prove far more capable here of accounting for the widespread stigmatization of Asian peoples in the 2003 SARS epidemic, for rather than attempting to break down the roles of the stigmatized and their reasons for being placed into negative categories, Falk simply states that “stigma and stigmatization can occur whenever and wherever some people find behaviour or characteristics of other people offensive and/or reprehensible” (Falk 2001, 24).

Having spent the first part of this chapter examining the nature of stigmatized individuals and the reasons behind their stigmatization, we now turn to the reactions the public has towards them. In this area, the literature is fairly consistent, and reads more like an extended series of variations on a theme. As Kleinman and Lee state, the stigmatized individual can expect “discrimination, negative labelling, menacing societal

responses such as ostracism and exclusion, and even violence” (Kleinman and Lee 2005, 173). In responding to the stigmatized, the public constructs a mind-set to create what Goffman calls a “stigma-theory”: “an ideology to explain his inferiority and account for the danger he represents, sometimes rationalizing an animosity based on other differences, such as those of social class” (Goffman 1963, 5). In discussing this reaction, Falk notes that Émile Durkheim claimed that the “function of creating a boundary in any human group is group solidarity” (Falk 2001, 32), and furthermore summarizes Edward Sapir’s recognition of stigma and stigmatization-producing language as “‘inventive thought,’ which means that people who have little or even no experience will nevertheless express opinions on a subject they do not know by using language which then constructs the reality that is thereafter perceived” (Falk 2001, 22). Other literature within the field follows the same basic pathways: we react negatively to those groups which we consider dangerous or different, and construct boundaries around them to separate them from ourselves (cf. Becker 2002; Berger, Michele Tracy 2004; Berger and Luckmann 1967; Feagin and Batur 2004; Lichtenstein 2004; Loury 2002; Persell, Arum, and Seufert 2004; Reinerman and Duskin 2002; Schwartz and Skolnick 2002; Shilts 1987).

In short, the only requirement for the construction of a stigmatized identity is not even necessarily the existence of a recognized differentness, but the mere notion that a differentness may exist. Once that label is applied to the stigmatized group, it is self-sustaining. The very language used to label that group is, through circular logic, sufficient to prove that group’s deserving the label. Stigmatized individuals are labelled because

they are different, and we know they are different because they are labelled. Such a self-fulfilling prophecy explains in large part the continued presence of long-standing stereotypes. We “know” that Mexicans are lazy because they are Mexicans, and all Mexicans are lazy; we “know” that the Irish are drunkards because they are Irish, and all Irish people are heavy drinkers. Obviously, it is difficult for an individual in a stigmatized community to escape such labelling, for the very fact that they are a member of that community “proves” the label to be correct, all evidence to the contrary notwithstanding. Similarly, the existence of a label on a stigmatized community can be used to “prove” the culpability of that community for any related offences. If the Chinese were historically blamed for Chinese syphilis and the bubonic plague, they can also easily be blamed for other, newer diseases, for the existence of the older stories “proves” that they are dirty, disease-laden people.

Finally in our discussions of the literature, we examine how the reactions of those who have been stigmatized have been described and accounted for. I again turn to the work of Goffman, and begin this section with an extensive quote from *Stigma*:

How does the stigmatized person respond to his situation? In some cases it will be possible for him to make a direct attempt to correct what he sees as the objective basis of his failing, as when a physically deformed person undergoes plastic surgery, a blind person eye treatment, an illiterate remedial education, a homosexual psychotherapy⁹.... Here proneness to “victimization” is to be cited, a result of the stigmatized person’s exposure to fraudulent servers selling speech correction, skin lighteners, body stretchers, youth restorers...cures through faith, and poise in conversation. Whether a practical technique or fraud is involved, the quest, often secret, that results provides a special indication of the extremes to which the stigmatized can be willing to go, and hence the painfulness of the

⁹ Though it bears little ramification to the overall thrust of this chapter, it should be pointed out that in the current, post-millennial era the notion of a homosexual seeking treatment for “his failing” is quaint at best, and at worst, homophobic and closed-minded.

situation that leads them to these extremes.... The stigmatized individual can also attempt to correct his condition indirectly by devoting much private effort to the mastery of areas of activity ordinarily felt to be closed on incidental and physical grounds to one with his shortcoming. This is illustrated by the lame person who learns or re-learns to swim, ride, play tennis, or fly an airplane, or the blind person who becomes an expert at skiing and mountain climbing.... Finally, the person with a shameful differentness can break with what is called reality, and obstinately attempt to employ an unconventional interpretation of the character of his social identity. (1963, 9-10)

I have included a quote as extensive as this for two reasons. First and foremost, it is important to notice here—as with his arguments about the nature of stigmatization—that Goffman is only dealing with the reactions of people who actually *have* a condition or differentness that has led them to be placed into a stigmatized category. The above quotation lists only three of some fourteen reactions Goffman categorizes, but all of his examples follow the format of this quote, and are of people trying to cope with or fix their real differences. What is missing from these arguments is, again, the notion of the *potentially discreditable*: in this case, the perfectly healthy individual who has been wrongly placed into the category of those who are suspected of being infected with SARS. It might be true that the reactions of these individuals are in part the same as those stated by Goffman as reactions of people who have been categorized based on an actual diagnosis of SARS, but the point is far from semantic. There are definite differences between the two groups of people on enough levels to warrant their separation. For example, while those who have and have not been infected with SARS may both chafe at their being included in a stigmatized category, and both may feel the placement and concomitant reactions of the public unwarranted, the reasons behind such reactions are vastly different. While individuals who have been infected with SARS may feel their

stigmatization as undeserved and unpleasant for a number of reasons—their having successfully fought off the disease, their rejection of the diagnosis, their rejection of or lack of understanding of the serious nature and contagiousness of the infection, general stubbornness, etc.—the individuals who have not been infected with SARS feel their being stigmatized is undeserved precisely because they have *not* been infected with SARS. So while the reactions of these two groups may be similar, the reasons behind their actions are different enough to warrant their being categorized separately.

Secondly, I have included an extended section from Goffman's work because it is also important to point out the commonalities and differences between his theoretical reactions and the real-life reactions reported by those stigmatized in the SARS epidemic. Restating Goffman's theories on stigmatized individuals' reactions to their situations in the above quotation reveals three areas: 1) direct correction of the failing through surgery, therapy, or education; 2) mastery of activities thought to be difficult or impossible, given the stigmatized individual's condition; and 3) the employment of an "unconventional interpretation of the character of his social identity" (though this last point is left unexplained and without an example, making it difficult to ascertain Goffman's exact meaning). As previously stated, however, there are at least fourteen points in total to Goffman's list (a more careful reader may find more, but Goffman's lack of sub-headings or numbered entries, combined with the stream-of-consciousness style writing employed in *Stigma*, makes exact count difficult). Briefly, the remaining eleven reactions are as follows, noting that these do not form a sequence of progression, nor does every stigmatized individual experience them all:

- 4) stigma as an excuse for ill success;
- 5) stigma as a blessing in disguise;
- 6) (often following from number 5) stigma as evidence of the limitations of “normals”;
- 7) avoiding contact with “normals”;
- 8) paranoid feelings, such as hostility, depression, and anxiety;
- 9) uncertainty about status and placement when in contact with “normals”;
- 10) having to be constantly self-conscious and calculating about first impressions when meeting “normals”;
- 11) feeling that everyday accomplishments are misinterpreted or exaggerated by “normals,” as in when people are amazed that a blind man can make his own dinner, or excuse the failures of the stigmatized because of their situation, such as making it “okay” for someone with a learning disability to not understand;
- 12) feelings of invasion of privacy, as when people with amputated limbs are stared at;
- 13) defensive cowering; and
- 14) hostile bravado (Goffman 1963; Low 2004).

It is not my intent at this point to go through all fourteen points and compare them individually to the reactions I collected during my fieldwork, for such an effort would be ultimately self-defeating and pointless. The small range of experiences narrated by my informants does not constitute a sufficiently large example to prove or disprove Goffman's theories. It *is*, however, my intent to move from here into a series of studies of

those narratives, and hold them individually up to Goffman's fourteen points, showing how each does or does not fit. Such an effort will be strained in many ways, as none of my informants ever contracted SARS and are all thus only potentially discreditable, while Goffman's theories all center on those who actually had the conditions for which they were stigmatized. However, the results will shed new light on the proverbial cave wall, as it were, and thus are worth the effort.

It is first, however, useful to examine Goffman's points from a different light, for not all of them apply to the studies undertaken in this chapter. Recall that the ultimate efforts here are to examine the ways that stigmatized individuals and communities mediated the fears associated with SARS. Mediation, by definition, is an act of agreement, compromise, or reconciliation, usually conducted between two parties in an attempt to strike some accord or peace (dictionary.com). Used as it is in this chapter, the word still carries the meanings of reconciliation and peace, but the act of mediation does not necessarily occur between two physical parties. Instead, it can be an internal struggle, where a conscious effort is made to come to some inner peace. For many of my interviewees, these efforts were made to balance the stresses associated with being stigmatized: "mediation," as I use it here, is a loose synonym of the infinitive "to cope."

The act of mediation is thus a positive act, a movement toward learning to constructively deal and live with a given situation or circumstance. By elimination, then, any act that is not positive is not one of mediation. A negative act is destructive, not constructive. An examination of Goffman's fourteen points reveals that the majority of them are in fact destructive or negative. Ten of his fourteen points fit into this category.

Only points one, two, five, and six (from the above list) may qualify as positive, constructive reactions to being stigmatized: direct correction of the failing; mastery of difficult or impossible activities; stigma as a blessing in disguise; and stigma as evidence of the limitations of “normals.”

Though Goffman gave no evidence in *Stigma* that he intended his list to be all-inclusive, it seems obvious from this analysis that there is much that could be added to it, especially as his ideas are so heavily weighted in favour of the negative and destructive. For example, a basic and common method of alleviating the tensions of stressful situations makes virtually no appearance whatsoever in Goffman’s book: the concept of humor as relief. Take the following excerpt from the interview I conducted with Jonathan Gould as example:

My cousin by marriage, his mom was coming in. He must be like thirty, his early thirties. He was picking up his mom at the train station, and when she got off the train when he met her, he was wearing a mask, and he was all serious and he quickly handed her a mask and gloves to put on, telling her how dangerous everything was. So after a while, when she was wearing the mask and the gloves, then he started laughing and told her he was just joking, it wasn’t necessary. But the whole family wanted to kill him, they thought it was, he was a real jackass for scaring his sixty-year-old mother like that (laughs). (Gould 2005)

As Elliott Oring says, the distribution of tension in a narrative is the key to its interpretation as humorous or non-humorous. A humorous narrative requires some tension to make the topic interesting, but too much tension or emotional involvement for either the narrator or audience cancels out the humor. Jokes about cancer can be humorous, but are probably less so if your sister died of it (see Oring 1992, 12-13). Jonathan’s story is a perfect example of this concept: for the cousin, the tension in the act

of tricking his mother was appropriate for the determination of the act as humorous. But for the family, the tension exceeded those levels.

Humor is, of course, relative, and it should come as no surprise that a narrative such as this would be seen as humorous by some—including Jonathan, as evidenced by his laughter—but as disturbing and inappropriate by others. Jonathan himself recognized the breaking point in this equation in a separate section of his interview, when he discussed a trip he took to visit his sister:

Yeah, we joked about it, about not telling people when we'd got to Newfoundland that we had just come from Toronto, because it was in the middle of the SARS hysteria. In the cab or...just anywhere, like our first couple of days there. I'd forgot all about this, there was just so much fear that, we wanted to joke about it with people, but we were afraid that some people would just leave the room (laugh). It's crazy. (Gould 2005)

A similar comparison of the tensions involved in the creation of humor came from my interview with Luis Tan. When asked if he remembered hearing any jokes about SARS, Luis' first response was, "No. Because people I deal with, people...everybody took it seriously. Everybody took it seriously. Because how can you make a joke when you see people dying and there's no cure? You yourself get scared, too. You just hope and pray that this will stop and there will be a cure for this particular disease" (Tan 2005).

However, Luis acknowledged that there were people in Toronto who did employ humor in their responses to the crisis, and said of them:

Well, they might have their own reason. But in my opinion, maybe some people want to...because everybody's too serious, they want to make a little, they want to make people relaxed or...they maybe make jokes like that. But I don't think inside them, whoever makes that, I don't think they have a bad intention of putting the real meaning on it, because it's a serious matter. (Tan 2005)

The point is that people used humor to mediate fears during the SARS crisis. Several of my informants related humorous stories, jokes, or anecdotes about their experiences with the outbreak. Recall from the previous chapter that Heather and her Chinese roommate regularly and openly joked about contracting the disease—"Ha ha: you've got SARS"—in response to coughing. Mike, the EMT, recalled several instances where humor was used as a coping mechanism by people in the widely-stigmatized health profession. First, Mike recalled at least two instances of the SARS acronym being appropriated and recontextualized to comment on the outbreak. Though he had lost the new definition of one of the recontextualizations by the time I interviewed him in 2005, he did recall that it had something to do with "'Summer Recreation'...something about getting a vacation through quarantine"—but could not remember what the rest of the letters stood for. He did, however, quite clearly recall people joking that SARS stood for "Shitty Acute Respiratory Syndrome," in response to the quarantines and hassles.

Mike's largest contribution to this discussion was an extended section of interview relating how he and his colleagues in the health profession used humor to cope with the stresses of the outbreak. His narrative, which I present here in full, reveals much about how a stigmatized community uses such a response:

Jon: And what about SARS jokes? I mean, let's start off, did you hear many jokes during this time about SARS?

Mike: Goodness. SARS jokes specifically. No, people used it in humor, you know there was some jest, mostly because people were nervous and anxious, and certainly in my profession we were, we have a bit of a wide sense of humor, you know, what else can you do when you're stuck in a mask and gown and headress all afternoon? I can't think of anything offhand. There was a lot of humor, people tried to keep it light, but...

Jon: Not any formalized jokes like, "Knock, knock?"

Mike: "Knock, knock," or "What do you get when you have a SARS patient...." No.

Jon: So it was mostly just like, a situation would come up, there would be tension, and someone would make a joke to break the tension of the situation?

Mike: (affirmative noise) I remember walking into a bar, this bar on Yonge Street, where they call Bingo and it's offensive and it's sort of a charity game for humor. It's also a bit of a show. And walking into the bar and, "Oh, there's Mike, and he's got SARS," you know, and people would turn around. Or, one really good one that I used to do, and I still do all the time, is if we [healthcare practitioners] get into an elevator, let's say in a busy office town downtown where you get fifteen people in the elevator, and you (makes coughing noise), and someone, "SARS." And people giggle or they cover their face. When we would get into elevators and people would cover their mouths, you know, there's no patient, it's just us going up to a call, you'd (makes coughing noise) just to sort of, you know, a ruse. But...

Jon: And it sounds like all of these, they're not cruel, they're used to kind of acknowledge in some way the seriousness of the disease by...

Mike: (affirmative noise) It's what's on everyone's mind, and when you get in an elevator with two guys who are in masks, gowns, gloves and eye-goggles and headdress, everyone's thinking about it. You can't, you know, elevator's quiet enough, they're all, they know what's going on. Everyone's thinking about it.

Jon: And you might as well make a joke out of it rather than have everyone...

Mike: Lighten the mood, yeah.

Jon: Other jokes, humorous situations?

Mike: Humorous situa... whenever I put the full-body white suit on, because downtown Toronto we mostly wore masks and gloves and gowns, but you could put the white full-body suit on, and people in public would look at you just like you're insane, you look like the Michelin Man, so it was funny to do that. And there were times when you'd walk in some place and, just to watch, just to watch people's reaction to you order coffee, you know, white gown. There was an email that went around as well that was "SARS On Ice," versus "Stars On Ice," where someone had taken pictures of, all these still shots of the "Stars On Ice" people doing their ice dancing, and then cut-and-paste or painted on gowns and gloves and masks on these people. Just stupid things, but they're cute nonetheless. (Larsen 2005)

In Mike's narrative, not only is the active, spoken use of humor as a coping mechanism apparent, but also the importance of learning how to interpret situations as humorous. It would be easy to react negatively to walking into a coffee shop and having the public

“look at you just like you’re insane,” but Mike seems to stress in his interview that such a reaction is ultimately self-defeating. Negativity only begets negativity; stress only begets more stress. Mike comments on this further later in the interview:

It’s really important not to lose sight of the fact that we’ve been going for thousands of years with all kinds of diseases and plagues, and there’s so much hype. I don’t mind, I guess, and I have a very open sense of humor. Certainly people who were losing family members to the disease might not find it funny, probably won’t. But, and again, that’s a matter of perspective, and from the perspective that I have, having had to deal with it, having been accused of having SARS, having people cover their face when I walk around, my neighbors in my apartment building never came by to see me, I don’t mind, myself, I think that’s normal. People react to any kind of stressful situation, often with extremes, and often with the extremes of nervousness, humor, laughing. They cut the stress by making a joke. (Larsen 2005)

Humor, then, is a natural reaction to stressful situations. The specific types of humor shown in these pages fall mainly under the classification of “gallows humor,” defined by Antonin J. Obrdlik as “humor which arises in connection with a precarious or dangerous situation” (Obrdlik 1942, 709). Obrdlik wrote the article in which this quote appears as a sociological study of gallows humor as it appeared in Czechoslovakia during its WWII Nazi invasion and occupation. The correlations between this event and the SARS outbreak may be slim (though epidemics are often referred to in militaristic terms, and it is no stretch to say that SARS “invaded” Canada), but Obrdlik’s comments on the nature of anti-Nazi jokes in Czechoslovakia still find purchase when applied to a modern disease crisis. Obrdlik says:

People...found in anecdotes an intellectual and emotional escape from the disturbing realities. It was symptomatic that the more ominous the news coming from invaded Austria, the more numerous and pointed were these anecdotes. They became a means of social control in that they bolstered the morale of the Czech people, and, although they were so often but the expression of wishful thinking,

their importance as a compensation for fear could not be overestimated. (Obrdlik 1942, 710)

These comments coincide with what James A. Thorson has said of gallows humor: that it "...is both intentional (not circumstantial) and has a coping motive. It is humor that is generated for a reason. That is, it's not just a funny thing that happened, like mourners with no place to go; rather, gallows humor is created knowingly and for a purpose" (Thorson 1993, 18). And since, as Obrdlik noted, this type of humor seems to be more common the stronger the negative entity that enacts it, the proliferation of black and gallows humor in hospital settings should come as no surprise (see Bosk 1980; Kuhlman 1988; Maxwell 2003; Sayre 2001; and van Wormer and Boes 1997).

There were other activities that similarly evidenced the use of humor as a coping mechanism in dealing with the SARS outbreak. The animated television program *South Park*, for instance, aired an episode on April 30th of 2003 titled "Red Man's Greed," in which a group of Native Americans attempted to drive out the residents of the town of South Park to enable the destruction of the town and the subsequent construction of a superhighway connecting their reservation's casino to Denver, Colorado. The Native Americans' first few attempts were all stymied by the townsfolk (primarily the five children who were the focus of the episode), but then the casino's owner, Chief Runs With Premise, hatched a devious plot: he infected a batch of blankets with SARS by rubbing naked Chinese men against them, then gave the blankets to the residents of South Park. All of the townsfolk fell sick, only to be saved in the end when Stan, one of the protagonistic children, discovered that a combination of Campbell's chicken noodle soup, DayQuil, and Sprite cured SARS (*South Park*).

South Park, of course, can only be used as evidence that humor was used to respond to the SARS crisis; show creators Trey Parker and Matt Stone did not belong to a stigmatized community. But public efforts such as theirs were not limited to American television. As Torontonians as a whole constitute a stigmatized group, Toronto's 2005 Fringe Festival provided the ultimate example of a stigmatized community responding to their situation through use of humor. The Festival hosted, among its many productions, the musical "SARSical," written by Brandon and Kurt Firla (aka the Rumoli Brothers) and Waylen Miki (aka the Severe Acute Repertory Theatre Company). The show mocked the marketing of the SARS epidemic through skits and songs, two titles for the latter being "I Kissed the SARS Babies" and "Teen in Quarantine." The original production was met with scorn by many critics, who were offended by the show's light-hearted stance on death and disease, but ticket sales were strong enough that it was picked up by Toronto's Factory Studio Theatre in 2006 for a second run, and in late 2007 was being revamped for a full-scale production (Pedersen 2006; "SARSical..." 2006). Again, the point is simple: stigmatized individuals used humor as a coping mechanism during the SARS epidemic.

Restating my earlier point, this use of humor as a coping mechanism is largely absent from Goffman's work. This is not to say that it is *entirely* absent, for the concept of humor does make a few brief appearances. For example, in responding to a stigma, Goffman notes that, "In addition to matter-of-factness, levity is also recommended" (1963, 116), and provides as illustration, quoting Macgregor, et al., the story of a woman whose face had been damaged by beauty treatments, and who dealt with such scarring by

joking that she had “leprosy” (1963, 116). Some pages later, Goffman seems to comment on this story by noting that many stigmatized individuals do often joke about their stigmas, especially as such jokes are used to fool “normals”. However, Goffman calls acts like these a “sad pleasure” (1963, 134)—hardly an objective term at best, and quite offensive at worst. Regardless of such potential controversy, the simple fact is that there is not enough of a serious discussion of humor in Goffman’s works for the subject to be considered in any way adequately addressed.

As with the realities of perfectly healthy, unsullied individuals being wrongly stigmatized, the application of humor as a mediating device has been updated since Goffman wrote *Stigma*. Michael Edelstein, discussing the Hanford Nuclear Reservation in Washington State (U.S.A.), notes that the residents of the three towns located within the reservation—Hanford, Richland, and White Bluffs—often use humor to cope with the stigma that comes from living in an area that still boasts extremely high background radiation levels, as well as a significant number of below-ground nuclear waste storage systems that have proven leaky. Edelstein notes that it is not uncommon to hear locals joking about how easy it is to find their children at night, since they all glow in the dark (2007). Susan Seizer, in an ethnography of popular theater artists in the southernmost Indian state of Tamilnadu, examines how the artists—all of whom are lower-class and stigmatized as such by their countrymen—use humor to cope with problems endemic to their status, such as being refused rental privileges by landlords (2005). And Sharon E. Preves’ study of intersexed individuals pointed out the ways informants dealt with social and public stigma through humor (2003).

Especially notable in this area is Marcia Gaudet's *Carville: Remembering Leprosy in America* (2004). In studying the lives and narratives of individuals who contracted Hansen's disease, Gaudet found that humor was an often-used and important device. Until the 1960s, anyone in America who was diagnosed with Hansen's disease was sent into involuntary and supposedly lifelong quarantine at the National Hansen's Disease Center in Carville, Louisiana—a fact that only changed with the advent of medical treatments in the mid-1900s. It was thus common that patients frequently attempted to escape (or "abscond," as that was the official term used by the Center), and patients quickly built a corpus of narratives concerning successful attempts at absconding, and the often-humorous encounters they had with outsiders. These narratives, Gaudet notes, "[tended] to poke fun at the stupidity and prejudices of 'outsiders'" (2004, 80). More importantly, when told to outsiders, the narratives "[seemed] to be establishing a kind of bond with the listener to let him know that they had faced the adversity and overcome it" (2004, 85-86).

The last category of narratives that will be studied in regards to their evidencing fear-related mediation includes narratives about church practices. Three of my informants recalled examples that fit into these discussions. The first comes from Heather (the same informant whose Chinese roommates were discussed in the previous chapter), who very briefly mentions that her mother's Anglican church, as part of its prayer section, added the phrase "We pray for all those with SARS" to its list of Prayers of Intercession (Read 2005). It is unclear from Heather's narrative whether any of the members of this church were themselves stigmatized, but as the church was located within an hour's drive from

Toronto, it is very likely that at least some of the parishioners knew someone who was. Heather does state that Prayers of Intercession are a regular part of this particular church's services, and so it "would just have seemed like a natural, normal thing" to include SARS victims into the recitation (Read 2005).

The two remaining narratives make the fear-mediating nature of church practices quite apparent, and as well, evidence the extents to which people were willing to alter basic routines to provide for their own safety. These two narratives are especially relevant because both come from the highly-stigmatized Filipino-Chinese community in and surrounding Scarborough. Luis Tan, for example, recalled the following:

When the SARS was at its peak, meaning you see people die here and there, you try to [avoid] restaurants...public places as much as possible you avoid. Even in the church, the priests always say, normally you shake hands when you say "Peace be with you," even the priest was telling people just to be cautious, we just greet each other, "Peace be with you," instead of shaking hands. Those are the precautions that even in church was good practice. That was at the height of the SARS crisis. (Tan 2005)

A second narrative, which both encapsulates and expands upon Luis' entry, comes from interviewee Seny Zamora, who related to me the following story about her church, showing how even holy ground can become tainted by fear:

Seny: So it's like, if you have [SARS], almost you feel that you're doomed. People recover, but because it was so contagious, that they can spread it by, say, air, coughing, sneezing and everything, right? So whatever you hold, right? So you're being paranoid, wash your hands, "Happy Birthday!" washing of the hands.... (laugh) People don't even want to shake hands even church, right? In the Catholic, I've been pure Catholic, I don't know, but when we have the mass you go around, you turn and you shake hands, right? People, the priest would say, "Okay, because of the SARS, you just bow your head." (laugh) So people bow their head. And also you're going to the church, you have the holy water and the "T" on your forehead and you make the sign of the cross. They took out the holy water! (laugh)

Jon: No holy water at all?

Seny: No. Because it contaminates the quickest. They're saying that SARS is spread by holding, like the hands, so you always need to wash your hands after contact, physical contact, no nobody shook hands.

Jon: What about communion? Was that altered at all?

Seny: I think they stopped, yeah, because the priest had...usually sometimes people sip communion through the mouth, right? So the priest made this announcement, "Please receive communion through your hands." (laugh)

Jon: Did they even pass out the little, the wafers?

Seny: They passed out the wafers, but through the hands. But not, not...to get at the priest holding it, because the saliva would cause the SARS, right? So if you stopped putting communion and the host into the mouth, right, but just done it through the hand, right? So everything was like that.

Jon: Did the wine disappear as well?

Seny: Yeah, the wine disappeared. They didn't...well, the wine was there, but then some people, there were some churches that they offered wine for the communion guys to drink, but that stopped for a while. 'Cause when you go to communion, some churches offer wine separately from the wafers and the bread. (Zamora 2005)

Seny's comments evidence a metaphorical "line in the sand" in relation to danger and gathering places. The desertedness of businesses and large areas of Toronto—such as Chinatown—is indicative of high levels of concern and fear, but many of the establishments that were largely empty during the SARS crisis were of an ultimately entertaining, dispensable nature. People do not immediately *need* to eat at restaurants, nor do they immediately *need* to go to the movies or shop for clothes. These are all activities that can safely and easily be at least temporarily done away with, and their absence provides minimal disruption to the basic, day-to-day workings of the household. However, there are activities that need to be performed on a regular basis, and for the religiously devout, Sunday morning church is as critical to the soul as bread is to the belly. Many of Seny's congregation continued to attend mass during the 2003 outbreak because of this, but there still existed at that church the potential of a dangerous juxtaposition between large numbers of people and a contagious, deadly virus. Since

ceasing to attend church was not an option, official services were altered to reduce the possible avenues of disease transmission. Physical contact with other human beings was either eliminated altogether or, where that was not possible (as in the passing of communion wafers), kept to a minimum and performed in such a manner as to reduce possible contact with “dangerous” body fluids like saliva. The methods that church-goers and church officials chose to deal with this problem highlight the extents to which they were willing to endanger themselves for the sake of what were perceived as basic needs.

Such changes in church activities evidence a paradigmatic need for security, as reflected in the alterations of personal actions and behaviours, and simultaneously a syntagmatic need for stability, as the intended meanings behind the actions remain constant despite the changes. Scarborough’s Filipino-Chinese community was heavily stigmatized during the SARS outbreak, and the members of that community were aware of their stigmatization. Furthermore, the members of that community were affected by that stigmatization, and many of them attempted to avoid contact even with members of their own community—as evidenced by Angel’s statement in chapter five that he hardly left his home for six months. Luis’ narrative about parishioners being asked not to shake hands while saying “Peace be with you” is a perfect example of how members of a stigmatized community dealt with the fear that encapsulated their lives. The churchgoing sentiments of brotherly love and well-wishing are still present, as the members of the community still recognize the importance of group solidarity, but the actions have been altered in response to the threat of disease and contamination to facilitate the safety of individuals. Seny’s narrative evidences similar reactions: the recognition of others is still

present, but the act is changed from a handshake to a bow of the head. Similarly, the reception of communion and the concomitant religious experience and importance are still present, parishioners simply receive the wafers in their hands, rather than through their mouths. Seny's comments do evidence at least one alteration that falls outside of this category—the complete removal of holy water from the fonts, with no apparent attempt to replace it with a different action or gesture—but even then I would argue that the overall meaning of the religious nature of church participation has not changed. Seny's comments do not demonstrate that the absence of holy water changed her churchgoing experiences on any fundamental level, especially as she continued to attend church during the outbreak. Nowhere in Seny's narrative is the alteration of these actions and behaviours announced as a negative experience. Instead, the alterations simply seem to be acts that the parishioners accepted as consequence of the outbreak—acts that only changed the ways church was conducted on a physical level, but not the way church was experienced on a religious level.

Returning to Goffman's list, only point two—mastery of activities thought to be difficult or impossible, given the stigmatized individual's condition—appears to apply to the churchgoing experiences reported by Luis and Seny. But again, Goffman's comments are focused only on those who actually have the conditions for which they have been stigmatized. Furthermore, the examples Goffman uses to support this point—lame people learning to play tennis and blind people learning to ski—all focus on the impossibilities assumed to accompany significant losses of physical capabilities such as sight or movement. Both Seny and Luis are perfectly healthy individuals who had full control of

their facilities, both mental and physical. Nor can the act of attending church be thought of as a difficult or impossible physical activity for a healthy individual. Once again, Goffman's points do not offer adequate headings for the categorization of the responses reported by people during the SARS outbreak.

But then, when it comes to SARS, Goffman's reliance on the use and categorization of individuals who actually have the conditions for which they have been stigmatized means that the larger number of his arguments cannot be used to examine public reactions to the outbreak, unless his arguments are decontextualized or otherwise twisted to fit the situation. One of the few of his statements that does seem to apply to the responses given to me by any of my informants is that "since the stigmatized person is likely to be more often faced with these [awkward social] situations than we are, he is likely to become the more adept at managing them" (1963, 19). Jokes and humor provide exactly this type of stigmatization management, as do the churchgoing narratives provided by Seny and Luis. But even here, there are reported actions that do not seem to fit into this neat statement. Does Angel's near-complete avoidance of people for six months constitute an adept *social* management strategy? What about the public's avoidance of Chinatown and Asian-themed or -oriented businesses? Of non-Asian-oriented businesses such as theatres and airports? What about reports from interviewees who said they avoided funerals (Seny) and stopped shopping for birthday presents (Heather's mother, as reported by Heather) during the outbreak? Do these actually constitute "adept" social management strategies, since they generally entail the complete *avoidance* of social situations? Wouldn't an adept social management strategy entail

learning how better to successfully navigate social situations, rather than avoid them altogether?

As seems clear by now, Goffman's work on stigma—while influential and groundbreaking—in many ways does not provide an adequate framework for the study of SARS narratives and communities stigmatized by SARS. Goffman's lack of a general category for those stigmatized by disease, and the similar lack of a category for the potentially discreditable, means that the larger portion of the stigma-related narratives collected for this study are left without a neat slot to fit into. And even when forced into the study despite this problem, Goffman's heavy emphasis on stigmatized individuals' *negative* reactions to their situations means that many of the collected narratives that exhibit positive mediatory actions are similarly left unshelved and uncategorized. Even a small study such as the one conducted here demonstrates the necessity of the inclusions of humor and other more positive reactions to Goffman's lists, and a larger, book-length study would no doubt find more areas hitherto uncovered. Sociological analyses of stigmatized individuals and communities have revealed much about the nature of stigma. Folkloristic, experiential analyses can reveal yet more, and should be conducted more frequently, as there is much that our field can add to these arguments.

Chapter 8: The Cause and the Cure: Folk Medicine and SARS

When confronted with a disease, it is a natural human reaction to want to escape. Self-preservation is deeply ingrained in our psyche. Barring this possibility, the next logical step is to find a way to prevent the disease from affecting us. And if those attempts fail, we then begin to search for ways to heal ourselves, and to rid our bodies of the invading forces. The SARS outbreak provides a unique opportunity for examining all three of these approaches, because the border-crossing and airborne nature of the virus led to situations in which individuals found themselves suddenly confronted with a disease that only a few hours earlier had not existed in their neighbourhoods, or even countries.

The escapist reactions of the public in response to the outbreak have already been covered in the examinations of deserted restaurants, airports, and neighbourhoods. This chapter opens a new forum in looking at the ways people responded to the encroaching coronavirus when escape was not an option, whether for economic, personal, political, or other reasons. What will result from these studies is proof that SARS is unique in the types of cures that were created by the layperson in response to the threat of disease.

We first, however, begin with a look at the history of the study of cures and remedies in medicine. Examining previous work on the subject will provide background information that will prove useful in demonstrating why SARS is unique. It will also provide a necessary look at how the study of folk remedies has changed over the past 120

years, thus presenting data that will frame the theoretical approaches taken in this chapter.

Discussions of the natures of cures and remedies present in folk medicine are numerous, having occupied volumes' worth of scholarship and covering areas as diverse as philosophy, psychology, and ethnopharmacology. Much of the early work in folk medicine was text-oriented, in keeping with the philosophies present in the field of folklore at the time, and consisted largely of long lists of collected remedies for various problems. One example from this era will be a sufficient illustration. William George Black's *Folk-Medicine: A Chapter in the History of Culture*, the preface of which dates the work to 1883, but which was reprinted in 1967, is an excellent example of such an approach. His work contains chapters on both "Personal" and "Animal" cures, as well as the importance of charms, saints, colors, numbers, the sun and the moon, magic writings, rings, and various forms of "domestic folk-medicine," that altogether constitute some 130 pages of a 220-page book. The scholarship necessary to produce such voluminous lists is impressive, and the categories Black forms to organize his collections are useful, but from the current perspective the work as a whole is lacking such critical contextual information as the beliefs and values of the practitioners of these cures and remedies. A typical passage from Black's work, chosen at random, reads:

To avert the destruction of an entire drove it is still known that the burial of one cow alive may be useful. More cruelly, there are instances of a cow being rubbed over with tar, and driven forth from the stricken herd. The tar is set on fire, and the poor animal is allowed to run till death puts an end to its sufferings. To burn to death a pig has been recommended by a wise woman of Banffshire as a cure for cattle disease. The ashes were to be sprinkled over the byre and other farm buildings. (Black 1967, 74)

While Black does list the source for his information—Lecky's *History of England in the Eighteenth Century*, which is itself citing Mitchell's *Superstitions of North-West Highlands*—no further information concerning the practitioners of such traditions is forthcoming. Pessimistically, Black's work at times reads as little more than a list of curious or barbaric and outmoded trains of thought in folk medicine, such as the paragraph that succeeds the above-quoted one, which is devoted entirely to examples of human sacrifice-as-cure from history and begins with the subjective sentence "Human sacrifices are, happily, now rare" (Black 1967, 74).

Black's work did advance the study of folk medicine in its own way, for in his textual studies of cures and remedies he contradicts earlier sociological thought that "all primitive theories attribute disease and death to the spirits of the dead" (Black 1967, 205). Instead, Black advances the theory that there are three main "primitive explanations" of disease, which are, in order of most to least common and important, "(1) the anger of an offended external spirit; (2) the supernatural powers of a human enemy; and (3) the displeasure of the dead" (Black 1967, 205), the studies of which can lead mankind to a greater understanding of itself. While these theories may no longer be considered correct, they still evidence a progression in analytic thought. But in terms of contextual analyses, Black's work falls short of current standards.

Fast-forward almost a century, and the textual analyses practiced almost to exclusivity by Black are slowly giving way to more context-based approaches. Text-based studies do still appear in print, (cf. Brandon 1976; Emboden 1976; Fox-Baker 1981; Guerra 1976; Lacourcière 1976; Radbill 1976; Smith, Truman 1981; Stallings and

Tilton 1981; Sullivan 1981; Vogel 1976), and one of the more prominent textualists of the last thirty years was Wayland D. Hand. His 1980 *Magical Medicine: The Folkloric Component of Medicine in the Folk Belief, Custom, and Ritual of the Peoples of Europe and America*, a collection of twenty-three of Hand's articles on folk medicine, consists almost entirely of text-based studies. Like Black, Hand is meticulous in citing the sources of his data, but rarely does the reader get a look into the lives of the people who practiced these medicines. For all of its excellent research, *Magical Medicine* offers three hundred pages of various cures and remedies, and virtually no discussion of the practitioners.

This is not to say that Hand's work was not important in advancing the field. What William George Black was able to do in terms of codifying and organizing folk medicine in the latter part of the 19th century, Hand did for the middle third of the 20th. His essays greatly detail how folk medicine can be broken into distinct categories of cures and remedies, and he provides numerous examples for each of his groupings. Hand does claim in an essay written in 1975 that "the magical element in folk curing is a somewhat neglected field in folk medicine" (Hand 1980, 1), a statement that seems exaggerated given the lengthy tracts devoted to it by Black, but other of his theories provide interesting insights into the field as a whole. For example, in his discussions of the "conditions and circumstances that may enhance the [magical] folk medical act or insure its success," Hand chooses to categorize his entries by "the adverbs of time, manner, and place" (Hand 1980, 2). Under these discussions, Hand avoids the normal pattern of naming a malady and then listing possible cures for it, instead choosing to look at, for example, cures that take place at crossroads, regardless of the malady they are

designed to treat. A reshuffling of categories such as this illuminates similarities between widely dispersed items, allowing researchers to make connections that were previously hidden.¹⁰ And so Hand provides lists of cures categorized not by disease, but by how, when and where they are administered.

Hand's work was also useful in expanding the field of study to all areas of humankind, rather than just focusing on third-world or impoverished peoples. In an article on disease aetiology, he states that:

[Forrest E.] Clement's seminal paper on the causes of disease deals largely with ideas held within the primitive community in various parts of the world, yet for almost all of his five main theories of the cause of disease (sorcery, breach of taboo, disease-object intrusion, spirit intrusion, soul loss) parallels can be adduced from medical and folk medical aetiologies that derive from people of high culture, modern as well as ancient. (Hand 1980, 251)

Present within this quote is not only a more modern and inclusive version of Black's "primitive explanations" of disease, but the idea that it is not only the "primitive community" that continues using such explanations. Instead, humankind as a whole is correctly pointed out as maintaining these beliefs, and thus limiting research in the manner evidenced by Clement only impoverishes folkloristic understanding of the topic.

Within Wayland D. Hand's lifetime—though not evidenced as being practiced by him in the works cited in this chapter—a critical shift in the field of folklore came with the insistence that context-based studies would provide even greater understanding of a given area. The presence of this context-based approach is evident in Bruno Gebhard's

¹⁰ Such efforts are not confined to the study of folk medicine, and have proven useful in other areas of folklore. David Buchan's article "Propp's Tale Role and a Ballad Repertoire" (*Journal of American Folklore* 95.376) provides the same sort of illumination-through-categorical-reshuffling for the field of ballad study, ultimately proving that Child ballads separated by dozens of numbers have virtually the same plot.

1976 article “The Interrelationship of Scientific and Folk Medicine in the United States of America since 1850,” wherein the following quote appears:

The division of folk medicine into a natural, rational science and a magico-religious healing art is generally accepted, but I would not limit the first aspect to herbal healing, as Don Yoder does. There is more to it than purging, bloodletting, fasting, sweating, and so on. I prefer to speak of both parts together as *lay medicine*, identical to what in the last century was called domestic medicine.... I like to define lay medicine as the patient’s—not the doctor’s—concept of health and disease and the cures applied in case of illness or accident. (Gebhard 1976, 90)

Though Gebhard’s article does spend most of its length discussing the history of folk medicine and giving itemized, textual lists of common “folk medicine items,” it is still noteworthy in two ways. First, it marks one of the early uses of the term “lay medicine,” and second, it ends by stating that folk medicine has one important advantage over scientific medicine: “it has no doubt; it believes” (Gebhard 1976, 97). Gebhard never goes so far in this article as to conduct a context-based study, but he does hint at its importance in this latter quote, as well as the extended one above. To say that there is “more to” folk medicine than just the cures themselves is a definite move towards contextualism, as is the mention that the patient’s concept of health and disease is at least as important as the doctor’s. And, of course, the mention of the importance of “belief” in lay medicine is directly indicative of the changes that would be made in the field in the following years.¹¹

¹¹ Important to note in relation to this is that the article preceding Gebhard’s in the volume is David J. Hufford’s “A New Approach to the ‘Old Hag’: The Nightmare Tradition Reexamined,” which used memorates to study a supernatural phenomenon, and which led to Hufford’s creation of the Experiential Source Hypothesis, discussed more fully in Chapter 2.

The shift from text to context resulted in an explosion of articles in the 1970s and '80s centered on the *reasons* patients used cures, rather than just the cures used by patients. Attempting to examine the field of folk medicine from the viewpoint of the practitioners and consumers forced academics to look at the "why" of the situation—more succinctly asked as, Why are people still using folk, or "unofficial" remedies in an era dominated by the success of scientific, "official" medicine? After all, by 1980 scientific medicine had eradicated smallpox, drastically reduced through vaccines the number of yearly deaths from disease, transplanted human hearts, kidneys, and lungs, and delivered the first test-tube baby. In light of such astounding achievements, why would people still turn to magic and religion for medical help, much less the weeds growing in their back yards?

Some of the earliest efforts to answer this question came in the form of scientific studies of the folk medicines themselves. George G. Meyer's 1981 article "The Art of Healing: Folk Medicine, Religion and Science" devotes part of its length to a summary of the studies that have tested the pharmacologic properties of various plants. Specifically mentioned is Ortiz de Montellano, whose work in the mid-'70s found that of twenty-five plants commonly used in Aztec folk medicine, sixteen were proven in laboratory studies to produce the claimed effects, and four more had possible activity (the remaining five were nonactive). In addition, Meyer notes J. L. Diaz's study of plants used by *curanderos* which concludes that most of the remedies make "pharmacologic sense" (Meyer 1981, 10). The ultimate goal of studies such as these is stated to be proving that folk medicine does often make "scientific sense," and that many of the plants are specifically chosen

after long periods of investigation by *curanderos* and their global counterparts. As such, folk medicine ought to be taken more seriously by scientific medicine.

Pharmacologic efforts such as these were relatively common throughout the 1970s and '80s. Much of the work of Social Scientist Virgil J. Vogel, for instance, was devoted to studies of the efficacies of Native American medicines. His opus magnum in this respect is *American Indian Medicine*, a 1990 publication that approaches six hundred pages in length, almost all of it devoted to the pharmacologic studies of various plants. Ralph W. Moss's 1992 *Cancer Therapy: The Independent Consumer's Guide to Non-Toxic Treatment & Prevention* and 1998 *Herbs Against Cancer* did much the same work, though for the more tightly-focused field of herbal cancer therapies. And my own Master's thesis took a similar, admittedly text-based pharmacologic approach to the study of the effectiveness of herbs common to four popular folk-based cancer treatments (Lee 2001), demonstrating that studies such as this are still being undertaken in the new millennium.

However, the strengths of George G. Meyer's article lay not in the summaries of other authors' works, but in the statement that "elements of folk medicine, religious healing, and scientific medicine need to be incorporated into all healing practices. Indeed, when integration has not occurred, the patient will seek separate care in all these areas" (Meyer 1981, 7). While pharmacologic studies that prove the ultimate scientific effectiveness of remedies are a step in the right direction, the ultimate goal of folk medicine research should be patient-oriented, and Meyer's statement directly reflects this philosophy. Researchers and medical practitioners need to take into account the beliefs

and attitudes of the patients, because disregarding them only leads to situations where the patients seek additional help elsewhere. The problem with this approach occurs when the types of help sought by the patients prove harmful or contradictory, such as in the case of herbs that counteract or prove toxic in conjunction with hospital-based treatments and medications. In a conversation with Lynnette Lee, a Radiation Therapist at Massachusetts General Hospital, she commented that patients receiving radiation therapy for cancer, for example, are supposed to avoid foods containing antioxidants, as such compounds inhibit or negate the effectiveness of the radiation—but many patients begin taking antioxidant-rich vitamin pills after a cancer diagnosis because they believe such efforts will prove beneficial. If for no other reason than safety, then, the beliefs and attitudes of the patient must be taken into account, and medical practitioners need to learn to address such issues with tact and open-mindedness.

Further steps in building the patient-oriented approach examined both the similarities between the folk and scientific medical systems, and the structure and nature of folk medicine as a whole. Sometimes these approaches were used simultaneously, or within the same article, to build an extended series of bridges between the fields. The Nordic Research Symposium of 1981, held in Kuopio, Finland, resulted in several published articles central to these points. Tuula Vaskilampi, working out of the University of Kuopio in Finland, looked at both scientific and folk medical systems in his article “Culture and Medicine.” Vaskilampi’s sociological analysis, according to Carol P. MacCormack,

...suggests two fundamental elements in all medical systems: 1) a cognitive and ideological sub-system, and 2) an organizational sub-system. The former

encompasses perceptions of disease etiology, explanations of illness, the natural course of illness, and treatment. The organizational sub-system includes social relations, especially between patients and healers, as well as legal entitlements and constraints. (MacCormack 1982, II)

In stating that both folk and scientific medical systems contain these elements, Vaskilampi is pointing out the rationality and complexity of such systems, stating in much the same way as proponents of the pharmacological approach do that folk medical systems are far from the simpleminded and illogical bits of quackery that they are so frequently assumed to be. Instead, folk systems can boast the same levels of complexity and ingenuity as scientific systems, and their treatments are just as well researched.

The remainder of Vaskilampi's article provides an excellent example of the study of folk medicine as a whole, specifically attempting to organize and define common ideas within the field, despite the differences in values that come with cross-cultural philosophies. Nature is stated as a highly-valued idea within folk medicine, especially in the sense of the wholeness and liveliness of natural things. Such a value is present within such diverse medicines as "vegetarism, homeopathy, herbalism, naturopathy, osteopathy and spiritual healing" (Inglis, qtd. in Vaskilampi 1982, 4), but despite the variety of such medicines, the ultimate meaning and importance of nature is that it is "seen as containing messages and truths of deep emotional impact" (Twigg, qtd. in Vaskilampi 1982, 4).

"Wholeness" is another concept common to folk medicines, the study of which reveals much about the reasons folk medicines remain popular in the modern era.

Wholeness is "expressed in the emphasis of the balance of the body and the mind. The aim of care is to treat the whole person and not only symptoms of the disease. We find health in the harmony between individual and nature and universe" (Inglis, qtd. in

Vaskilampi 1982, 4-5). Where scientific medicine is often criticized for treating the disease and caring little for the patient—or perhaps better stated, focusing on the singular disease to the exclusion of all other possible and multiple health-related issues—folk medicine examines the person as a whole. Still present in these examinations is the importance of treating the body, but folk medicines are also willing to examine the spirit and soul.

In total, Vaskilampi states that “The cultural content of belief systems involves several positively valued ideas: nature, wholeness, purity, humanity and individualism.... These ideas are becoming salient in other spheres of life, too. They form countertrends to the reductionistic technological development which many people reject as unsatisfactory” (Vaskilampi 1982, 12). Folk medicine, then, provides more than the simple extirpation of virus and bacterium offered by hospitals. Instead of being treated as anonymous broken and empty vessels that must be quickly and all-too-often surgically repaired, practitioners of folk medicines treat people as full and important bearers of life who must be slowly and carefully mended from the inside out using a variety of largely non-invasive strategies.

Bente Alver, another participant in the Nordic Research Symposium, carried this idea to a clearer conclusion in “Folk Medicine as an Open Medical System,” wherein she states that “The reason so many people seek treatment by alternative means is that folk medicine is an open system capable of responding to human needs as they arise in space and time in contrast to official medicine which is locked into a system of a priori assumptions” (Alver 1982, 124-5). Alver specifically states that there are four types of

illnesses that most frequently result in the consultation of folk healers: "chronic illnesses...fatal illnesses...various psychological disorders...[,] and conditions which according to the physicians are not illnesses at all" (Alver 1982, 130). In each of these cases the scientific medical system is seen as failing the sick and inflicted by either not effectively treating the disease, or by rejecting the patient's claim of disease. Alver's list may actually be too restrictive, for it does not include the various folk medicines used to treat such everyday problems as upset stomachs and hangnails, but it does illuminate the underlying issues of cold and clinical distance that frequently accompany stories of hospital visits.

Two more articles are needed to fully demonstrate the transition from the text-based to the context-based approach. The first is another of Bente Alver's articles, "The Bearing of Folk Belief on Cure and Healing," this one published in 1995 in the *Journal of Folklore Research*. Alver's discussions in this article constitute a fuller and more extended version of the arguments made in her earlier article, building on her previous concepts to flesh out the patient-centered nature of folk medicine. One of Alver's first points in this article is to outline not only the importance of folk medicine as a whole, but the importance of the beliefs inherent to folk medicine as they apply to the broader concept of culture:

In all cultures, people's perceptions and belief systems regarding health are closely tied to fundamental values, such as those concerned with the maintenance of life and the loss of life and to certain conceptions of "the good life." Therefore, the research domain within which one deals with people's beliefs relating to disease and treatment is highly important for our understanding of culture seen as a totality. (Alver 1995, 22)

Folk medicine, then, ontogenetically recapitulates the phylogenetic development of the larger culture, the former encapsulating and mimicking the important aspects of the latter, but on a relatively smaller scale. Alver's statements on this matter are given as unidirectional, but it seems apparent that they can be reversed, and thus an understanding of culture can lead to a strong impression of what a researcher might find upon first encountering that culture's folk medicine. Cultures that, as a whole, emphasize the quality of life over the quantity of it will carry those attitudes over to their folk medicines.

The importance of such a statement lies in the differences between folk and scientific medicines, as hinted at in Alver's earlier work, but restated in this later article as follows:

Many people feel they are being helped within the folk sector. They report that they lead more functional lives than they had before treatment, have greater success in what they do, and are happier. On the whole, they describe an improved general condition. However, their doctors seldom feel convinced. The doctors, whose judgment stems from a biological perspective, usually conclude that the patient is as sick as before, though sometimes they will concede that the patient is experiencing a good period, especially in the case of the chronically ill or those with life-threatening sicknesses. (Alver 1995, 26)

Ultimately, folk medicine and scientific medicine attempt to treat the various maladies that plague humanity, but the approaches taken differ vastly in their concepts of what constitutes "health" and "cure." Folk medicine, as we have seen, mimics culture as a whole, and thus concepts found in the culture as a whole are likely to also be found within the domains of folk medicine. It is because, in part, of such similarities that folk medicine is the easier form of treatment to slip into; its concepts are familiar and friendly. Scientific medicine, on the other hand, precisely because it is based solely on reason and

logic, hypothesis and laboratory-based proof, and emotional suppression in favor of cold, hard facts, is not seen as reflecting culture as a whole. Its concepts are alien and clinical, and its practitioners prone to disregard anything that does not coincide with their school-learned worldview.

Alver, in describing such differences, uses the work of several scholars to supplement her own:

Health disorders have a biophysical as well as a socio-cultural aspect. In medical anthropology these two features are designated *disease* and *illness*. Disease is viewed as the biological disturbance in the body, while illness refers to the cultural and social meaning attributed to the disorder (Young 1982). One may visualize the two aspects graphically as partly overlapping one another and jointly constituting the total health field with a particular culture (Hastrup 1984; Elsass and Hastrup 1986:10-11). On the whole, professional medicine is oriented toward disease, while the folk (lay) sector has its orientation toward illness. The medical strategies in relation to disease are designated *curing*, while those in relation to illness are termed *healing* (Hastrup 1984; Kleinman 1980:82). (Alver 1995, 25)

Such a radical difference in philosophy frequently serves to alienate the layperson, who feels that his or her needs are not being met by the scientific approach. Drawing these last few concepts together—folk medicine as a smaller version of culture and the differences between folk and scientific medicine—Alver completes her arguments with the following:

In a modern folk belief system, health and quality of life are connected to concepts like harmony and balance. Sickness is linked with disharmony and disequilibrium: it is understood as a lack of balance within the body, as a disequilibrium between body and soul, and between human beings and the immediate environment. Also, it may be seen as a lack of balance between human beings and the “forces.” Healing, then, involves help to dislodge the cause of the apparent disequilibrium and to re-instate harmony. (Alver 1995, 28-9)

Alver goes on to state that concepts such as these, when large enough, can be adapted to ideas present in scientific medicine, but the emphasis seems to be on the larger scale.

Individual treatments are not often seen as part of this balancing act, a view that only serves to further distance the relativity of scientific medicine to the life of the average person.

Alver does recognize the importance of scientific medicine, of course, and acknowledges its marked ability to treat and cure many diseases. What she does say in response is that scientific medicine “deals with sickness in terms of *how*, while alternative medicine asks *why*” (Alver 1995, 31), and notes that while each of these questions are important, human beings are only satisfied when they have answers to both of them. And so the continued presence of folk medicine can once again be attributed to its meeting needs that are not adequately addressed by scientific medicine.

The last article that needs to be mentioned in this section comes from Bonnie B. O'Connor and David J. Hufford. Published in Erika Brady's 2001 book *Healing Logics: Culture and Medicine in Modern Health Belief Systems*, “Understanding Folk Medicine” provides a succinct overview of the field, and echoes many of the statements made by previous scholars in regards to the reasons folk medicine remains valid and present in modern society. O'Connor and Hufford state:

However, it is precisely the health promoting capacities of any system or therapeutic modality that are of greatest importance to its proponents and users. People dealing with health problems are typically quite pragmatic in approaching and evaluating any form of treatment or remedy: if it seems not to work, or produces effects that are too unpleasant, it tends to be rejected; if it seems to work, it tends to be supported and retained in the repertoire of healing resources likely to be tried again (and recommended to others). This pragmatism operates at both individual and collective levels. Folk healing traditions' reputations for efficacy, based on aggregate observation and experience, are central to their persistence and continued vitality. (O'Connor and Hufford 2001, 15-16)

Important to note here is the underlying notion that folk medicine is not without logic or reason. Its treatments are chosen carefully and specifically, evaluated over long periods of time by hundreds, if not thousands of practitioners and patients, and only absorbed into the category of useful treatments if such long-term observations conclude them worth their merit. Folk medicine is thus the ultimate patient-centered approach, especially considering the abandonment of treatments deemed too harsh. Not only is folk medicine interested in healing, it is interested in doing so in a manner comfortable to the patient.

O'Connor and Hufford also attempt a brief list of the common practices found in folk medicine—much like William George Black attempted over a century earlier. Their list is much shorter, however, as they freely acknowledge that “the enormous diversity of American folk medicine makes it impossible to enumerate every therapeutic practice found in every system” (O'Connor and Hufford 2001, 28). Instead of listing cures based on such categories as “saints,” “colors,” and “numbers,” as Black did, or even on such broader categories as “time, manner, and place,” as did Wayland D. Hand, O'Connor and Hufford simply state that “there are...broad common categories of preventative and therapeutic modalities in use across systems, including physically applied therapies, medicinal herbs and other naturally derived substances, sacramental objects, and prayers and other religious and spiritual actions” (O'Connor and Hufford 2001, 28), the article then providing a brief paragraph for each of these modalities that lists examples of the treatments that might fall under them.

What O'Connor and Hufford do describe in the closing paragraphs of their article are the links between folk and official medicines. They state that most people use folk

medicine more frequently than official medicine, and that these people continue to use folk medicine while being treated by doctors and other practitioners of official medicine for the same illness. Oftentimes, these doctors are not aware of such practices. This is made all the more complex by the fact that people are often recommended *by their folk healers* to seek treatment from hospitals, and these folk healers will sometimes enter the hospitals to continue their methods of treatment after or even while the patient is receiving treatment from hospital staff. "The conventional medical model," O'Connor and Hufford conclude, "can be incorporated rather easily along with folk models of illness, and in some instances may even serve to reinforce them" (O'Connor and Hufford 2001, 32). Folk medicine is thus more than willing to accept the presence and wisdom of scientific medicine, but such an attitude is still a long way from being reciprocated. This, too, makes folk medicine the easier choice for the public: not only is it "comfortably consonant with their general worldviews" (O'Connor and Hufford 2001, 32), but it is more adaptable and willing to recognize the benefits—and sometimes superiorities—of other systems of healing.

Taking all of these articles into account, one sees the history of folk medicine as varied, but generally pointing toward contextuality, especially within the field of folklore. The larger proportion of modern scholars have adopted a patient-oriented approach in their studies, focusing on the beliefs and attitudes of their interviewees regarding the treatments they use and the diseases for which they are selected. This patient-oriented approach appears across the wide field of folk medicine, and has been applied to numerous health issues, both psychological, spiritual, and corporeal. Applying such

theories to SARS is at first blush no different than applying them to any other health issue, for the primary purpose of such investigations is simply to gain an understanding of the interviewee's culture, worldview, mindset, etc. To at least some extent, many of the same questions could even be asked of a SARS interviewee: How do you treat this disease? Where did you learn of these treatments? Why are they important to you? What do they mean to you? Why do you use them?

From another perspective, to at least some extent the answers to these questions might be the same for SARS as they would be for any other disease. Alver's conclusions that folk medicine continues to present itself in modern culture because it fills niches and answers questions that scientific medicine does not are also applicable to SARS, even though this disease did not exist when Alver penned her texts. Interviewee answers to a question such as "Why do you use these treatments?" or even more basically, "What treatments do you use?" could therefore be expected to exhibit anti-medical establishment and/or pro-nature sentiments. Take, for example, the following excerpt from my interview with Angel and Rosita Lim:

Jon: What did you do to prevent yourselves from getting SARS?

Angel: Preventing, like, avoid going to public places, like mall, like movie houses, restaurants specifically, restaurants, because they say that if you ate something and you, they didn't wash the dishes well, you know, you easily get SARS from eating [with], like, utensils they didn't wash well. So we try to avoid going to the mall or the fast foods or restaurant.

Rosita: Also, this fear, good thing we didn't have to go to, but this fear of going to funeral parlors. If somebody had died and you don't know why they died...

Angel: Yeah, yeah.

Rosita: ...the SARS they said that if you were even in the funeral parlor you might get sick. (laugh) Or somehow transmit.

Angel: So one thing, you know, I'm afraid to go to the clinic, like if you are sick, like if you have colds, you would avoid going to see the doctors, because

who knows, somebody before you has seen the doctors and left something, and then you go to see the doctors and you might have SARS. So that's one point, we are afraid to go to the doctors. Even [if] we, we are sick. (Lim, Angel and Rosita 2005)

Clearly present in Angel's narratives—especially in the last paragraph—is the distrust of the medical community. Angel saw clinics not as places of healing, but as places where people were likely to get sick, whether that illness came from the medical professionals or from other patients. For Angel, the word “hospital” became synonymous with “dirty,” or perhaps “diseased,” and as such, hospitals became places to avoid. Such fears were caused and exacerbated by the medical profession's apparent lack of control over the virus: even after news broke worldwide about the coronavirus having spread from China, SARS continued over the next few weeks to spread elsewhere. The World Health Organization, possibly the face most readily identified as responsible for containing such outbreaks, seemed to be losing the battle. On a smaller level, hospitals and clinics also experienced great difficulties in containing the virus—evidenced by the numerous instances of doctors, nurses, and other patients contracting the disease from infected patients. Avoiding restaurants and funerals seems a natural extension of such a negative perception, for if trained medical professionals have not proven themselves capable of preventing the spread of SARS, what assurances of safety could a waiter or funeral director possibly offer? In light of such failings, the only acceptable response for Angel was to take matters into his own hands.

The reasons why patients “take matters into their own hands”—a phrase used here in the larger, metaphorical sense of “removing some or all of the decision-making power from Western medicine in treating illness and disease”—are the crux of modern,

contextual folk medicine study. The reasons stated by my interviewees as to why they chose these approaches over, or at least in conjunction with Western medicine, are exactly those forwarded by Alver and O'Connor & Hufford: Western medicine, at least in some small part, is failing them, and folk medicine has the capability of offering more sound shorings.

Angel's avoiding the medical clinic because of a perceived risk of contracting SARS is just one example of this failure. When I asked my informant Luis Tan about his precautionary measures, he responded, "There is the...the most susceptible is if your resistance is low. So what we did during those times is we tried to boost our immune system by taking vitamin pills and extra milligrams or capsules or tablets of vitamin C. Those are the...and then don't overwork yourself, that way your resistance won't go down" (Tan 2005). Luis' response is subtler than Angel's, as Luis never openly admitted to discontent with Western medicine. He did admit to being afraid during the outbreak, but seemed to believe in the power of local hospitals and global medical workers to combat the virus. Luis also watched the news and read local newspapers daily, following and apparently completely trusting any advice given to him from those "official" sources. However, his inclusion of vitamins in his daily regime, and especially his notions of overworking oneself leading to decreased resistance, still indicate that somehow his needs hadn't been fulfilled by those official sources.

What is interesting to note about SARS—what, in some small part sets it apart, and what may explain Luis' actions—is that almost all of the examples of folk medicine mentioned either by my interviewees or through Internet and media sources were

preventatives, and not *curatives*. My thirteen interviewees specifically discussed having either used or seen others use the following precautionary measures, in order of most to least noted:

- 1) masks or other covers of the mouth and nose while breathing (ten mentions);
- 2) avoiding places (nine mentions);
- 3) washing hands/antibacterial sanitizing hand gels (seven mentions);
- 4) tied at two each were
 - a) taking vitamins
 - b) not shaking hands, and
 - c) using herbs;
- 5) and tied with only one mention each were
 - a) using Windex as a surface disinfecting agent
 - b) altered communion practices, and
 - c) daily washing of clothes.

The reasons for such a proliferation of preventative medicines and efforts—to the virtual exclusion of curative medicines and efforts—are no doubt multiform. One of the largest reasons is also the most obvious: not many people contracted SARS, and far fewer died of it. Under such circumstances, “cures” make far less sense than “preventatives,” as there is little need for a “cure” to a disease that has not yet affected a large number of people; preventing it from getting to them is sufficient.

If, for example, the list of cures and preventatives for AIDS and SARS are compared, the natures of these differences are more apparent. AIDS, of course, has

dozens of preventative measures that could be taken. Whatley and Henken give several examples,¹² including that “A shower after sex reduces the risk of getting AIDS” (Whatley and Henken 2000, 88); “Withdrawal by a man before orgasm prevents transmission of HIV” (Whatley and Henken 2000, 88); that only anal sex transmits AIDS, and therefore vaginal sex is safe (this contrasted with the opposing belief that only gay men get the disease through anal intercourse, so it is safe for heterosexual couples to practice anal sex to prevent contracting it vaginally); and that a 1:10 dilution of bleach will kill the virus (which is true for surfaces on which bodily fluids have spilled, but is misinterpreted by women who use this dilution as a douche).

In terms of cures for the virus, Whatley and Henken note the belief that a man can cure himself of AIDS by having sex with a virgin and “giving away” the disease to her—a belief that surfaced in rape trials of HIV positive men in Zimbabwe and South Africa in the 1990s (Whatley and Henken 2000). A news report from MSNBC.com, dated February 20th, 2007, covered the story of Gambia’s President Yahya Jammeh claiming that he had a cure for the virus, consisting of a green herbal paste that he rubbed on the ribcages of victims, followed by the ingestion of a bitter yellow liquid and two bananas (“Gambia’s President...” 2007). Jonathan Campbell, who states himself to be a “Health Consultant” in Boston, MA, writes of one Dr. Ian Brighthope, whose book *The AIDS Fighters* details his successful use of zinc and massive oral and intravenous doses of vitamin C to cure patients (Campbell n.d.). Pam Rotella’s website, devoted in roughly equal parts to vegetarian cooking, conspiracy theories, travelogues, and stories about

¹² Readers should note that the examples that follow vary in accuracy and efficacy, and should not be undertaken without first consulting a doctor.

rescued animals, contains an extensive section on Dr. Hulda Clark's ability to cure both cancer and AIDS through use of radio frequencies (Rotella n.d.). Finally—for this list, at least—FOXNews.com reported in February of 2007 that Iran, on the anniversary of the Islamic Revolution, was poised to reveal an herbal, nontoxic cure to AIDS (“Report: Iran...” 2007)—though as of February 2008, this drug, called “IMOD,” has not been subjected to clinical trials in the U.S., nor does there appear to be much mention of it after March of 2007. There are dozens of further “cures” available for discussion, and I close this paragraph here only for reasons of brevity. Suffice to say that AIDS does have numerous folk medical treatments, both curative and preventative.

SARS, on the other hand, is almost exclusively dominated by preventative measures. Not one of my informants discussed a method of getting rid of the virus once it had infected a person. Instead, their examples focused on ways of staving off such an infection, either by boosting the immune system, killing the virus outside the body, or physically preventing it from entering the body. The Internet and media searches I conducted revealed a similar skew: mothers buying vitamins to strengthen their children's immune systems (Harmon 2003); people in China's Guangdong province stripping store shelves of Western antibiotics, vinegar, and herbal teas (Hoenig 2003); villagers in the central province of Hunan seeking “help from sorcerers in incense-infused rites.... Some [of whom] burn fake money as an offering to the gods” (Ang 2003b); a widespread rumor in China that smoking prevented SARS (Mackay 2003); that drinking mung-bean juice made people impervious to the disease (“China vs SARS...” 2003); teas made from 1) Banglangen (isatis root), 2) huzhang (*Polygonum cuspidatum*), 3) ginseng,

4) Tremella (white fungus and silver ear), 5) Chrysanthemum, and 6) Andrographis (Dresser 2004); a concoction that requires boiling 10 grams of dead silkworms and 10 grams of cicada skins in water with five herbs for 20 minutes and drinking the water for seven to ten days (Dresser 2004); that having the Ace of Spades with Saddam Hussein's face on it will keep away SARS ("Bouncin' around..." 2005); etc. etc. etc., including, of course, the ever-present surgical facemask. Pessimistically, one might wonder if there is anything that *doesn't* keep away SARS.

Conversely, "cures" for SARS are few and far between. The television show *South Park*, as noted in chapter 7, did claim satirically that the cure for SARS was a combination of chicken noodle soup, DayQuil, and Sprite. However, real-life "cures" are more difficult to find. As previously mentioned, not one of my informants was aware of a "cure." A scouring of the Internet reveals that there was at least one instance of a Hong Kong religious group claiming that drinking hydrogen peroxide would rid the body of the virus (Cline 2004), as well as a website claiming that hydrogen peroxide cured not only SARS, but several other ailments (McCabe 2003). Further surfing revealed a claim that intravenous vitamin C would cure SARS (similar to the above claim about an AIDS cure) (Cathcart n.d.), as well as that a man named Clive Harris claims to be able to cure SARS (as well as Ebola, cancer, malaria, AIDS, heart problems, and other diseases) because he has learned how to "download the Mother lode of energy fields, then [separate] them, then further [tailor] each individual's need to the specific energy form needed," which apparently resolves "energy field" problems in patients and allows the body to naturally kill off the virus/bacteria/etc. (Clinic Clive Harris n.d.). There was also mention of a

doctor who claimed that “ultraviolet blood irradiation therapy” was effective against viral pneumonias (Gupta 2003). Finally, one website was written by a man who claimed that a process called “Schlenzbath” was effective in treating almost any disease, including SARS. The process involved sitting in water heated to 41 degrees Celsius, or 105.8F (with a note that “Lindenblueten or Lime blossom” herbs could be added to the water for greater effectiveness), until the body’s internal temperature—as measured by a fever thermometer—reached between 39 and 40 degrees Celsius, or 102.2-104F. At this point the patient was instructed to lie down, wrapped heavily in towels, for the better part of an hour, or until their body temperature returned to normal (“There’s An Ancient Cure...” n.d.).

Several notes should be made concerning these “cures.” First, lacking any specific examples of cures from interviews or the initial investigations I conducted, I was forced to turn to the Internet for materials. I conducted my research by using one of the Internet’s most-frequently-used search engines—Google—and selected the search term “SARS cure” (though I omitted the quotation marks) as the most obvious option, reasoning that these would be the first words the average web-surfer would think to use. Google returned some 774,000 results, and I elected, in the name of thoroughness, to scan through the first two hundred—a far greater number than the average websurfer would choose to look through.¹³ And while I was able to locate five distinct cures through these

¹³ In fact, at least one ethnographic study of seventeen individuals using search engines concluded, in part, that “The majority of participants never clicked beyond the first page of search results. They trusted search engines to present only the best or most accurate, unbiased results on the first page.... 88 percent of the result links selected were located on the first page,” and “not one participant explored search results beyond the fifth

methods, this should by no means be taken as evidential of a panoply of easily-locatable remedies. My investigations took several hours, and were exhausting to the point that I do not believe many people would choose to repeat them. Second, and tied in with the first point, by far the larger number of the websites I had to look through to find these “folk” cures were, in fact, legitimate websites from legitimate sources about legitimate scientific advancements in the search for a vaccine or cure. Many of these websites included published reports by the WHO, the Food and Drug Administration (FDA), or the Federal Trade Commission (FTC) on the status of scientific progress in laboratories around the world. Third, along with these legitimate reports of potential cures were dozens of websites warning the public about spam emails containing claimed SARS preventions and treatments, and noting the 2003 FDA and FTC crackdown on such bogus emails. Given these three points, it seems unlikely that any member of the public in search of a SARS cure on the Internet would be able to locate one without first coming across several dozen webpages noting that a) there is no cure for SARS, b) vaccines take years to develop, and c) many people have been scammed by bogus claims of “cures” that turned out to be little more than sinkholes for naïve consumers’ moneys.

A fourth note does not involve the nature of the surfed-through websites, but an examination of the discovered “cures.” A close look at the remedies mentioned in the previous paragraphs will reveal that only the first of these—the Hong Kong religious group’s suggestion of ingesting hydrogen peroxide—involves the claim of curing only a single disease. The rest of the entries all revolve around treatments that are claimed to be

delivered page” (Marable 2003). At ten links per page, my research took me through page twenty—four times the research of the most hardy of Marable’s individuals.

panaceas, curealls for virtually any malady.¹⁴ SARS seems related to them only in the sense that it is a disease, and these treatments cure all diseases. In this light, the claims that these treatments cure SARS can only be seen as the post-event addition of a disease to an already-long list of maladies that can be cured. In other words, the status of these treatments as SARS cures is only marginally related to SARS itself, as the treatments were not specifically formulated to deal with the coronavirus, but were created long beforehand in an effort to rid the body of any illness. Any new disease that might come along is simply added to the treatment's list of "treatable ailments," since the cureall nature of the treatment entails its being able to cure anything, including diseases that have not yet surfaced.

It is possible, of course, that I have missed something in my research, and that there is, somewhere, a folk SARS cure that was created specifically to treat SARS. But given that none of my informants were aware of one, and that a large quantity of effort on my part did not result in a positive hit, it seems safe to say that a legitimate example of a SARS cure is difficult to locate. Again, I believe this to be a function of the coronavirus's limited presence in public consciousness, combined with its comparatively low mortality rate.

More important than my academic analysis of the types and numbers of cures and preventatives for SARS, however, are the opinions of the people who would have been surrounded by them. Interviewee Jen Lim, who identified herself as Filipino with strong

¹⁴ However, even the ingestion of hydrogen peroxide has been historically claimed as a cureall—see not only the aforementioned McCabe 2003, but Douglass 1992; LeBeau 2001; McCabe 2004; and Trudeau 2007. The "Cline" article simply did not mention this connection.

Chinese roots, was quite vocal about her opinions of these remedies. Asked what she thought about the idea of people attempting self-treatment to avoid contracting SARS, she responded by using an example from her own culture:

Jen: Again, it's sort of part of that human need for self-preservation. But it's entirely possible that you would, I mean in the Chinese culture, you would...animals and their body parts are sort of linked to human attributes of strength, and so I could see how people would think up, "Oh, if the bull is immune, or if the monkey was immune, that if we took"—and I think that's like what they base vaccines on, that you take a part...of the animal where it's the animal that is not affected or impacted and apply it to yourself, and that somehow you obtain their qualities of immunity.

Jon: So it seems to you like a very rational decision to try and treat yourself for a disease by using part of an animal that seems immune to the disease?

Jen: I think because it does have a scientific basis, and that it is also rooted in these old medical practices, then yes, it fulfils both an old tradition of drawing upon nature, but it also does have a basis in science, in modern science. (Lim, Jennifer 2005)

Jen's proclivities toward empathy are strongly apparent here, as she seems to take some care in not judging the practitioners of these remedies. Interestingly, Jen claimed to have been mostly unaffected by the outbreak, and changed little about her habits. She never wore a mask, did not see the need to take extra vitamins or herbs, and did not change her daily routines—which included walking through Chinatown to get to work. When pressed, the only thing she could recall having felt hesitant about was hypothetically traveling to Asia.

However, her generally non-judgmental attitude evidenced some wear when asked if she knew anyone who had avoided public places during the outbreak:

Jen: I think my dad. I don't know if I can say that up to that point we ate regularly at Chinese restaurants, because we don't really eat at Chinese restaurants anymore, but I can't say if that was the date or period. But my dad's sort of a clean freak, and so is my younger brother, Charles. And I think for sure

my dad said, "Okay, let's not eat at Chinese restaurants." Because he does have the perception that Chinese restaurants are not as clean, just regularly anyway, as other restaurants.

Jon: Kind of an awkward question, considering it's your father, but what did you, or do you, think of people who avoid those kind of places?

Jen: I think it's whatever a person is comfortable with. I mean, I sort of did feel as though it was unfounded. I mean, it was discriminatory, it is discriminatory. I don't know. I don't think I judged him on it, or I think my brother, Charles, would not...you know, he's also kind of a neat freak, and I think he avoided [Toronto's public transportation system] because of that. (Lim, Jennifer 2005)

Jen is clearly torn here between her open-mindedness and what she sees as discriminatory behavior. This is made all the more confusing for her because of her ethnicity, and the fact that her father, who was born in the Philippines and whose parents were born in China, has these discriminatory attitudes about people from his own culture. In an outbreak such as SARS, it is not surprising to see lines such as these being renegotiated. As we have already seen, anyone perceived to be of Asian ethnicity was treated poorly because of it, but Jen's father's actions show that this discrimination was not limited to outsiders fearing Asians. In fact, even some Asians feared contact with other Asians, and thus it seems that outbreaks such as this at least temporarily disturb the cohesiveness that might exist within a community. When one's neighbor might be carrying a potentially deadly virus, one tends to avoid that neighbor, regardless of his age, sex, or race. Disease, it may be said, is the great leveller: it makes everyone afraid of everyone else.

Not all of my informants evidenced such positive attitudes toward the use of folk medicine. While no one actually spoke negatively and seriously about people using herbs and teas to treat themselves, there were informants who joked about the methods they saw people using. Mike, the EMT, recalled several times having people cross the street

when they saw him coming towards them in his medical uniform, “even though I was by myself and there were no patients around, there was no one ill. Or people covering their face in their elbow, sort of the pit of their elbow, or holding their jacket sleeves and whatnot over their face, sort of to prevent themselves from breathing in near me” (Larsen 2005). Asked what his opinion was of the efficacy of such a preventative method, Mike jokingly dismissed it as a “put garlic in your sock and tie it over your head kind of thing” (Larsen 2005). Coincidentally, Mike did later recall a rumor about a method of creating a better facemask that involved stuffing the standard masks with garlic and talc—an act that created what he referred to as a mask looking “like a big doily or a Maxi-Pad stuffed with herbs” (Larsen 2005) that people would attempt to breathe through. In general, Mike’s reactions to the panic he saw in 2003 followed this same sort of good-natured fun-poking, though it is important to note that he did not ultimately see these methods as pointless. While the actual efficacies of these various methods might be questionable, Mike did quickly point out, when asked what he thought about people who avoided public places:

I mean, paranoia strikes deep. People avoided Toronto as a whole. The number of out-of-province license plates you saw that summer was few and far between. You can’t blame one...people would like to blame China, and you can’t do that. You can’t blame the Guangdong province or the physicians there, or the representatives from that country. I guess people were responding out of their own fears and concerns. (Larsen 2005)

Mike’s final comments here echo Jen’s feelings about Chinese medicine, and in general, this is the viewpoint that most of my informants held: that scared individuals should not be judged for trying whatever they felt might help.

There were differing opinions, such as one gathered from my informant Seny Zamora. Asked if she remembered hearing of any teas or vitamins that people took to prevent themselves from contracting SARS, she responded, “I don’t think we had any of those. No, I don’t think we had any of those. Because it was an unknown disease, right? It was [a] very new disease. So it wasn’t something that you can strengthen your body to fight against, because it was still unknown” (Zamora 2005). The media may have heavily influenced Seny’s unique take on these matters, as she admitted to watching televised SARS updates “all the time...even at work” (Zamora 2005), and most of the information she remembered gathering came from these sources. Seny’s opinions—that folk medicines cannot be used to treat diseases until those diseases are understood—stands in sharp distinction to the opinions of the rest of my interviewees, and moreover, seems to parallel the operations of official medicines. That is, while the response of folk medicine to the SARS crisis was to offer a large list of potential preventatives (as per my earlier list), the response of official medicine was to try and stop the disease from spreading until the coronavirus’s genome could be sequenced, allowing for the search for drugs that could halt or eradicate it altogether. Put more simply, official medicine’s policy in the SARS crisis was to stop it from getting worse until more was known about the virus. Seny’s remarks thus more resemble the action sequences of official medicine than folk medicine—though they are an interesting hybridization of the two, as she still apparently believed in the importance and validity of folk treatments.

At the same time, however, it is hardly possible to say in the modern era that any response by folk medicine is not in some way a hybridization of folk and official

practices. As has already been noted, many practitioners of folk medicine exist in comfortable cooperation with official medicine, offering their services at hospitals, recommending their patients get x-rays and vaccinations, and otherwise incorporating Westernized practice and knowledge into their own methods. However, as Alver, as well as O'Connor and Hufford pointed out, the reverse of this situation is far more rare. Practitioners of folk medicines are often looked down upon by doctors, and patients receiving treatment from practitioners of folk medicine are often advised by doctors to cease using any medicine that has not been scientifically tested and approved. All of this put together points to an interesting dilemma that official medicine presents to its patients, for it demands of the public a great deal of patience while scientists and other highly-trained and educated people search for cures—a process that takes years. On the other hand, folk medicine is able to immediately deliver answers in the form of a multiplicity of remedies, some of which have been around (i.e. “tried and true”) for decades. And this is in addition to all of the perceived benefits of folk medicine discussed elsewhere in this thesis, including its non-invasiveness, natural roots, and tendency to treat patients as people, rather than as statistics. For someone suffering from a disease that has barely been named, much less investigated, the choice seems clear.

Chapter 9: Full Circle: The Recycling of Disease Narratives

The disease-related narratives that have filled the pages of this thesis have been collected from hundreds of oral and written sources, have in some cases existed for scores of years, and have circulated in dozens of countries. In addition, these narratives have been told at varying times about a significant number of diseases, as outlined in chapters three and four. The SARS narratives alone constitute an adequate cross-section of the rumors, gossip, legends, jokes, and other oral forms that circulated during the 2003 outbreak, but when placed against the narratives about AIDS, Hansen's disease, influenza, syphilis, etc., patterns begin to emerge. Like photo mosaics, where thousands of individual photos are grouped by shade, pattern, and coloring to form a single larger picture, the individual disease narratives in this thesis construct a larger representation of reality. This new, larger picture can be interpreted in multiple ways, but underlying all of these is how this new picture is representational of the health beliefs of millions, if not billions of people.

This is, of course, not to say that everyone has the same beliefs—any statement to that effect would be made in ignorance of decades of scholarship. It is to say that, at least concerning novel diseases, there are certain sets of narratives that people use to discuss the presence of illness, to mediate their fears of it, to come to terms with it, and to otherwise incorporate its presence into daily routines. Past experience with disease does influence future perception (see Duffin and Sweetman 2006). Some of these narratives evidence a harsher, more paranoid view of reality than others, some are openly racist and

xenophobic, and some are more concerned with issues of treatment and prevention than blame, but all revolve around a single emotion, evidenced in its many forms: fear.

Let's look at this mosaic again, but from a different angle, taking into account the narrative I have created. If all of the individual narratives that comprise this larger picture are borne of fear, and if all these narratives can be separated into a finite subset of mediating reactions, and if the narratives in these subsets can be organized by common themes and elements, then it is possible to establish at least a basic typology of disease narratives. This does seem to be the case, and though this volume is one of the first to examine SARS narratives at length in relation to this method of organization, it is not the first volume to recognize the existence of such a method. As Diane Goldstein says in the Introduction to *Once Upon A Virus*:

As I write this introduction, another deadly disease, SARS (Severe Acute Respiratory Syndrome) has hit the world stage. In these initial weeks of the outbreak of the disease, one cannot help but notice that epidemiologists and the general public alike have become obsessed with story making. While members of the public engage in rumors about who has the disease, places and people to avoid, mandatory quarantines, and government health conspiracies, epidemiologists create and recreate plots that they hope will establish links of transmission. Both sets of stories mirror the narratives discussed in this volume. They explore notions of animal origins, superinfectors, hidden carriers, and numerous other themes entrenched in our stories about AIDS but also seen in reaction to virtually any devastating disease we have experienced historically. Already, only a few weeks into the SARS outbreak, we can see how story comes to define risk. (2004, xiv)

Narratives, then, are re-circulated from one outbreak to the next, modified not in their themes, but in the specific details necessary to link the narratives to current situations.

An example of a single narrative that exemplifies this process of modification is the "blood libel" legend. This legend is at least two thousand years old, and in its earliest

forms was either anti-Semitic, describing the murder of Catholics by Jews, or anti-Catholic, describing the murder of Roman children by recent converts to Catholicism. In both cases the murders were done ritually, as part of religious ceremonies. In the several centuries that have passed since this legend's inception, many different groups have been accused of ritual murder, and the narrative has been altered to fit. Communists, Chinese people, neo-pagans, Satanists, and gang members have all been fingered as guilty of such crimes. In each case, while the main theme of ritual murder has remained, the specifics of the story have been altered: names, dates, places, and other details have been updated to increase the story's relevance, believability, and impact (Alexander, Tamar 1987; Bennett 2005b; Dundes 1991; Rives 1996).

It is true that not every disease narrative has a history as long as the blood libel legend, or with as many permutations. But a significant enough number of these narratives do contain sufficient examples to allow for the construction of a typology (see Appendix 1). The importance of such a typology is that not only will it allow scholars to cross-reference and examine previous narratives, but also it will present to those scholars a list of common themes and elements that can be expected to appear in future outbreaks. More specifically, since xenophobia is a common element in the narratives that have already been collected, it is logical to assume that it will also be a common element in future narratives. Or, since most major outbreaks have resulted in conspiracy theories about governmental deception, secrecy, and misconduct, it can be assumed that future outbreaks will contain similar theories. Recognizing that patterns such as this do exist, and are relatively easy to isolate, is a boon for healthcare workers everywhere who are

forced to deal with the negative effects of such narratives. Understanding that any new disease outbreak is going to result in conspiracy theories, xenophobic gossip, etiological arguments, and so forth, and that these will appear in a finite number of permutations, allows health workers the opportunity to better prepare themselves for the onslaught.

An initial examination of this idea also points to the possibility of this information being used to counter such narratives even before they are born. But narrative forms such as legends—especially contemporary legends—and conspiracy theories are notoriously difficult to eradicate post-creation, and while knowledge of impending racist narratives is beneficial, predicting the exact narrative forms that such racism will take in future narratives is an extraordinarily complex task, and perhaps even an impossible one. It is conceivable that this could be accomplished by taking a sample of narratives that have been collected about a disease (or possibly about a series of diseases), and statistically analyzing those narratives for the distribution and occurrence of key themes or motifs. The results of such a study, while they would not predict narrative forms, would at least provide markers for common elements. However, such a study is beyond the scope of this work, not to mention my current abilities and resources.

What *can* be addressed here is the possibility of eradicating or countering narratives that already exist. This is not a new idea, having been discussed in academic circles for the last few decades. The problem, as has already been stated, is that narratives have a troubling tendency to exist: very little seems to affect them. Kimmel and Keefer discovered in regards to AIDS rumors that their transmission was strongly linked to the anxiety caused by the rumor; that is, the more anxious someone felt about the information

contained in the rumor, the more likely they were to pass it on. In addition, those rumors that were seen as personally consequential and relevant were more likely to be believed, and thus cause anxiety (1991). Spreading rumors is thus a purposive action for both narrator and narratee (Bordia and DiFonzo 2005). This information alone points out the difficulties inherent in eliminating a narrative: any rumor (and presumably some other narrative forms such as legend and gossip) that is deemed important or pertinent enough to provoke a fearful reaction is very likely to be passed on. Such is the nature of people. We naturally want to warn those close to us about danger.

But rumor-telling is not an action that merely involves attempting to protect those close to us. It is also a social act, shaped by the communities we have been raised in. We think in patterns that have been taught to us by friends and family (Fine and Khawaja 2005). Rumors are in this sense understood within the context of "local meanings and recent histories" (White 2005, 241), and "are drawn from a store of historical and contemporary allusions that have been kept alive and given new and renewed meanings by the fractious arguments of diverse social groups" (White 2005, 244). Rumors are often grounded in prejudices and misunderstandings so old that they are not recognized as being inaccurate, so any attempt to challenge the rumor inherently challenges belief systems and ingrained ideas.

Making the issue of dealing with racist rumors more difficult is that, as Gary Alan Fine has noted, the modern world has proven their model breeding ground:

The transformation of the global economy and the expansion of transnational migration patterns have proven to be a rich source of rumor and fears for national identity. Moreover, even in the most remote corners of the globe people are increasingly aware of diversity. With expanding migration between developing

and developed nations, the character and actions of migrants have become more salient. As the homogeneous cultures of industrialized nation-states mutate, becoming more multicultural, rumors that target recent immigrants (legal or illegal, temporary or permanent) frequently appear. These workers bring their own cultural patterns, including such diverse matters as food preferences, standards of cleanliness, public decorum, sexuality, family dynamics, and religious beliefs. These patterns of behavior and display may contrast with those of the receiving nation, leading to misunderstanding, suspicion, and mistrust. Observations of cultural diversity are transformed into rumor alleging that these cultural choices are immoral or dangerous. The majority transforms events, some real and some imagined, into patterns of depravity through truth claims reported in rumor. (Fine 2005, 3-4)

Dealing with rumors in this light seems a truly Herculean task, for not only can racist sentiments be deep-seated, but they can also be continually aggravated by the influx of foreign peoples into “our” territory. It is not even necessary that a narrator *believe* a rumor to have some impetus for passing it on—only a belief that the events in the narrative could have happened (Fine and Khawaja 2005).

Moving beyond rumor, Véronique Campion-Vincent has noted the popularity of conspiracy theories, and how they are used “to provide meaningful and accurate explanations of the world’s condition,” and are “part of an everyday struggle to make sense of a rapidly changing world” (Campion-Vincent 2005, 103). In addition, these narratives are used—wittingly or not—to increase group cohesion through the naming of enemies. These enemies can be other races or ethnicities, but they can also be members of different classes within the ethnicity of the conspiracy theorist. Fine has remarked that the telling of anti-government conspiracy theories reveals “uncertainty about procedural democracy...[the narratives] frequently reflect the inchoate disaffection of citizens, diverting allegiance, but lacking any positive program of change” (Campion-Vincent 2005, 5). In these senses, conspiracy theories constitute important and critical avenues for

the discussion of unknown situations, providing form and shape to, and release from, stress. Like rumors, conspiracy theories exist because they serve a purpose, and because the need for informational vacuums to be filled is strong enough to support the existence of the narrative.

Not surprisingly, then, those articles that have dealt with the issue of eradicating rumors and conspiracy theories are mixed in their judgments of the effectiveness of any given method. Bill Ellis discusses several methods in his essay "Legend/AntiLegend: Humor as an Integral Part of the Contemporary Legend Process," beginning with the note that most scholars have focused their efforts on the birth and spread of such narratives, rather than on their demise. He then states:

Only three factors, according to Fine and Turner, combine to make a rumor (or legend) disappear: boredom, saturation of the community, and intervention of social interest groups.... That is, legends are news, and when everyone has heard them, they cease to have the attraction of novelty, and so when more credible information is available, they have no reason for being. (Ellis 2005, 123)

So one possible response to the question of eradicating a narrative is to simply wait it out; it will eventually get rid of itself. Proof of this is found in the SARS outbreak. As soon as the virus disappeared and ceased to make headlines, the stories died. This tack, however, is problematic in the case of an outbreak, where the narrative can cause massive psychological, and even real-world damage before it ceases to circulate. In such instances it would be better to contain the narrative to the largest extent possible. Waiting for the legend to take care of itself is also problematic because, as we have already seen with the blood libel legend, there are narratives that, some two thousand years after their creation, are arguably more popular than ever. And as we have also already seen, narratives are

continually reshaped, and are almost infinitely flexible in their ability to be adapted to new situations. Quoting Fine and Turner again, Ellis notes that “some legends may not die so much as they *dive*, that is, remain latent in the communities in which they circulate, ready to be verbalized later as a social need arises” (Ellis 2005, 123-4, emphasis in original).

If waiting for the legend to die out is not an option, then the next logical step is to attempt to force its early demise. Again, Ellis provides us with excellent scholarship on efforts that have been made in this direction:

Fine and Turner concede that formal rumor control has had “mixed success,” and in any case there are no control data available to determine what might have happened in the absence of such efforts. Official denials do no harm, they conclude, but whether they in fact do shorten the duration of rumors by providing “authoritative information” is unclear.... Some research by Jean-Noël Kapferer...on the Mickey Mouse LSD legend, in fact, suggests that formal efforts to debunk legends are not especially convincing and may in fact communicate the rumor to those who have not yet heard it. If the authority challenging the legend is seen as a low-credibility source, then taking time to deny a claim suggests that it may be doing so to cover up its own culpability. (Ellis 2005, 124)

Additionally, as Renard points out, Western postwar generations have been found to be more likely to question and distrust governments, and are thus more receptive to conspiracy theories and other such negative narratives (Rendard 2005). Further problems with official denials are pointed out by Patricia Turner (1993), who notes that African-Americans often dismiss such denials—such as the CIA creating AIDS, or the KKK owning Church’s Fried Chicken—because of deep-seated distrust of a primarily white government and economy. Because of this, any attempts to deal with rumors and gossip must not only take into account the tenacity of such narratives, but race and ethnic relations that may prohibit or lessen the effectiveness of communications.

One potential avenue for dealing with unwanted narratives is the antilegend, a parody narrative designed to counter a legend by presenting its information in a humorous, satiric, or scornful light. By “creatively distorting” (Ellis 2005, 124) the narrative structure of a legend, the antilegend can prove more effective in demonstrating the logical flaws and absurdities present in legends. Ellis note that antilegends have, at times, proven effective, citing the Good Times computer virus legend, whose antilegends have not only fairly effectively halted the circulation of the original legend, but have proven more popular in the long run than the original legend (Ellis 2005). The problems with antilegends, however, are 1) that they have been found to exist comfortably beside the original legends, commenting on them rather than negating them (Dégh 1995, cited in Ellis 2005), and, 2) “the dynamics of the antilegend require a conduit that supports both belief in and skepticism about some of the elements of the legend on which it is based” (Ellis 2005, 135). In other words, in order for an antilegend to succeed, there must already be some skepticism about the original legend, or at least an environment in which a skeptical attitude can be fostered. Given the right circumstances, then, an antilegend might prove effective. In the case of Turner’s African-American dismissal of official denials, however, an antilegend would stand far less of a chance of succeeding in negating the original legends, as those legends exist because of deep-seated distrust and strong emotions. There are few chinks in such armor for an antilegend to sink into. Similarly, it is questionable whether an antilegend would prove effective in dealing with narratives that espouse racism and xenophobia. Such sentiments are also deep-seated, and

may have been present in an individual's psychological matrix since early childhood, having been learned from parents and peers.

The methods so far discussed in dealing with problematic narratives have all come from folklore and related fields. However, psychology also offers useful insights. The psychological study of rumor transmission is usually credited as beginning in 1945 with the work of Floyd Allport and Milton Lepkin, who found in their study of false war-time rumors that the more often they were heard, the more likely people were to believe them. Additionally, Allport and Lepkin concluded that subjects were more likely (33.9% more likely, to be exact) to believe a rumor they had heard before, compared to a novel rumor. They did, however, find an inverse correlation between rumor belief and the number of times a subject had read the Rumor Clinic column in a local newspaper, pointing to the conclusion that official rumor debunking does have some measurable effect (Allport and Lepkin 1945).

Allport and Lepkin's study may have been revolutionary, but it was not the last of its kind. It was also not the definitive study, as other researchers have come to contradictory conclusions. In 2007, for example, Schwarz et al. conducted a study wherein participants were given an official CDC flier containing "myths" [sic] about the flu vaccine. The flyer followed a simple format, presenting in sentence form various commonly held beliefs, labeling them clearly as either "true" or "false". Immediately after reading the flyer, participants were questioned on its contents, and initially demonstrated high levels of comprehension, misidentifying only 4% of the incorrect statements as true, and 3% of the correct statements as false. Only thirty minutes later, the

test was re-administered, and this time the participants misidentified 15% of the incorrect statements as true, while the percentage of correct statements wrongly identified as false remained stable. These findings were not unexpected, the authors explaining that the human brain has a tendency to assume that familiar statements are true—which explains why the number of false positives increased, as well as why the number of false negatives did not (Schwarz et al. 2007).

A second study—reported in the same article—exposed groups of “younger adult” and “older adult” participants either once or three times to statements that were clearly marked as “true” and “false”. The subjects were then tested immediately on the contents, and again three days later. In almost all cases, the number of true statements misidentified as false was low, and rose only marginally over the three-day wait (by roughly 6% across the board, by my estimate). However, the results for the number of false statements misidentified as true varied widely—not only over time, but also according to age. The young adults who were only given the information once increased their incorrect answers from 10% to 24% over the three-day period, while the young adults who were given the information three times only increased their errors from 7% to 14%, showing that, for younger adults, increased repetition improved accurate recall. For the older adults, however, the number of errors for those who heard the information once remained steady at 28% between days one and three, while the older participants who heard the information three times actually *increased* their number of incorrect responses over time, from 17% on day one to 40% on day three—showing that, for older adults, increased repetition *lessened* accurate recall. Schwarz et al. state that this is the result of

the decreased memory function of older adults, which forces them to rely more on “familiarity” as evidence of truth than recollection of accurate facts (Schwarz et al. 2007).

Additional psychological studies add to the complexities of rumor perception. Weaver, Garcia, and Schwarz determined that, not only does repetition increase the likelihood of a statement being determined as prevalent among a group, but the statement does not have to be made by all members of that group. In fact, an outsider who only hears a statement repeated by one member of a group is just as likely to assume that statement holds true for all members of the group as if the participant had *actually* heard it from all members. And within that group, participants were more likely to agree with that frequently repeated statement, even though they knew it came from only one member (Weaver, Garcia, and Schwarz 2007).

Finally, a study by Mayo, Schul, and Burnstein examined the effects of time on the memory of certain statements. The researchers gave participants a series of descriptions, then examined recollection over time based on the presence of “bi-polar” and “uni-polar” negations. Briefly, “a bi-polar description has a well-defined opposite construct which is easily accessible, whereas a uni-polar description does not” (Mayo, Schul and Burnstein 2004, 440). An example of a bi-polar description might be “warm,” which has the easily-understandable opposite of “cold,” whereas a uni-polar description would be “responsible.” The word “responsible” does not have an easily-accessible opposite; the most immediate antonym is “not responsible” or “irresponsible,” which is linguistically far closer to the parent word than “hot” is to “cold”—and in fact “not responsible” and

“irresponsible” both *contain* the parent word in the negation. The results of the study found that, while 83% of respondents accurately remembered the bi-polar description “not warm” as meaning “not warm,” only 62% accurately remembered the uni-polar description “not responsible”—the other 38% misremembered it as “responsible” (Mayo, Schul and Burnstein 2004, 444). In real-world terms, this study gives reasons for why people who are cleared of criminal charges are still stigmatized afterwards: someone who is declared “not guilty of harassment” is more likely to be remembered as “guilty of harassment” due to the uni-polar nature of the word “harassment.” In fact, the study concludes in part that, at times, it is far better to avoid denying a false claim altogether. Instead, a more effective approach is to create a new, positive claim that makes no reference to the false claim—i.e. saying “I am innocent” instead of “I am not guilty.”

The implications of these studies in terms of rumor negotiation are vast. As we have seen, many rumor control methods have been historically ineffective, and have often resulted in the dispersal of incorrect information, rather than its correction. The above studies help provide reasons for such results, and point in a direction of action that, at least theoretically, should provide rumor debunkers with a better outcome. Not all rumors are harmful, of course, and thus not all merit such attention as might result in their demise. But for those rumors that are dangerous or harmful, there are a few strategies that can be employed to help counter their effects. Summarizing the information laid out in the previous paragraphs, we come up with the following series of statements: 1) if we naturally assume that familiar statements are true, and 2) we tend to misremember false statements as true, and 3) if bi-polar descriptions are better remembered than their uni-

polar counterparts, then 4) accurate, oft-repeated, positive descriptions are obviously superior to re-hashings of narratives followed by denials of veracity. Studies would be needed to confirm these conclusions, but I would suggest that, in the case of a selection of disease narratives, the following courses of action would find better results:

- 1) Instead of denying the presence of SARS in an Asian neighborhood, city officials could comment that the disease has equally affected all parts of the city; or alternately, that SARS has only been discovered to exist in other cities (if there is no evidence that the virus has breached city limits).
- 2) Instead of denying that AIDS can be given away by having sex with a virgin (or any other harmful, unofficial course of action), health officials could comment that the only proven treatments are the FDA-recognized drugs.
- 3) Instead of denying that smoking prevents people from contracting SARS, health officials could comment that the best courses of action are to wear a mask, avoid crowded places, and stay away from people who are already infected.
- 4) Instead of denying conspiracy theories about the origin of AIDS, health officials could comment that current evidence points toward an animal virus that has adapted to humans as the source of the infections.

In each of these cases, the negative rumor has been bypassed entirely, and the answers instead rely on repeating accurate, positive information. Inaccurate information is neither

repeated nor summarized, to avoid its further spread. For best results, the accurate, positive information should be repeated frequently to help solidify its public recognition and familiarity. Any phrase that begins with "X is not true" should be avoided altogether, as should, in general, the word "not," as it too often leads to confusion, especially when used in conjunction with uni-polar descriptions. Response to rumors should be rapid, for best results, and where possible, presented by people who have some recognized authority, either on a local or national level.

Who should these authorities be? Church leaders, mayors, police and doctors are all fine candidates. However, individually, these people have only limited exposure to a small section of a city. In order to get their messages across, a dispersal system is needed—one that is nearly ubiquitous, highly visible, and frequently used. Such a system already exists: the media. Consider this selection from my interview with Luis Tan:

Jon: According to what you saw, how did the public react to the outbreak?

Luis: Based on what I see, I said, you couldn't go on the bus. People tried to avoid sneezing and coughing. (laughs) That was very, very obvious sight you can see in the public. Even in churches or public places, people sneezing, people try to turn their head away, you know? (laughs) It's really very scary during that time. Because especially newspapers say that it can be transmitted by, when you sneeze, saliva or something from your nasal excretion. Those are the things I remember quite well.

Jon: Do you think that the reactions that you did see from people were justified, or did you think they were overdone?

Luis: I don't think it's overdone. It's just human nature to be cautious. It's normal. You try to avoid, you know? Especially newspapers, how this can be contracted, then they tell you what to do, what to avoid. We just follow most of this from what we heard in the news.

Jon: So were you following the news fairly regularly?

Luis: Oh yeah. You open the TV, you hear SARS stories. You see the, you read the newspaper, you have SARS stories front page. It's almost, even in the workplace, the company sends out memorandum, and if you visit the hospital or something...the company is very [understanding], they're okay you can have a...what do you call this, you secluded yourself, there is a term for that...

Jon: Quarantined?

Luis: Quarantined yourself, yeah. We were even told that if you visit like this, the bank would be very, very [understanding]. As a matter of fact, I have a coworker that, without knowing that, she visited certain hospital, and then she self-quarantined herself at home for x number of days. She got paid, everything was...she worked from home, things like that. Most companies are very sympathetic, they support people, their employees. (Tan 2005)

Another example, this one from Angel and Rosita Lim, who gave the following when asked if they had heard any rumors about the origin of SARS:

Rosita: Well for us, there's always it's coming from civet rats or something from China, so that's in our mind that that's where it came from. And then it moved to Hong Kong, and one person from Hong Kong brought it over. That was very clear in my mind, that was what everybody kept saying. I didn't hear any other sources, did you?

Angel: That's the only one, yes.

Rosita: Because it was very clear, they kept saying, "This is exactly where it came from" (Lim, Angel and Rosita 2005)

In fact, of the fourteen people I interviewed, thirteen mentioned that media sources provided them with at least part of the information they'd gathered about the coronavirus, and several informants stated that media sources provided them with the larger part of their critical information. It is true that some of this information wasn't correctly recalled—the SARS virus came from the civet cat, not the civet "rat," as Rosita stated—but even here the wrong answer is still very close to the right one. More importantly, Rosita's answer still demonstrates the power of media sources in dispersing information.

These findings agree with at least two studies of the SARS crisis. The first was conducted in Qatar, and examined the knowledge, attitudes, and practices of the people of the region in response to the outbreak. The researchers handed out questionnaires at airports and health centers, and ultimately received 1,386 responses. The results showed that 73% of respondents were aware of the highly-infectious nature of SARS, 69.9%

recognized that close contact with an infected person was a primary transmission vector, and 67.4% knew that a high fever was the first symptom of infection. Roughly half of the subjects reported having gained most of their knowledge of SARS from media sources—primarily television and radio programs (Bener and Al-Khal 2004). The second article detailed the results of a study of community responses in Hong Kong to the SARS outbreak. The study consisted of a number of telephone surveys conducted during the crisis, examining the measures people thought effective in preventing the spread of the virus. Of the 1,397 participants, 82% rated mask-wearing as effective in preventing infection, 93% said the same for hand-washing, and 75% said the same for home disinfection—and these numbers remained constant throughout the epidemic. The researchers concluded that government and media-based dissemination of accurate information in a timely manner was responsible for the high numbers of people who provided knowledgeable answers and who so quickly adopted the appropriate SARS prevention measures (Lau et al. 2003).

The media thus *does* work, at least in the sense of being an effective vehicle for the distribution of information. The problem lies only in the type of information that is disseminated. Following the steps laid out in this chapter would greatly increase the dispersal of accurate information, and inhibit the spread of negative and harmful rumors. Additionally, using local spokespersons recognized for their honesty and authority on the matter would increase the chances of this accurate information being trusted and believed. Knowing that certain narratives are more likely to appear in epidemics, health officials could better prepare themselves for the kinds of rumors and gossip that they

would encounter, and perhaps even prepare a shortlist of accepted responses—much like the four examples given earlier. Again, real-world tests need to be conducted to prove or disprove these theories, but the simplicity and cleanliness of the logic that brings us to these theories is compelling. With any luck, the next outbreak—whatever it may bring—will be better dealt with in light of these conclusions.

Chapter 10: Epilogue: ...And the World Moved On

As I write this epilogue in Boston, Massachusetts, in late February of 2008, the coronavirus is but a distant memory. Since its last fluttering in early 2004, the virus has faded into the background, as have many of the narratives that accompanied its existence. It is still possible that SARS is lurking in the bodies of civet cats and other wild animals, waiting only for that one chance to make again the leap between species and wreak havoc on the world. However, there is nothing in the public consciousness to suggest the slightest concern over such an occurrence. Even now, only five years after SARS was the biggest story in the world, I find people looking at me quizzically when I explain my research topic, and I have even had to remind people of what SARS was on more than one occasion. It has been three years since I remember seeing the word “SARS” in a newspaper headline, and longer still since I’ve heard anyone voluntarily bring up the outbreak in conversation—except for friends and colleagues asking me about the progress of my research. The world has truly moved on.

Or has it? While SARS itself may be forever wiped from the earth, the fears and attitudes that underscored the narratives that sprang up around the disease are as present now as they have ever been. Racism and xenophobia still seethe just under the surface of humanity, and legends—though they may currently focus more on computer than biological viruses—are ubiquitous. As evidence of both of these, one needs only to turn to the Internet. The popular website snopes.com, for example, currently (as of the 28th of February, 2008) lists legends about Presidential Candidates Barack Obama and Hillary

Clinton as its second and eighth “Hottest Urban Legends,” respectively. All six of the legends about Obama, the U.S.’s first black candidate, that are listed on the website are either openly racist and xenophobic or otherwise question his loyalty to the United States. A number of the legends about Clinton are markedly anti-feminist.

Just as equally, the media is as guilty now of exaggerating and overstating facts as they were in 2003. In the last two weeks, the local “7 News New England” television news show has run several promotional commercials for “Special Reports” that seem little more than attempts at fear-mongering for profit. Each commercial has been more lurid and exaggeratedly important than the last, with subjects such as the dangers of badly-manufactured playground equipment, armrests on chairs at local movie theaters that laboratory tests have revealed are swarming with bacteria, and non-inspected and unsafe semi trucks traveling our roads at highway speeds (ready to break down and hurl parts everywhere at any given moment!). American novelist and polemicist Upton Sinclair is reported to have once said, “It is difficult to get a man to understand something when his salary depends upon his not understanding it.” In the current climate, it seems more appropriate for this to be modified to instead say, “It is difficult to get a journalist not to make a big deal out of a little situation when his salary depends upon his making a big deal out of it.” It is important that media sources begin to recognize their roles in spreading rumor and legend, and the damage that they can cause. By repeating racist narratives—even if only as examples—newspaper and television journalists, as well as their editors and managers, are complicit in the hate crimes and xenophobia that follows.

But such blame cannot be solely placed upon journalists and media sources. They are indeed selling a problematic product, but they can only keep selling it because someone is buying. We, the people, are creating the information vacuums that these xenophobic narratives fill, and if fingers are to be pointed anywhere, they should point toward the public. Why then place so much emphasis on having media sources alter their practices, when the problem lies with those who demand the narratives? Because it is far easier to ask a score of businesses to change than it is to demand the same from millions of individuals. For if the former task seems daunting, the latter is truly Sisyphean.

The purpose of this thesis has been to demonstrate the links between disease narratives, to study the various vectors through which those narratives have been transferred, and to examine the effects that these narratives have had on the world. It seems to me that disease panic and racism are to disease narratives as the chicken is to the egg: each exists because of the other, whirling together in a generative dance that began long before living memory, and will continue to exist long after the child born today dies of old age. But it is not enough to say that these narratives define us. They *are* us: body and soul, flesh and idea, moral and ethic, a connection that goes beyond mere metaphor. And just as these narratives are our friends and homes, they are also our enemies, and the things we hate and fear. When in story we crucify and ridicule Others for being different, we reveal to the world our true faces—the ones that are only loosely held back otherwise by our concerns over political correctness and maintaining social niceties.

I believe that disease narratives are vastly unregarded by health officials. Not only do they reveal what people believe about a specific disease, but studying them on a larger scale reveals overarching beliefs that pass between diseases, highlighting areas of concern and cultural importance that do not always coincide with those espoused by doctors and scientists. Understanding these differences will lead to improved communications between laypersons and medical personnel. It may also point to preventive measures that could be undertaken by entities such as the World Health Organization to preemptively combat the racist and xenophobic narratives that come out of epidemics.

The problem, however, lies less in understanding what the narratives say about people than it does in getting the appropriate official sources to conceive of these stories as anything other than, well, stories. The only way to achieve this is for the medical profession to begin thinking of patients as intelligent, reasoning beings who are equal participants in health-related decisions, rather than just as bodies that must be made well. Or as Bonnie Blair O'Connor has said, "This will require the capacity of health professionals to accept the patient as an active co-shaper of the relationship and of health care choices and actions, rather than as a limited partner to whom various duties are merely delegated" (1995, 193). Only by including the patient—and his or her stories—in the equation can doctors truly begin to understand how to help people, rather than just treat disease.

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¹⁵ Due to the large amount of time that passed between the initial research and completion of this work, many of the referenced Internet-based sources are no longer available at the URLs on which they originally appeared. Both MSNBC.com and Yahoo! News, for example, do not appear to archive their news articles—at least not as far back as 2003 (a problem I only became aware of while conducting initial revisions in 2008). Where possible, I have attempted to find alternate sources for these news articles (reflected in an “accessed” date of the year 2008). Many of these articles, unfortunately, now only exist at pay-per-article news databases, or worse, as printouts in my files. If no alternate sources were found, the citation will reflect this by stating that the article is “No longer available online.”

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Appendix 1: A Contribution Toward a Typology of Disease Narratives

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