FEAR AND THE COMING PLAGUE: WHAT AMERICAN MEDIA TELL US ABOUT INFECTIOUS DISEASE

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Certificate of Approval

This is to certify that the accompanying thesis by Margaret Vernon du Bray has been accepted in partial fulfillment of the requirements for graduation with Honors in Anthropology.

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Table of Contents

Outbreak: An Introduction……1

Masks and Vaccinations: Theory and Methodology in International Public Health…….5
Media and Metaphor……...5
Boundaries……..8
International Relations……....11
Contagion……...13
Methodology……..16

Malaise: Historicity and Representations of Ebola……..17
History of Ebola……17
Representations of Africa……...20
Media and Ebola…….....23
Globalization and Ebola…….33

Inflammation: Rhetoric and Flesh in the SARS Debate……...35
History of SARS…….35
Representations of China……38
Media and SARS in China……...40
Transmission of SARS……46
The United States and Responses to SARS…….53
SARS in Toronto……56
Globalization and SARS…….....59

Health Hazards: Security and Global Public Health……63
Historical Framework: From the Cold War to 9/11……....63
International Relations……....68
Health as Security……...72
Health as Security, Metaphors, and the Media……80

Containment: A Conclusion……...82

Outbreak: An Introduction

The past thirty years have seen an incredible rise in the number of infectious diseases affecting global populations. Some of these diseases are familiar specters: Malaria and Tuberculosis are microbes with which we are already familiar, and with which the Western world seems to have made its peace. While these diseases continue to be prominent in the Global South, other diseases have begun to affect the world: the 1970s and 1980s saw the rise of HIV/AIDS, the 1990s saw Ebola, and the early 2000s were affected by SARS and new strains of influenza. Before 1970, the American public was told that the end of microbes was nigh due to the prodigious use of antibiotics: this was clearly optimistic (Wald 2008:29-30). We have witnessed the increased prominence of viruses, and these diseases have come to be represented by, and be representative of, a host of geopolitical concerns.

The American media have been integral in this cyclical process; they have appropriated pre-existing metaphors of disease and location and applied them in novel ways to the diseases that appear threatening. What are the representations that are used in relation to diseases? How are metaphors connected to the disease's location of origin and subsequently, how are these metaphors entailed to diseases? To what extent is the media responsible for creating and manipulating these representations, and what are the outcomes? In studying the media representations of two diseases, Ebola and SARS, I hope to address these questions.

In 1995, a poorly known disease called Ebola gained international recognition for the first time in its known history. Ebola was first identified in 1976, but received little or no attention until 1995, when a serious outbreak began in the town of Kikwit, Zaire (NYT 1976:7, Garret 2000:61). As the American media turned to Kikwit, Ebola became a new source of concern for American media consumers. Ebola was characterized as a possible "coming plague", a disease which could infect the human race at a furious pace and cause widespread devastation due to its virulence (Waltner-Toews

2007:124). This was only the first in the line-up of characterizations employed by the media to demonstrate the frightfulness of Ebola; a disease of generalized African origin, Ebola was immediately associated with Joseph Conrad's Heart of Darkness metaphor, from which a number of entailments followed. That Africa appeared to be in a state of constant violence and war caused the disease to be even more concerning; rhetorically, it too became violent and unchecked.

The metaphor of cultural Otherness was regularly attached to Ebola; cultural practices in Africa as a whole were deemed different from those in the US, and were therefore suspect as the cause of the outbreak. These ideas operate within the framework of cognitive linguistics described by Lakoff and Johnson; the media used ideas that were already incredibly pervasive and built upon until they became normalized (1980:28). Because these ideas were cemented in our reality, they became reassuring. The media regularly employed what Sheldon Ungar (1998) calls the *contagion-mutation* and *containment* packages; the first is used to alarm the public and cause them to fear the imminence of the ingress of disease. The second uses metaphors to distance the readers from the threats they have just described. These metaphors simultaneously use and create norms for societal consumption and reassurance.

The 2002-2003 outbreak of SARS took a similar trajectory in American media sources. Because it emerged post-9/11, SARS began in what Wole Soyinka (2004) deems the "climate of fear": the constant state of fear in which the United States finds itself post-9/11. This climate of fear, he suggests, results from a concern that the sanctity of limits and borders is no longer respected in a globalized world (Soyinka 2004:6). It is within this new context that SARS appeared in Guangdong Province, China. While there is no primary metaphor (like the Heart of Darkness) attached immediately to China, the metaphors associated with China are as pervasive as those related to the African continent. SARS, like Ebola, became the "coming plague"; while it was significantly less

deadly than Ebola, it was also notably more contagious, and demonstrated an alarming ability to cross national borders.

Also like Ebola, SARS was readily associated with a number of metaphors surrounding China and its people; China's lack of transparency and communication during the early stages of the outbreak led to immediate suspicion and vilification of China in the media. The intensity of the SARS outbreak was regularly portrayed as a result of the political climate in China, which allowed the government to cover-up the outbreak. SARS was also linked to violence and cultural habits. As SARS was consigned to the Other, it too became a mitigated threat to the American public. Later journalistic coverage suggested that only if one came into contact with a highly infectious individual, or "superspreader," would one actually contract SARS. The regular use of Otherizing metaphors solidified the cognitive framework that the American public was safe from SARS. By cementing SARS within a metaphorical framework that favored the distance between the two countries, the threat of SARS was not only mitigated, but new boundaries were put in place to distinguish the two countries.

These two diseases and the general threat of contagion which they often represent play into Mary Douglas' as well as Lakoff and Johnson's discussion of borders and fears of contagion. The increased prevalence of globalization in the past thirty years is often one of the sources blamed for the increased exposure to diseases. Globalization and the apparent breakdown of national borders have been both part of the rhetoric of emerging diseases and have been greatly influenced by these diseases. Borders, as Mary Douglas demonstrates, are important metaphorical entities: conceptually, borders and definitions are often the means by which we separate ourselves from other societies, both literally and figuratively. Bounded societies are also those that are less prone to pollution either metaphorically (in the transmission of ideas) or literally (in the transmission of disease). Yet

globalization has challenged these borders, and cognitively, they seem to have fallen. As a result, diseases are more threatening to the individuals living within these unbounded societies.

Representations of Ebola and SARS were both impacted by the fear of disease ingress; these fears, in tandem with broader biomedical and cultural fears influenced the creation of the *contagion-mutation* and *containment* packages mentioned earlier (Ungar 1998). Indeed, these fears are incredibly prevalent in American press coverage. Yet, because the diseases are associated with cultural differences, they are also a means by which borders can be metaphorically rebuilt; the differences between societies, to which contagion was often linked acts as a new kind of boundary, and so the national borders that were deconstructed during globalization are somewhat reconstructed. Thus, these diseases, while biomedically threatening, also serve as a reassurance of the status quo.

Because we increasingly perceive diseases as a threat, they have often become attached to the idea of security. The health as security paradigm, perhaps unwittingly, employs the possibility of disease to maintain and re-establish borders. This, in turn, acts as a reassuring force. After 9/11 and the domestic anthrax (hereafter referred to as Amerithrax) attacks, diseases were seen not as simple contagious elements, but something that could be weaponized, putting a much larger population at risk. Because diseases such as HIV/AIDS had already demonstrated the possibly devastating effect of a large-scale epidemic, public health increasingly became intertwined with security. The media encouraged this paradigm by demonstrating that this was yet another way for the U.S. to reassert its borders. If health was a security threat, more specific, if only conceptual, boundaries could be created in order to prevent contagion and possible security breaches. This also served as a means of maintaining existing geopolitical circumstances; because the U.S. was at the forefront of the securitized health framework, the U.S. maintained its dominance in creating and disseminating discourse.

Our understandings of disease have been dramatically altered in the past thirty years. We are now constantly reminded of "…[the] potential devastation, potential catastrophe…imminent moment[s] of life and death resulting from a successful virus" (Magnusson and Zalloua N.d:1). The American media have been essential in creating this understanding; their rhetorical strategies, use and manipulation of metaphors, and pervasive influence allowed them to fundamentally construct the way that the American public understands disease. Indeed, "…the media may actively aid in interpreting or constructing emergent events in specific ways that carry specific consequences" (Buus and Olsson 2006:71). The American public relies on the media for information; yet it is often difficult to remember that the American media are simultaneously enmeshed in pre-existing American culture and are creating the rhetoric that shapes it. SARS and Ebola serve as examples in this thesis to explore the extent to which the American media shape our cognitive framework, and thus, American culture in relation to diseases and contagion.

Masks and Vaccinations: Theory and Methodology in International Public Health

Media and Metaphor

In their representations in American media, Ebola and SARS have each been regularly imbued with metaphors that relate them to specific locations and elements. Ebola is regularly portrayed as essentially African, as coming from a dangerous rainforest environment, and as the result of specific cultural behaviors. SARS is similarly seen as being essentially Asian and is also demonstrably related to cultural behavior, including a lack of hygiene that makes the American public incredibly uneasy. These representations are not only prevalent, they are important in shaping (and being shaped by) American perceptions of diseases.

Hegemonic societal values translate into public discourses and metaphors that frame experiences. These metaphors and discourses therefore play an incredibly important role in shaping the understandings of diseases held by the American public. Metaphors are often used subliminally –

the speakers themselves may not recognize or realize the depth and history of the metaphors they use, or even recognize their language as metaphorical. George Lakoff and Mark Johnson explored the importance of metaphors in great depth in Metaphors We Live By, which demonstrates the extent to which the subconscious use of metaphors engenders thought.

These metaphors, as they describe them, are both hegemonic and extremely long-lived. Metaphors retain popularity in part because they act as a ubiquitous method for transmitting information. As with HIV/AIDS, it is possible that the biomedical understanding of the disease changes; yet the related metaphors live on. So too has it been with our understanding of political climates in other countries; geopolitics has greatly changed on the African continent, and yet the metaphors largely remain the same. Lakoff and Johnson illustrate the longevity of metaphors in thought:

> Most of our metaphors have evolved in our culture over a long period, but many are imposed on us by people in power – political leaders, religious leaders, business leaders, advertisers, the media, etc. In a culture where the myth of objectivism is very much alive and truth is always absolute truth, the people who get to impose their metaphors on the culture get to define what we consider to be true – absolutely and objectively true [1980:160].

The dissemination of metaphors by apparently credible individuals embeds these ideas in our culture; because they are spread by individuals in whom we trust, we take them as truth. This creates certain understandings of the world around us, and provides us with the reassurance that we are right. Metaphors are ubiquitous and enduring not only because they are reassuring to the populace, but because they are politically convenient for the people in power, either for perpetuating norms or because they continue to reassure the populace, which ensures the security of the governing body. Because metaphors are often subconsciously utilized but are viewed as "objectively true", they retain their power even long after they are debunked.

The idea that metaphors are objectively true is especially insidious considering that their acceptance creates and perpetuates certain understandings within the broader societal spectrum.

Because these understandings often prevail through time, they also continue to enable certain societal and personal actions: "Metaphors may create realities for us, especially social realities. A metaphor may thus be a guide for future action. Such actions, will, of course, fit the metaphor. This will in turn reinforce the power of the metaphor to make experience coherent" (Lakoff and Johnson 1980:157). Metaphors pervade public thought, which authorizes certain responses to changes in our realities. In a self-perpetuating cycle, the responses must fit within the scope of the original metaphor. When the actions cause the world to fit within the scope of the metaphor, it is apparent that the actions were correct or natural.

Much of this occurs without cognizance of the process. People and organizations, particularly the media, operate within these frameworks and propagate them to and among the populace until they are absorbed, completely, without any thought of their metaphorical nature. As Lakoff and Johnson suggest, "…much of our social reality is understood in metaphorical terms, and since our conception of the physical world is partly metaphorical, metaphor plays a very significant role in determining what is real for us" (1980:146). Additionally, "…the fact that they are metaphorical never occurs to us"; not only do metaphors permeate much of our thinking, we rarely even realize the importance of metaphors, or even the existence of metaphorical thought (Lakoff and Johnson 1980:28). As the media cover major events, including disease outbreaks and political changes, the widespread use of these metaphors becomes increasingly important in engendering thought and problematic for the representations they generate.

Using the rhetoric of AIDS as an example of the prevalence of metaphorical thinking surrounding diseases in the media, Paula Treichler demonstrates that "…a complex cultural phenomenon produces diversity and contradiction but also…a variety of ways 'dominant' meanings emerge – default meanings, that is, that can be expressed with little fear of being challenged" (1999:5). New social phenomena, like AIDS, with which nation-states had no familiarity and no

experience require a paradigm of understanding for the populace (in part to avoid panic); while this paradigm must include some complexity, it also becomes imbued with pre-conceived notions, partially to make it relatable. New metaphors are thus created out of pre-existing metaphors in order to explain experiences. As she says elsewhere,

> A preliminary approach involves framing the new phenomenon within familiar narratives, at once investing it with meaning and suggesting the potential for its control. One investment strategy is to link the new phenomenon with existing issues, social arrangements, or institutional sites [Treichler 1999:5].

The phenomenon of new experiences, in this case, diseases, requires both a method of explanation and containment; by relating disease to certain ideas repeatedly, the idea and the disease become linked. Repeated associations of disease with another element allow that element to be metaphorically representative of the disease. This relation creates a framework within which the populace can understand the disease, but also within which they feel safe and unthreatened.

Because cognitive metaphors are omnipresent in society, their creation and use may seem benign; however, because these metaphors are so deeply embedded in society, and so rarely considered, they are incredibly powerful. They regularly influence popular thought, often in directions that benefit certain constituent groups. With diseases that affect certain individuals or certain parts of the world, the subliminal nature of these metaphors can be particularly problematic: "…Western representations reinforce familiar stereotypes about the less-developed world. In these predictable roundups of the usual suspects, most obvious are the limited set of words and images through which people themselves are portrayed" (Treichler 1999:7). Thus, while cognitive metaphors might initially seem relatively unproblematic as a means of information transmission, the implications of their prevalence are troubling, and result in the propagation of certain ideas. This is even more so true when considering political and bodily boundaries, contagion, and disease.

Boundaries

Both political and bodily boundaries play significant roles in the understanding of disease in a globalized context. Anthropology has long explored the prevalence of boundaries and their importance to many cultures. Metaphorically, the idea of boundaries is important in our perception of our physical bodies: "We are physical beings, bounded and set off of the rest of the world by the surface of our skins, and we experience the rest of the world as outside us. Each of us is a container, with a bounding surface and an in-out orientation" (Lakoff and Johnson 1980:29). The prominent scientific metaphor for the body demonstrates that it is bounded – skin acts as a barrier, one that keeps "intruders" out of the body. As Mary Douglas demonstrates, however, the body is not perfectly bounded:

> Any structure of ideas is vulnerable at its margins. We should expect the orifices of the body to symbolise its specially vulnerable points. Matter issuing from them is marginal stuff of the most obvious kind. Spittle, blood, milk, urine, faeces or tears by simply issuing forth have traversed the boundary of the body [1966:121].

The body both emits and is susceptible to what is emitted – it is not a perfectly bounded entity because it is vulnerable, permeable. Rarely included in cognitive metaphors about the body, vulnerability makes the body liminal – it is subject to the possibility that what was emitted from one person's being could enter another's to make them ill. Yet, metaphors allow us to see the body as impermeable to these substances, as bounded and safe. When something alters the perception of safety, new norms are produced:

> Occasionally the odd species or individual gets out of line and humans react by avoidance of one kind or another. The very reaction to ambiguous behaviour expresses the expectation that all things shall normally conform to the principles which govern the world [Douglas 1966:178].

Disease is often the catalyst that demonstrates to a population that they are not securely bounded beings, and that they are vulnerable to outside influence, such as war, violence, and chaos. When this occurs, new norms are developed in order to avoid what is polluting, dangerous, or contaminating; new principles, including the securitization of health, are developed to reify the bounded body.

The bounded body is a common metaphor when considering disease, and has historical importance. It shapes not only how diseases are managed, but also influences international relations. As Emily Martin demonstrates, the bounded body is metaphoric in itself, but becomes entailed to the metaphor of geopolitics and bounded nations: "The notion that the immune system maintains a clear boundary between self and nonself is often accompanied by a conception of the nonself world as foreign and hostile" (1994:53). The body and other bodies are used not only to represent the concern about contagion between human bodies, but between global entities. Countries become bounded entities, susceptible to foreign agents, bacterial or otherwise. The theme of globalization and fears therein become related to fears about bodily boundaries. Martin addresses this again in terms of concerns about contagion on an individual level:

> Now imagine such a person gradually coming to believe that wider and wider circles of her existence – her family relationships, community work activities, work situation – are also directly related to personal health. Once the process of linking a complex system to other complex systems begins, there is no reason, logically speaking, to stop [1994:122].

In a globalized and biomedically hyperaware context, this is the omnipresent, niggling fear: that in our every interaction, our bodies are susceptible. The metaphor of the bounded body acts as a soothing force, but the constant awareness of globalization diminishes the feeling of security.

This is particularly relevant considering that it is not just the human body that is no longer conceptually bounded, but it is also the body politic: the state itself is seen as vulnerable. It is particularly exposed to any number of foreign agents, including but not limited to disease and terrorism, both forces that are conceptually contaminating. There is a paradox here, however: "…pollution is a type of danger which is not likely to occur except where the lines of structure, cosmic or social, are clearly defined" (Douglas 1966:114). In a globalized world, it is exactly these boundaries that are poorly defined. Yet this is a relatively new phenomenon, and metaphorical thought still reassures by suggesting that trust in our boundaries is not unfounded; indeed, this allows polluting or foreign agents to still appear threatening. As Douglas goes on to describe, this

may be a relatively fundamental characteristic of society: "The idea of society is a powerful image. It is potent in its own right to control or to stir men to action. This image has form: it has external boundaries, margins, internal structure. Its outlines contain power to reward conformity and repulse attack" (Douglas 1966:114). Even in the context of a globalized, supposedly boundary-less world, the metaphor of society itself still retains its borders. These borders do not exclusively need to contain the body politic, or the economics of the country; society does, however, retain its borders in terms of behavioral conformity. Thus, when deviations occur, the fear of pollution remains.

When the behavioral deviation is an illness, certain boundaries increase in importance. Society erects greater borders and boundaries to combat ambiguous behavior that includes illnesses, and as Priscilla Wald demonstrates, these actions simply reify the validity of cognitive metaphors: "…social bonds are reinforced by the institutional legacy of communicable disease…[Epidemics] paint the pathways of interdependence with the brush of mortality and can help overturn or reinforce governing authority" (Wald 2008:17). The possibility of overturning authority is not as common, although, as will be seen with the SARS outbreak, it was a possibility. As Wald suggests, however, new diseases become metaphorically linked to old ideas (like the Heart of Darkness) to reify the legitimacy of the body politic. When the outcome apparently demonstrates the efficacy of these metaphors, they are further cemented in public thought. It is thus that "…the state imagines the disease as a foreign threat and…uses the disease to imagine the nation as a discreet ecosystem with its own biological as well as social connections" (Wald 2008:23). The prevalent framework thus reifies the metaphors used to describe diseases, and affects international relations.

International Relations

These metaphors pervade perceptions of global interactions, particularly in terms of disease management and cooperation. Globalization has significantly shaped international relations, but specific events, including the beginning of the HIV/AIDS epidemic and 9/11 have also

fundamentally altered the way countries interrelate, cooperate, and perceive each other. Metaphor has played a significant role in this process: "Deeply entrenched institutional agendas and cultural precedents in the First World prevent us from hearing the story of AIDS in the Third World as a complex narrative" (Treichler 1999:99). The recycling of theories of disease and perceptions about certain parts of the world has fundamentally altered conceptualizations of disease and has heavily influenced international relations and global health. HIV/AIDS is one of the recent issues that have drastically shifted the focus of global health.

While HIV/AIDS was possibly the most influential impetus for changing thoughts about global relations (and particularly global health), the events of 9/11 also radically altered the progression of international relations. Wole Soyinka eloquently describes the 'climate of fear' that has developed, particularly in American society, as a result of 9/11. The climate of fear, as Soyinka describes it, is the result of uncertainty and fear about the possibilities in a world where terrible actions can be done with relative impunity. This pervasive climate leads to a constant sense of alarm: "As each assault on our localized or global sense of security is mounted or uncovered in the nick of time, the residual question is surely: What next? Where? How? Are limits or restraints any longer recognized?" (Soyinka 2005:6). Terrorism, as Soyinka suggests, seems to have no limits in who it targets, and this only leads to greater uncertainty and concern: it seems that nothing is sacred. As he goes on to demonstrate, this leads to cognitive frameworks which challenge not only the prevailing boundaries of the body politic, but also the authority therein: "For now, let us simply observe that the assault on human dignity is one of the prime goals of the visitation of fear, prelude to the domination of the mind and the triumph of power" (Soyinka 2005:10). People who are frightened cannot trust in their government; for the public, it is as if the boundaries that were meant to protect them no longer exist. Globalization, as the process of opening borders to trade, also opened nations to the influx of new people and the diseases and other supposedly contagious elements they carried

with them. Globalization introduced a series of new variables into societies the world over. This stressed the ability of our conceptualized boundaries to hold, to repel the outside. They continue to reward conformity, as Douglas suggested they would, but they apparently cannot keep the internal margins safe. This leads to a climate of fear, which though originally related to terrorism, became related to other concerns.

This fear is incredibly potent in instances of disease outbreaks. Because the fear is linked to globalization and the emergence of new phenomena, it is also linked to fears about emerging diseases. As bioterrorism gained notice, concerns about diseases only increased. Fears about contagion not only of dangerous people or dangerous elements, but of dangerous diseases became common:

> The networks of daily existence have transformed the herd into an amorphous entity constituted through airwaves as well as air travel. Communicable disease marks the increasing connections of the inhabitants of the global village as both biological and social, the communicability of germs and ideas 'broadcast' together in an ever more elaborate network of human existence [Wald 2008:22].

The metaphor of the global village is one that became prevalent as globalization became increasingly apparent. While this metaphor is meant to be reassuring, as Wald demonstrates, it simply suggests that everyone is susceptible to the agents, biological, conceptual, and literal, of everyone else. This adds to Soyinka's climate of fear – restraints in the form of borders appear to exist no longer, and the apparent lack of protection reifies the fear.

Diseases and contagion became increasingly concerning as globalization progressed and international relations changed. Paula Treichler's quote, which opens this section, demonstrates that early in the AIDS epidemic, the Third World was not being properly represented (1999:99). In spite of the changes in global paradigms brought about by increased globalization and the changes wrought by 9/11, representations and metaphors about the Third World have changed very little, and indeed, fears about contagion have perhaps worsened them. As Wald demonstrates, contagious

diseases become most concerning when they threaten the First World: "An infection may be endemic to an impoverished area, but it *emerges* when it appears – or threatens to appear – in a metropolitan center of the North" (2008:34). Thus, fears about contagious diseases are reified by our ideas about other cultures and the concern about the globalized world's lack of borders.

Contagion

Concerns about globalization were not the first site of fears of contagion. Emily Martin traces the current metaphors about contagion to the 1940s and 1950s; the political climate of this time began linking fears of foreign contamination, both political and medical:

> In the 1940s and 1950s, seen through the lens of popular publications, the most important threats to health were considered to lie in the environment just outside the body. Enormous attention was devoted to hygiene, cleaning surfaces in the home, clothing, surfaces of the body and wounds with antiseptics [1994:24].

Our modern conception of disease has its origins in another time when the outside environment could be perceived as foreign, and fears of anything Other were running high. The metaphor of the bounded body became particularly prevalent during this era and has remained so.

Mary Douglas traces concerns about pollution, contamination, and contagion in other cultures; her findings in other cultures demonstrate a great deal about fears of these agents in our own culture. She begins, saying "Almost any…account…talks about the fear, terror or dread in which…adherents live. The source is traced to beliefs in horrible disasters which overtake those who inadvertently cross some forbidden line or develop some impure condition" (Douglas 1966:1). While she writes of accounts of missionaries and travelers, the same fear pervades American society: transgressed boundaries led to the transmission of contagious diseases, and the fear therein is remarkable. Douglas also challenges the biomedical assumptions of transmission and seemingly logical fears of disease: "Is this then really the difference between ritual pollution and our ideas of dirt: Are our ideas hygienic where theirs are symbolic?" (1966:35). Rather than conforming to typical ideas about biomedical contagion, Douglas demands that we reassess our ideas of contagion and

biomedicine. Our fears are no more rational simply because we can ground them in biomedical definitions – this is a logical fallacy. Our fears, she demonstrates, are as grounded in metaphor as the fears of any other culture, and biomedicine does not alter that.

Within the framework of cognitive metaphors and outside biomedical definitions, Douglas explores what causes contagion to be so frightening. She suggests that disease initially interrupts the operating metaphorical framework and creates disorder:

> Granted that disorder spoils pattern; it also provides the materials of pattern. Order implies restriction; from all possible materials, a limited selection has been made and from all possible relations a limited set has been used. So disorder by implication is unlimited…It symbolises both danger and power [Douglas 1966:94].

As others have expressed, pollution and contagion challenge operating frameworks, including those of secure boundaries in the human body and the body politic. The disorder generated by these elements requires a new metaphorical framework, which must be created. If disease is indeed disorder, then order is what we crave, and as Douglas says: "Each culture must have its own notions of dirt and defilement which are contrasted with its notions of the positive structure which must not be negated" (1966:159). Contagious diseases do often create panic and disorder; this may be at the local level, where the hospital is unprepared, or the disease is unrecognizable. It may be at the political level, where countries must effectively manage diseases and prevent global transmission. What would allow this process to go smoothly is order; yet this is rarely possible. Contagious diseases, therefore, become yet another metaphor for disorder and chaos – beyond the biomedical fears of contagious diseases, disorder plays directly into Soyinka's climate of fear and inspires dread among the masses.

Ironically, while contagious diseases are wrapped up in metaphors of disorder, pollution, globalization, and biomedical fears, all of which inspire concern, these concerns are rarely downplayed in the mass media: "…accounts of disease emergence used sensationalism – 'the coming plague' – to convey the urgency of threats enumerated by the scientists, including ignorance,

sanguinity, and resource shortage" (Wald 2008:36). It is in the locus of the media that diseases are fully packaged in the cognitive metaphor of the confluence of these fears. The media use metaphors blithely, subconsciously, and as a means of expression to their readership. It is here that metaphors become apparent, and here that they are widely distributed. Finally, it is also here that they have the greatest power to change perceptions. It is through these paradigms that Ebola and SARS are considered – the fears of contagious elements, and concerns about certain countries and globalization are often inextricably entwined with these diseases. This theoretical framework is one attempt to untangle the meanings imposed on these diseases.

Methodology

Primary research consisted of locating news articles in popular media sources, particularly from the United States. These publications included, but were not limited to *The Economist*, *Newsweek*, *The New York Times*, and *Time*. Using the search feature, articles were located by isolating articles specific to either Ebola or SARS. Articles were chosen depending on the depth of the included information; articles that mentioned either disease only in passing were ignored in favor of articles that explored the story of the disease with more depth. Articles with certain keywords were also chosen, and these words often became foci throughout the readings. For Ebola, articles relating to the forest, war, primitive culture, and specific references to its apparent African-ness were often pursued for their relevance to the topic. For SARS, key issues included war, hygiene, superspreaders, and the exoticism of cultural differences. Articles that mentioned these in passing were still included in the survey of literature to determine the extent to which these cognitive metaphors influenced the article.

Where articles made use of multiple tropes or metaphors, the combination was also examined to understand the extent to which metaphors were interconnected, and to what extent this influenced perceptions of the diseases and of contagion itself. This was often particularly relevant in

examining articles about Ebola; while articles discussing SARS used multiple tropes, articles on Ebola *regularly* exploited multiple tropes. The extent to which these metaphors were used to promote fear or to assuage concerns was also explored by examining the conjunction of tropes. The use of primitive culture in the case of Ebola and exotic cultural differences in the case of SARS were frequently used; I assume that this was for the purpose of allaying the fears of the readership and demonstrating to them their lack of risk. I assumed that the tropes involving superspreaders and globalization were used for the opposite purpose.

Background literature on Africa, and particularly Zaire, and China was also used to contextualize the cognitive metaphors presented in both sets of popular articles. The metaphors used to describe the individual locations also inform their entailments, such that certain elements (including violence, war, and political unrest) became entailed to larger metaphors of place. Thus, in order to understand the extent to which metaphor played a significant role in creating perceptions of contagious diseases and contagion more generally, the entailments and the original metaphors both required study.

Paula Treichler's concern about the complexity of representations of AIDS fundamentally shaped this thesis. This work attempts to open a greater dialogue about contagious diseases, their representations in the media, and the subsequent impact on American culture. It should be noted, however, that the author is an American citizen who is heavily influenced by the norms of that society.

Malaise: Historicity and Representations of Ebola

History of Ebola

Ebola, though a relatively rare illness, is nevertheless one that embodies fears of contagious disease in public thought. Paradoxically portrayed as a horrifying disease and one that poses no threat to the West, it not only represents a microbial threat, but also represents a metaphorical threat.

The 1995 Ebola outbreak in Kikwit, Zaire, exemplifies this. The outbreak likely began with a collier who lived outside the city of Kikwit. The media speculated that he came into contact with the blood of an animal infected with Ebola, and he in turn became infected (Garrett 2000:61). Upon returning to his home, he infected his family, and upon seeking treatment, they inadvertently brought Ebola to the local hospital. The hospital staff was simultaneously treating an outbreak of shigellosis (which is symptomatically similar to Ebola), and unknowingly exposed themselves (Garrett 2000:66). While doctors and the nurses were often initially exposed to Ebola, the apparent lack of resources in the Kikwit hospital ultimately made the patients vulnerable. As Garrett describes,

> The patients, nurses, anesthesiologists, and surgeons were protected from one another's germs by a thin veneer of hygiene: cloth tie-up masks, recycled latex gloves, cotton surgical gowns. These items, as well as the surgical equipment, were washed every day in local water. The hospital had no tap water, nor any source of sterile liquid [2000:65].

The conditions in the hospital were such that Ebola, a disease transmitted through contact with even minute traces of bodily fluids, was easily communicable. As patients came to the hospital, this "thin veneer of hygiene" was not adequate to prevent the transmission of Ebola, and led to increasing numbers of infected individuals. Other factors, including the lack of supplies, were also faulted for the quick transmission: "…nurses laid out 5 needles every morning, which they would use to give shots to between 300-600 patients each day" (Jones 2011:3). The re-use of needles, even more than the lack of sterile liquid, was a significant problem for the hospital and the patients who received treatment there. The conditions were perfect for the rapid transmission of Ebola to a large population. By the end of the outbreak, 315 individuals had been infected, of whom 250 (81%) had died (CDC 2011a).

Though it was the most publicized outbreak, the 1995 Kikwit epidemic was not the first case of Ebola. The index case of Ebola occurred near the Ebola River in what was then Zaire. First reported in 1976, it was initially publicized as "the virus responsible for the recent epidemic of green monkey fever that claimed several hundred lives" (NYT 1976:7). While Ebola received little press

during the first outbreak, globalization, increased fears of contagion (in part due to HIV/AIDS), and the heightened prevalence of the metaphorical framework regarding Africa brought widespread international media attention to Ebola in 1995.

Ebola is a hemorrhagic fever, one that causes malaise in its initial stages and progresses to gastrointestinal upset, hemorrhaging, and culminates in grand mal seizures (Jones 2011:1). Diagnosis can be difficult – the initial symptoms are similar to those of several illnesses, including the common cold and rabies (Waltner-Toews 2007:124). Once Ebola progresses, however, the symptoms are unique enough to narrow it down to group of hemorrhagic fevers, including Marburg and Lassa, which are most closely related to Ebola. Like these other viruses, Ebola is zoonotic, allowing transmission between one or more animal hosts and humans. The host of Ebola is as yet unidentified, in spite of efforts by the scientific community to locate it in pigs, bats, and apes (Waltner-Toews 2007).

The five different strains of Ebola further complicate its understanding. The original strain, Ebola-Zaire, appears to be the most lethal. Its average lethality is between 50-90%; this strain brought Kikwit to the forefront of popular and epidemiological thought in 1995. Three other strains have also been found solely on the continent of Africa and include Ebola-Sudan, Ebola-Ivory Coast, and the most recent discovery, Ebola-Bundibugyo (CDC 2011a). The only strain of Ebola to reach the Western world was Ebola-Reston, which, along with monkeys from the Philippines, was imported to the US in 1989. Used for testing, these monkeys were placed in separate rooms connected only by ventilation shafts. Monkeys in separate rooms fell ill and died; while simian fever was originally suspected, researchers soon identified a new strain of Ebola. Perhaps ironically, Ebola-Reston, the only strain of this fear-inspiring disease to be introduced to the United States was also uniquely not lethal to humans. Four researchers were tested and showed antibodies to the

disease, suggesting they had been infected; yet none showed outward signs of illness (Preston 1994:115-136, NYT 1990:A16).

Representations of Africa

Because the lethal strains of Ebola have been restricted to the continent of Africa, many metaphors associated with Africa have become affixed to perceptions of Ebola. Repeated associations of Ebola and other ideas or elements, including its unique African-ness, allowed these ideas to become symbolically representative of Ebola. One such element is the Heart of Darkness trope. Joseph Conrad's *Heart of Darkness* informed the most pervasive and long-lived representations of Africa. Throughout this still-influential text, Conrad depicts Africa as the Heart of Darkness, the place where people lose their humanity to the savagery of the wild. In developing the conceptualization of the Heart of Darkness, the character Marlow describes his experiences in Africa: "'And this also,' said Marlow suddenly, 'has been one of the dark places of the earth"'(Conrad 1899:18). Early in the text, Conrad creates a perception of the African continent as a place that lacks light, one that is brooding and harsh. As he builds on this theme, he says "Here and there a military camp lost in a wilderness, like a needle in a bundle of hay – cold, fog, tempests, disease, exile, and death – death skulking in the air, in the water, in the bush" (Conrad 1899:19). Not only is Africa dark, it is possessed by wildness that is not only untamed by man, but is dangerous to him. The danger is not specifically located, but lurks all around and presents a constant threat. Additionally, the wildness of Africa was not something that could be held at bay once one entered it:

> The wilderness had patted him on the head, and behold, it was like a ball – an ivory ball; it had caressed him, and – lo! – he had withered; it had taken him, loved him, embraced him, got into his veins, consumed his flesh, and sealed his soul to its own by the inconceivable ceremonies of some devilish initiation [Conrad 1899:81].

The wildness of Africa as conceived by Conrad devoured the individual that walked into it, bit by bit, and once devoured, there was no escape. Man literally lost his humanity among the African forests described by Conrad. Though located in a temporally distant text, these ideas have been used and

recycled until the continent of Africa is inescapably metaphorically represented by them. Due to their metaphorical nature and the prevalence of cognitive metaphorical thought, they continue to inform the understandings of the American public.

The Heart of Darkness metaphor underscored much of colonialism on the continent of Africa, as well as in other places. The book takes place primarily in the Congo, and as a result, "the Congo became synonymous with savagery, primitivism, chaos, barbarianism, cannibalism, and unchecked nature" (Dunn 2008:87). The Democratic Republic of the Congo (DRC, also Zaire, or colonially, the Congo) has often been representative of Africa as a whole, and thus, Dunn's remarks are applicable not just to the DRC, but to Africa generally. Conceptualizations regarding Africa began during the exploration and colonization of the continent, yet continue to prevail.

Africa continues to be represented as a site of brutal conflict, particularly related to tribalism. While Wangari Maathai speaks to the modern group conflicts, many of her assessments can be applied to perceptions rooted in colonialism. Maathai says "While expressing their allegiance to the nation-state, African leaders have repeatedly used their identification with a micro-nation to divide their citizens from each other and control them, to the detriment of the larger macro-nation" (2009:84). While the violence in many countries in Africa is real and its basis in micro-national struggles is not without some truth, continued media representations have metaphorically linked this violence to Africa. Africa is rarely considered or discussed outside of a context of violence, thus demonstrating the pervasiveness of the metaphor. In explaining how the violence is not without context, Maathai says "The colonial authorities are responsible for some of these self-perceptions by favoring one group over another" (2009:85). She suggests that individuals relate better to tribes or micro-nations, rather than to the larger nation-state. Colonialism, she contends, is largely responsible for creating greater divisions among groups and emphasizing the differences between them. Thus, colonialism, as well as its tie to the Heart of Darkness metaphor, is at the root of both the reality of

the violence in certain areas of Africa, as well as the perception that violence is ubiquitous in Africa. While these perceptions are rooted in colonialism, they continue to influence the way in which individuals and nation-states perceive the African continent. Understandings of decolonization similarly continue to influence representations of Africa.

Scholarship and documentation demonstrate the corruption of many colonial governments. When pressure forced these governments to decolonize and turn the government over to elected officials, corruption often continued. In many cases, Western agents interfered with decolonization processes out of fear for the future of international relations. Using the DRC as an example, Dunn demonstrates that "...the American discourse [in response to decolonization efforts in the Congo] was firmly rooted in earlier images of the Congo as a chaotic, savage and primitive jungle" (2003:86). While decolonization efforts were meant to clean the slate for these new countries, perceptions (in large part perpetuated by the media) lingered and tainted responses to decolonization efforts. These actions and the responses within the newly decolonized countries created new understandings and representations of the African countries.

Initially, many countries in Africa elected officials in what were considered democratic and free elections. These individuals included Patrice Lumumba in the DRC, Julius Nyerere in Tanzania, and Kwame Nkrumah in Ghana, among others. While these leaders demonstrated promising leadership, their efforts to unify their countries alarmed Western leaders. The omnipresent threat of the Cold War often caused Western leaders to react against the rhetoric and strategies produced by the African leaders. Patrice Lumumba was assassinated in the DRC as a result of the negative reactions of the United States and Belgium. The two countries then installed the handpicked Joseph Mobutu (soon to become Mobutu Sese Seko)(Dunn 2003).

When he took the reins in the newly named Zaire, Mobutu created a new image for the country: "Mobutu's national identity discourses were produced for external as well as internal

audiences…[and] were consumed across the international community" (Dunn 2003:108). In his *authenticité* campaign, Mobutu fashioned a new name for himself and created a country that was "uniquely" African, but that could serve Western interests. Zaire and its new conceptualization did nothing to harm the United States' agenda; thus the U.S. government continued to support him. "In exchange for Mobutu's willingness to act as Africa's proxy for Western anti-Soviet interests the dictator gained tremendous power and personal wealth…often in the form of zero-interest, no-strings attached loans…and direct military assistance" (Garrett 2000:56). Rather than employing this aid money to develop his country, Mobutu hoarded much of the money to the detriment of Zaire. In 1995,

> …only 42 percent of the nation had access to anything vaguely resembling safe drinking water, and sanitation and garbage services were available to just 15 percent of the population…the 43.3 million Zairois suffered in a country almost entirely lacking in infrastructure, their complaints met with brutal repression, torture, and military assault [Garrett 2000:57].

Mobutu's use of international funds failed to meet the needs of the citizens of Zaire. Mobutu thereafter fit into the pre-existing paradigm of fiscally irresponsible African leaders; the media latched onto this and perpetuated the trope until it became increasingly embedded in ideas of Africa.

Neocolonialism has perpetuated the representation that corruption of this sort is endemic to Africa. Neocolonialism has affected countries in Africa by continuing to impose economic and socio-cultural ideas upon the countries and their leadership. These impositions are intended to ensure certain political and social outcomes. IMF and World Bank loans often come with conditions that the country must govern democratically, thus theoretically ensuring that the political structure is recognizable and friendly to Western interests as well as to its citizens. In spite of these expectations, conditions in many countries have only changed marginally. Jones illustrates this: "Numerous authors point to endemic corruption and the patrimonial tendencies of predatory and autocratic regimes as the cause of poor economic performance…it is possible to trace the phenomenon to a

legacy of colonialism" (2011:4). Aid donation has a new structure, one that is supposed to help countries; however, it often does little to change the circumstances of these places, and often perpetuates the perception and reality of corruption. Africa as a whole becomes metaphorically associated with these ideas and elements; by its association with Africa, so too does Ebola. Media representations of Ebola are created and recycled within this layered and complex historical and political framework.

Media and Ebola

Perceptions of Africa are deeply entrenched in representations of Ebola in part because the African continent is the likely origin of Ebola. The media have been instrumental in shaping public understanding of Ebola during and after outbreaks. Because the media have unique access to the American public as a source of information, they are also situated to create and disseminate hegemonic thought. Their ability to create, recycle, and subsequently use metaphors to relate information is uniquely powerful in creating and manipulating culture. As Joffe and Haarhoff demonstrate, "…it is the mass media that introduce and construct far-flung events, for wide audiences" (2002:958). Because understanding international events is increasingly valued in a globalized world, the media are a valued resource. While this is not inherently problematic, "…the mass media's power in framing responses to risks lies not only in what it conveys, but also in its ongoing interaction with the personal experience and the structural positioning of the viewers" (Joffe and Haarhoff 2002:957). The media are able to influence not only what people know, but how they understand it. While the world is increasingly interconnected, it is not increasingly equalized in terms of access to resources, and the perceptions of the viewer are significant. These are the perceptions that allow us to feel afraid or reassured.

Ebola and Africa

The media generated certain representations of Ebola based on pre-existing perceptions. Perhaps the most prevalent of these is the idea that Ebola is essentially Africa: "In the tabloids, but not the broadsheet, Africa becomes integrated into the name of the Ebola virus, rather than designating a location" (Joffe and Haarhoff 2002:960). Africa is often portrayed as a unified whole, to the extent that it is perceived as a single country, rather than as a continent. By associating Ebola with Africa as a whole, rather than with a specific country, the media are able to use essentialized understandings of Africa to create metaphors that relate a specific understanding of Ebola.

As Maathai demonstrated, Africa is often associated with violence; this becomes a metaphorical entailment of Africa, and is therefore tied to Ebola. Associating Africa with violence and corruption engenders Ebola with a sense of danger beyond that of its epidemiology. Africa as a whole is Otherized and therefore removed from the West; associating Ebola with this whole, rather than a more relatable nation-state allows the media to suggest that we are safe from its spread. While discussions of Ebola might create some mild concern, these metaphors mitigate fear among media consumers: "Symbolising Ebola as essential to Africa as a whole...implies that such disasters [are] incontrovertibly African, rather than European" (Joffe and Haarhoff 2002:961).Positioning Ebola as geographically specific to Africa suggests that Westerners are safe and can feel reassured by the distance between themselves and the virus. Even in a globalized era, this remains true. By constructing Africa as the continent with innumerable problems, the U.S. is able to create metaphorical boundaries by demonstrating the Otherness of Ebola. Thus, "Representing Africa as inherently disaster-ridden affords certain Westerners a sense of protection, when they hear of threats that have the potential to globalise" (ibid.). The U.S. is able to reify borders around its society by representing Africa and Ebola as uniquely Other. In yet another comparison of Africa and the West, Goldberg says, "Africa…has served as a petri dish for emerging pathogens…Africa is hotter, wetter, poorer, and more chaotic than any other continent, and pathogens need precisely these conditions

to flourish" (1999:SM21). In comparing the West to Africa, Goldberg reveals the media's essentialization of Africa: that it is a single environment that is conducive to the development of frightening extremes, like unusually virulent microbes. Yet, because it is distant, it is not an immediate threat, only something to be warned against. Thus, the media portrayal of Ebola suggests that it is just another concern for a continent littered with problems, and, by essentializing it and locating it geographically, makes it something with which to be only distantly concerned with.

Ebola and the Rainforest

The relation of Ebola to the African rainforest or jungle acts as an entailment to the metaphor of Ebola as African. These media representations are undoubtedly influenced by Conrad's Heart of Darkness metaphor, and demonstrate how these portrayals continue to influence understandings of Ebola. Representations of Ebola and the rainforest are not without basis: current scientific research suggests that the animal host of Ebola inhabits a rainforest ecosystem. However, media representations of Ebola in relation to the rainforest have gone far beyond that, demonizing the forest and exoticizing Ebola in the process. As Richard Zerner remarks,

> …representations of African forests, like Africa itself, have also carried a heavy burden of meanings in the Western imagination. Containing in their recesses virulent pathogens, warrior tribes, and lurking predators, they possess a potential for violence, the capacity to explode or implode, and the possibility that their 'endemic' virulence would seep across borders and saturate adjacent territories [2004:246].

Zerner develops a fundamental question: to what extent is Ebola biomedically feared, and to what extent is it feared for the broader cognitive framework within which it is situated? Indeed, the African forest becomes representative of a certain wildness that is fearful and undesirable.

Representations of Ebola regularly refer the reader to the dangers of the African forest; this metaphorical linkage exemplifies biomedical fears, as well as fears of seemingly endless contagious elements. Authors continue to relate Ebola directly to Africa and the entailed forest, saying, "Horrific tropical fevers are an unfortunate fact of life in Central Africa, but this was no ordinary

fever" (Lemonick 1995:62). Once again, Ebola is characterized as uniquely African, and in relating it to the tropics, Ebola is demonstrably worse. The jungle or rainforest becomes the hiding place of Ebola, place from which it stalks its prey: "The Ebola virus, in its Sudan incarnation, retreated to the heart of the bush, where it undoubtedly lives to this day, cycling and cycling in some unknown host, able to shift its shape, able to mutate and become a new thing" (Preston 1994:57). Here, Ebola is hiding, lurking somewhere in the heart of darkness, from which it can once again appear. Ebola is not only frightening because of its ability to hide in unknown locations deep in the forest, but also because it has intent: to continue to infect mankind at will. Others elaborate upon the idea of the purposeful virus, saying, "…Ebola retreat[s] back to whatever animal reservoir [it] came from, stalking humanity from [its] hidden lair, only occasionally lashing out to bloody a village or crash a rural hospital" (Greenfeld 2004). The intent Greenfeld attributes to Ebola is misplaced; viruses lack cognizance, and are incapable of such intent. This metaphorical linkage, however, unlike those that position Ebola as distant and therefore relatively harmless suggests that Ebola is a very serious threat, one that intends to destroy humans indiscriminately.

Ecological disruption becomes another entailment of Ebola. The destruction of the rainforest and the intrusion of humans act as the catalyst for an outbreak where Ebola is a punishment for ecological wrongdoing: "Scientists believe that pathogens still unknown to man lurk in the tropics, and as the forests continue to be knocked down at an alarming rate, these microbes will seek new hosts – the men who are invading their forests, presumably" (Goldberg 1999:SM21). This representation suggests not only that the virus delivers retribution for the disruption of its habitat, but also that the forest is the habitat for a seemingly endless number of diseases. The metaphorical cradle of dangerous organisms, the forest is not merely biomedically threatening, but also metaphorically threatening.

Other authors build on this theme: "In the remotest tropics of Africa and South America lurk a coterie of viruses that infect animals or insects and seldom bother man. But people occasionally stray into their path, with results usually horrifying enough to mark the annals of medicine" (Wade 1994:SM24). The media represent forests as the origin of horrifying new diseases, ones that punish the individuals who disrupt their habitats or accidentally come into contact with them. Additionally, as deforestation continues in order to meet global demand for forestry products, it seems that the entire globe that could be at risk. This representation enhances the fear of individuals who are outside the continent of Africa. The representation suggests that outsiders, too, are susceptible to what is normally a local, contained virus.

Ebola and Violence

Representations of Ebola are not solely limited to its status as a rainforest virus. Because Ebola is metaphorically African, it is imbued with other characteristics that are often used to depict Africa. The entailment of violence is thus introduced as one of these characteristics. Representations of Ebola as violent have metaphorically linked the two entities, and thus imbued Ebola with a sense of violence beyond its medical reality. This suggests the ability of the media to disseminate a fear of contagion beyond that of the disease; it suggests a fear of the contagion of a specifically African violence which seems, through an American gaze, prolonged and far more damaging than the violence in other areas.

In his book *The Hot Zone*, Richard Preston repeatedly uses violent metaphors to characterize Ebola. He classifies Ebola as a "hot virus", evoking ideas of militarization; the threat of live fire makes militarized hot zones particularly dangerous (Preston 1994:11). He continues his use of military metaphors, saying,

> …when a virus, is trying, so to speak, to crash into the human species, the warning sign may be a spattering of breaks at different times and places. These are microbreaks. What happened at Nairobi Hospital was an isolated emergence, a microbreak of rainforest virus

> with unknown potential to start an explosive chain of lethal transmission in the human race [Preston 1994:33].

Ebola is not only imbued with the intent to infect and harm the human species, as is commonly suggested; violence and war act as entities representative of Ebola, thus adding to the fear of the outbreak. Preston continues on to literally describe Ebola as a bomb: "It hit the hospital like a bomb. It savaged patients and snaked like lightning out from the hospital" (1994:69). Ebola, metaphorically linked to bombs, takes on its deadly characteristics and is thus infused with imagery and representations of frightening elements: militarization and violence.

Preston is not the only author to represent Ebola as violent. During the 1995 outbreak in Kikwit, *The Economist* said, "The precautions being taken now stand every chance of closing the stable door before the Horseman of the Apocalypse bolts…" (1995:109). While the metaphorical Horseman was stopped, the representation of Ebola as the Horseman nevertheless links not only violence, but chaos to Ebola. This suggests that while fears of the disease itself are significant, the fears of the metaphorical entailments are equally provocative. The New York Times suggested that "…the Marburg, Ebola, and Lassa fever viruses are ax murderers among microbes, but too vicious for their own good" (Wade 1994:SM24). Ebola is repeatedly represented as incredibly violent; perhaps something that even revels in its own violence. These representations encourage fears of insanity and chaos. The linkage of Ebola to violence creates a pervasive cognitive metaphor that in turn allows a narrative of the virus as something that is controlled by its own virulence, but that would otherwise be unstoppable.

Cultural Explanations for Ebola

Discussions of the transmission of Ebola concomitantly create fear and reassurance. The media widely employed cultural explanations to distance the American public from the possibility of contagion. The bushmeat hypothesis, a common explanation, suggests that cultural practices are responsible for the contraction and transmission of the disease. While the bushmeat hypothesis is

not without some validity, the employed rhetoric over-emphasizes it as a means of transmission. The cultural practice of consuming hunted meat is generalized as being unique to Africa, and thus these representations reassure the public that they are not at risk from contracting Ebola. The most common explanation of the bushmeat hypothesis suggests that "People eat wild primates and other bush meat because they are poor and hungry and the animals are freely available to anyone with a gun" (Waltner-Toews 2007:129). The bushmeat hypothesis essentializes the continent of Africa by assuming that all people are hungry and poor; this suggests that individuals hunt bushmeat because it supplements their diet.

The media also suggest that culture might dictate the consumption of bushmeat. As the New York Times implied, bushmeat seems to be a delicacy: "The people who died in the latest outbreak of Ebola, a hemorrhagic fever dreaded for its virulence, took sick after a feast of chimpanzee meat on Jan. 26 in Mayibout" (1996:5). The word "feast" suggests that this was not a meal where people were starving; it indicates pleasure in the availability of chimpanzee meat. It also indicates the possible importance of a ritual, rather than an act done out of strict necessary.

The media also latched onto funerary practices as a means of transmission. Again, this is not without validity; however, the extent to which it is discussed as a primary means of transmission is grossly overemphasized. The media nevertheless employed this explanation to offer reassurance that these cultural practices were "African", and thus the illness was unlikely to be contagious to those outside of those practices. In a more recent Ebola outbreak, *Time* reported,

> It is traditional at funerals in the rugged and remote north for mourners to show their solidarity by washing their hands in the same bowl of water, and that's what they did at the funeral in September…Health workers now believe it was that ritual cleansing that launched the current outbreak of the deadly Ebola virus [Karon 2000].

The media suggest that Ebola is only a threat to those with similar rituals; Westerners are therefore safe from contagion. This representation pervades much of the media's explanations of transmission. Most notably, the resulting implication of these representations is that these rituals must change:

> …in all the Ebola outbreaks studied so far, once a person is infected, the epidemic is spread by close contact between the sick individual and his or her caregivers and through burial rites and the preparation of bodies for those burials. Controlling the spread of the disease thus requires culturally sensitive engagement with local people; caring for loved ones, and burial rites, are profoundly rooted in history and culture and are not changed through lecturing from medical experts [Waltner-Toews 2007:129].

Funeral rituals are again suggested as the cause of contagion. Because Western funerals are seen as sterile and safe, the people are thus also safe from disease.

The third main cultural explanation for the transmission of Ebola portrays corruption as endemic to African culture and places it at the heart of the transmission of Ebola. Like the other explanations, this is not without validity, and is perhaps the most valid. It strays, however, in its implication that corruption is endemic and unique to the continent of Africa. In employing this cultural explanation, the media again attempt to reassure the Western audience. As Garrett (2000:59) demonstrates, corruption was a significant problem:

> …two things are clear: Ebola spread in Kikwit because the most basic, essential elements of public health were nonexistent. And those exigencies were lacking in Kikwit – indeed, throughout Zaire – because Mobutu Sese Seko and his cronies had for three decades looted the national treasuries. The virus had no secret powers, nor was it unusually contagious…Its emergence into human populations required the special assistance of humanity's greatest vices: greed, corruption, arrogance, tyranny, and callousness [Garrett 2000:59].

Mobutu's extended presidency allowed the media to portray corruption as endemic to Zaire, and to Africa by entailment. While corruption did do exactly as Garrett describes and enabled the virus to spread in ways few had predicted, corruption is not endemic to Africa in any way. As Jones argues, "…corruption is not cultural, nor determined solely by the actions of individual African leaders. It is part of colonialism's long shadow" (2011:4). Indeed, corruption is based not on the culture of any part of Africa, or of Africa as a whole, but is political in its nature. Though corruption and the subsequent difficulties in Zaire's infrastructure likely contributed to Ebola's spread, endemic corruption largely fails to explain the transmission of Ebola.

Indeed, all cultural explanations of the transmission of Ebola fail on the premises described above, but even more importantly on the premise that these explanations assume that one culture is present in all areas of Africa. Africa is one continent composed of over fifty countries, and within every country, multiple cultures exist. Thus, the cultural explanation does nothing but continue to essentialize Africa in an effort to distance Western audiences from the threat of Ebola and thus allay their fears.

The transmission of Ebola depended heavily on hospitals in the area of the outbreak. Because of economic and political breaches, hospitals were often understaffed and underfunded. As the New York Times crudely says, "Primitive hospitals, where contaminated needles and instruments may be used on scores of patients, often amplify an initial outbreak" (1995:A30). As Garrett and Jones also demonstrate, the lack of infrastructure and equipment in these hospitals made it extremely easy for the virus to transmit to patients and staff alike. Jones remarks upon the continued focus on cultural explanations: "…despite the clear role of poor healthcare infrastructure, the focus in the literature has been on education and community mobilization campaigns, consigning inadequately funded hospitals to a status as an unalterable African condition" (2011:3). Additionally, he says "…rarely do health reports or newspaper articles suggest [the causes of poverty] or remedies…Culture…another contextual factor, is considered 'fixable'" (Jones 2011:4). While the media may recognize the problematic healthcare infrastructure, it is easier for them to employ cultural explanations. The economic and political factors that prevent hospitals from gaining adequate supplies are often deeply complicated, and the media must consider its audience: the public of the United States primarily want basic explanations for the Ebola outbreak; furthermore, they desire the reassurance that it can't happen to them. In spite of the documentation that explains the epidemiology behind the outbreak, the cultural explanations for Ebola reassure the American public that Ebola and the elements with which it is associated are not contagious. By both commenting on

Otherized culture and creating a metaphorical framework within which we link these ideas of culture to Ebola, the media generate our own cultural response to disease, and in turn increase concerns about outside cultures. The media use deeply embedded metaphors and create new ones in order to continue reassuring and frightening the public in due order.

Globalization and Ebola

Representations of transmission lend themselves to questioning other ideas, particularly related to fears of contagion and how these relate to boundaries. Globalization has opened the world up, and while much is to be lauded about this, there is also much to fear. Ebola is one such thing that has been presented to the public as something worth fearing: "A hot virus from the rain forest lives within a twenty-four-hour plane flight from every city on earth. All of the earth's cities are connected by a web of airline routes" (Preston 1994:11-12). This is a fear that lives quietly in the minds of many – it rarely comes the forefront, because we like to believe that "…entire oceans separate us from the rest of the world" (Goldberg 1999:SM21). A climate of fear has enveloped the United States such that we are often afraid of what the media portrays. Indeed, there is much to fear, particularly from uncertainty: "…the residual question is surely: What next? Where? How? Are limits or restraints any longer recognized?" (Soyinka 2004:6). The world is interconnected, more so than it ever was before. On a personal level, individuals may be able to continue to believe that oceans separate us from what we fear, but conceptions of barriers and fear have irrevocably changed in the past thirty years.

Ebola represents these fears and insecurities perfectly: outbreaks led to media representations that simultaneously reassured and scared the public. Ungar (1998) terms these the *contagion-mutation* and *containment* packages. The contagion-mutation package suggests that Ebola would mutate and infect someone in Africa. This person would get on a plane and arrive in the West, where the virus would start a pandemic. This was enforced by several ideas, including the belief that

new viruses were being discovered which were unusually strong, or that viruses were learning to 'outwit' science. The Heart of Darkness metaphor developed into Ungar's ecological parable, which suggests that ancient diseases lurk in the forest until they are disturbed. This perfectly fit many of the media representations. Thus, what made Ebola special and enabled the creation of these representations "…was not the usual determinants of media interest, but a perceived hot crisis that could be a harbinger of a pandemic and attendant panic" (Ungar 1998:47). While could have conventionally focused on a more immediate biomedical threat, the metaphorical entailments of Ebola demonstrated a fear beyond that of disease to include the elements accompanying the disease, including chaos, violence, and the apparently dehumanizing aspect of the African forest.

The containment package, conversely, used metaphors of culture to reassure media consumers that Ebola was not a serious public health threat. The containment package allows individuals to believe that the virus and its attendant problems are actually an ocean away, and that this is enough to prevent any contamination. As Jones recounts, "There is intense fear that the Ebola virus could contribute mayhem and destruction were it to mutate and cross the Atlantic or the Mediterranean" (2004:5). The containment package assuages these fears by demonstrating the unlikelihood of a global epidemic. While the contagion-mutation package erases the barriers, the containment story attempts to construct them again, to ensure that people feel safe and unthreatened by the outside world.

These rhetorical strategies and representations affect the public's perception of Ebola and other diseases very deeply, and change their perceptions of their safety. Indeed, there is a great fear that

> The barriers that protect human populations from assault by new infectious agents are…frail and fallible…Pandora's box is far from empty. As the webs of trade and travel expand and lifestyles change, the industrial world's inhabitants are being exposed to novel pathogens to which they have no legacy of immunity [Wade 1994:SM24].

It is thus that contagion of disease is framed; however, the contagion of disease is only the starting point of understanding representations of diseases. The media generated metaphors also frame fears about contagion of the elements with which the disease is associated. The violence engendered in Ebola is constructed because it is an "African" disease, and Africa has regularly been portrayed as a violent and chaotic continent. Thus, it is feared that, without barriers, we are as susceptible to Ebola as we are to violence and chaos. Thus, "…viruses are not just biological entities, but also are political constructions" (Weldon 2011:20). The fear of Ebola is deeply and metaphorically connected to fears about contagion and the possibility that the U.S. is not infallible. The use and creation of pervasive metaphorical thought about Ebola and its entailed elements leads to the captivation and horror of the American public.

Inflammation: Rhetoric and Flesh in the SARS Debate

History of SARS

In November 2002, the first reports of an unidentified virus began in Guangdong Province, China, a region already notorious in the media for other outbreaks of emerging diseases (Wald 2008:1). After the 1997 outbreak of H5N1, the Avian Flu, doctors and specialists speculated that the new virus was another strain of influenza. While speculation continued "… more patients came in, [and] rumors of a murderous flu spread to the city at large, inciting panic" (Forney 2003:2). The Chinese government initially prevented media coverage of the illness, ostensibly to avoid the already-beginning panic. The number of patients increased through the winter, but the Chinese government maintained their silence on the subject. This continued until March 12, 2003, when "…the World Health Organization (WHO) issued a global alert [for] the especially virulent and 'unexplained atypical pneumonia' soon to be known as severe acute respiratory syndrome (SARS) [which] had already crossed a dozen national borders" (Wald 2008:1). While the Chinese government silenced

media reporting on the new virus, people had unwittingly spread it throughout China and over twelve other countries.

Initially, it seemed that the disease spread through direct contact with infected individuals, often in hospitals. While the doctors and staff were careful with symptomatic patients, the media blackout and concurrent lack of communication between hospitals made it difficult to adequately protect the staff and their patients. As a result, it appeared that "…this highly contagious lung infection had a predilection for health-care workers and its victims included doctors, nurses, and their family members" (Duffin 2006:1). Patients continued to come to hospitals with symptoms of the unidentified illness; because the staff had very little idea of the infectiousness of the new virus, they became susceptible to it.

While Severe Acute Respiratory Syndrome, or SARS, as it came to be known, was traveling through doctor's offices and hospitals, it was also beginning to travel by other means. Two cases, one in Guangdong and the other in Hong Kong, are particularly notable for the media attention they ultimately received. The Metropole Hotel in Guangdong Province became the site of multiple infections, most likely due to the presence of a sick doctor: "Although it was not clear how these people became infected at the Metropole hotel when they had no direct contact with the doctor, it was clear that this cosmopolitan setting had provided the opportunity for the virus to infect travelers who would go on to spread the disease throughout the world" (Murray 2006:19). The poorly understood method of transmission meant that more individuals were susceptible to the disease.

Amoy Gardens in Hong Kong illustrates a similar problem. An apartment complex, it also became the site of multiple infections. Unlike the Metropole, however, Amoy Gardens demonstrated that the infection route for SARS was not limited to respiratory transmission: "Up to this point, transmission appeared to have occurred principally through the respiratory route, but the Amoy Gardens outbreak now raised the possibility that environmental transmission might also play

a role" (Murray 2006:20). Possible sewage treatment and ventilation problems led to a number of new infections by exposing residents to infected fecal matter (Murray 2006:20).

These two micro-outbreaks led to new fears about this emerging disease. It traveled easily through hospitals yet was not limited to them. The symptoms were insignificant enough that individuals were able to board planes and travel to other countries, bringing a new and mysterious virus with them. And finally, the Chinese government appeared to have been suppressing information about the disease for months before it was reported globally. The convergence of factors led to global concerns about health, but also about the security and permeability of national borders. Furthermore, because the disease was unknown, the world could not yet imagine the extent of the possible damage: "In April 2003, no one was certain where SARS would lead: Would it become a worldwide disaster with high lethality on the order of the 1918 influenza pandemic?" (Kleinman and Watson 2006:3). Fear and publicity during SARS led to a vicious cycle of reinforcement, ultimately generating significant press coverage. American coverage of the SARS outbreak used and created a variety of metaphors to convey certain fears and understandings of the new disease.

It is now known that what was originally an unknown virus is a coronavirus, a family of viruses known to cause the common cold and a number of illnesses in animals (CDC 2011b). SARS was the first demonstrably virulent and contagious coronavirus to affect humans, which led to early speculation that the coronavirus was not the only virus causing the illness (Lemonick 2003). Symptoms of SARS were initially similar to those of many strains of influenza, or indeed, of the common cold: malaise, dry cough, and shortness of breath were all reported. The micro-outbreak in Amoy Gardens included symptoms of gastrointestinal distress; these symptoms were unique and may have been specifically related to the method of transmission (CDC 2011b; Murray 2006:20). The outbreak spanned from November 2002 until the World Health Organization (WHO) declared

the end of the outbreak in July 2003. In spite of extensive research during this period, the method of transmission remained ambiguous. It certainly spread through respiratory droplets, but other means of transmission have been investigated without conclusive results (CDC 2011b). Similarly, the origin of SARS is unclear. Speculated to be a zoonotic disease, the source has not been conclusively identified. Civet cats and raccoon dogs were tested extensively and appeared to carry a similar SARS-CoV virus, but a link between these animals and the SARS outbreak was never determined (CDC 2011b). Regardless of the source, 8,098 people were infected and 774 died between November 2002 and July 2003 (a lethality rate of approximately 10%) (CDC 2011b).

Representations of China

The recent series of viruses emerging from Asia, and China specifically have led to and are built upon certain conceptualizations of China. Economic and political tensions both in and outside of China have not only compounded fears and concerns about the region, but have lent themselves to understandings of disease. The media used H1N1, SARS, and H5N1 as examples of frightening diseases that originated in Asia (CDC 2011b). Each outbreak created a certain panic about disease preparedness and the fear of the foreign. Compounded by pre-existing stereotypes of China and its people, the perceptions of China as a cradle of disease and internationally uncooperative greatly influence how the American media portrays emerging diseases.

Representations of China are paradoxical; they simultaneously herald China as the economic power that financially supports the United States and demonize it for its political decisions. The citizens of China are viewed as both technologically forward and culturally backward. In discussing the cases of SARS in China and Hong Kong, *Time* reported that "Americans should not count on their sophisticated health-care system to protect them. China may be relatively backward, but Hong Kong, with a modern medical system, has experienced about as many deaths as have been reported in the rest of China together" (Lemonick et al. 2003). Hong Kong is perceived as being relatively

progressive because until 1997, it was still a colony of the United Kingdom, a Western, and metaphorically modern entity. The healthcare system there is considered to be advanced, while China is portrayed as the foil: a third world country with a health care infrastructure that is inadequately prepared to deal with the SARS outbreak.

These representations are not solely generated by the prevalent belief that China lacks an appropriate medical system; it is also based on the perception that it denies healthcare to individuals by preferencing urban inhabitants. It is understandable that individuals in rural areas might not have the same access to health care as those living in Beijing; however, the apparent denial of health care to individuals in rural settings suggests the repressiveness of the Chinese government: "…the poor health and hygiene conditions in China was in fact depicted as a failure of China's communist government in neglecting human rights with great inequality between the rural peasants and urban dwellers" (Huang and Chi Mei Leung 2006:309). Because China has a reputation of suppressing political diversity and underrepresented ethnic groups, the supposed lack of health care in rural areas quickly becomes classified not as an issue of distribution of services, but as a political problem with which American citizens can take issue.

Western media also portray China as the political Other. The tensions between the United States and China have been well publicized in recent years, and the radio silence from China during the initial occurrences of SARS provokes both animosity and suspicion by the media. Scholars have attempted to explain this through a historical lens: "Rulers in China for millennia held an odd belief: that natural disasters, such as earthquakes or new disease reflect on their legitimacy. Guangdong cadres repressed news of early cases of SARS out of fear that knowledge of this mysterious illness would disturb the populace and sow 'disorder'"(White 2003:31). Fears of illegitimacy plagues many governments, but rather than exploring the possibility that the Guangdong government suppressed reporting of SARS for a modern reason, it is instead assumed that historical reasons maintain their

validity in spite of wildly different circumstances. Thus, China continues to be seen as a backward country with political customs that are antiquated or diverge from global well-being.

The idea that China is politically volatile is compounded by the Western perception that the Communist Chinese government is deceitful and repressive. As Buus and Olsson discuss, the apparent secrecy of the Chinese government augmented the view that the Chinese government is not only disobliging but purposefully deceptive: "China's perceived inability or unwillingness to release information…was in turn linked…to the purported 'personality' of the Chinese system and its 'habit' of avoiding sensitive or negative issues" (2006:75). Similar to the explanation that the Chinese government is secretive due to a history of feared illegitimacy, the media depicted the Chinese government as secretive, thus classifying an entire nation as deceitful and uncooperative.

The apparent secrecy of the Chinese government is not the only characteristic that becomes symbolic for China as a whole. The media portrayed the Chinese as antiquated in their ideas, and reluctant to participate in the global exchange of information. China appears to be what stands in the way of treating and preventing SARS on a global scale – the secrecy and repression not only of information, but apparently of people characterizes China in the media, and becomes metaphorically entailed to SARS: "It is, again the very system itself in China that stands as the world's Achilles heel in the fight against SARS in the news accounts studied – an 'old' system using traditional outdated methods to deal with 'new' and modern threats" (Buus and Olsson 2006:77). These ideas are repeated in multiple publications, until the metaphorical linkage of SARS with the apparent characteristics of China is complete; one then begins to representative of the other until SARS is metaphorically both Chinese and therefore, furtive. That China is secretive and anachronistic, repressive and intractable are ultimately what characterize media portrayals, and thus, the world's perceptions of China in relation to SARS.

Media and SARS in China

The media not only used pre-existing perceptions of China; they were also influencing and altering these perceptions. These representations were subsequently metaphorically linked to conceptualizations and understandings of SARS during its initial discussion. Kleinman and Watson suggest that, "Media coverage generated by SARS was tremendous", and indeed it was (2006:2). In spite of the short-lived outbreak, the media coverage was immense. When SARS finally did make it into the western media, it was inevitably tied to China. Even after SARS reached Toronto, Asia or China were still the focus of the media. SARS and China became inextricably linked due to SARS' origins in China, and concerns about how China handled the initial outbreak. Uncertainties and fears about the political dimensions of China were only compounded by the secrecy with which the initial outbreak was handled: "…the Chinese government…at the early stages of the epidemic withheld information, controlled the media and discouraged international access to SARS victims" (Kleinman and Watson 2006:4). The suggestion of subterfuge by the Chinese government is incredibly pervasive; while it is not without some truth, it becomes inescapably linked to the concept of SARS.

China as Secretive

Media coverage suggests that China "…willfully deceived representatives of the World Health Organization (WHO) on their visits to Beijing hospitals" (Ratnesar et al. 2003). While the reasons for this deception remain largely unclear, the American media perseverated upon the apparent truculence demonstrated by the Chinese government. *Time* reported that the Chinese government put incredible pressure on its healthcare professionals to maintain the secrecy of the SARS outbreak. They suggested that "…state-run hospitals moved dozens of SARS patients out of wards just before WHO inspectors arrived" (Ratnesar et al. 2003). A variety of explanations exist for this behavior, from economics to political legitimacy; yet none entirely explain the deception of the WHO. Indeed, while unethical, it is understandable that the Chinese government would not want an epidemic-induced panic or economic collapse on their hands; deceiving their citizens serves a certain

twisted purpose. While the press undeniably wove a cognitive metaphorical framework into their representations of SARS, one must also wonder how China benefitted from deceiving the WHO – this remains unclear. It was only when faced with governmental criticism that the Chinese president, Hu Jintao openly discussed the SARS outbreak.

The ostensible secrecy and deception displayed by the Chinese government is revisited throughout the span of the outbreak until it becomes representative of China as a whole. It is then regularly cited as the cause of the initial spread of the disease: "If not for the secrecy of the Chinese government, health officials could have acted a lot earlier…Officials hushed up the outbreak to prevent panic, and by February at least 305 Guangdong residents had developed SARS" (Lemonick 2003). This acrimonious rhetoric acknowledges that the cover-up of SARS served a purpose: to avoid panic. However, within this commentary lies the suggestion of the corruption or distinct Otherness in the Chinese government and their approach to SARS. This Otherness is linked to the political acceptance of suppression as a strategy, which the American media suggested enabled the unchecked spread of SARS.

The Chinese government was also accused of falsifying its data, even after reporting to the WHO: "…there may be a lot more cases in China than anyone realizes. It's hard to gather information in such a vast country under the best of circumstances, but the actions of the Chinese officials have made the situation worse…" (Lemonick et al. 2003). The initial underreporting of cases is linked to the continued outbreak in China. The media silence, they suggest, allowed the disease to go undocumented, which accounted for the lack of communication between doctors early in the outbreak; had doctors been able to communicate, the media speculated, the disease would have slowed dramatically. Forney says, "…as health officials raced to identify the disease they faced, official cover-ups and dissembling meant valuable information was withheld not only from the public, but also from the health-care workers who were trying to save lives" (2003:1). The lack of

information and communication undoubtedly influenced the spread and rate of infection. The media, however, continually linked the corruption of the Chinese government and the uncertainties therein to the spread of the disease, augmenting the metaphorical relationship between the two entities.

The political uncertainties of China were further associated with the spread of SARS as the media disparaged the government's response. The media villainized China for allowing its citizens to be exposed to SARS, and for failing to prevent its spread. This was regularly related to the suppression of information: "This is a tragedy that happened largely because China's government suppressed all information about the epidemic, thus depriving its people and health workers of the knowledge they needed to prepare for outbreaks" (NYT 2003:A24). The suppression of information as well as the dissembling of China personified SARS and made it seem like a secretive, unpredictable, or unknowable disease. As the characterizations of China became gradually wrapped up in those of SARS, the representations of SARS became increasingly complex.

SARS as Uniquely Asian

SARS was almost immediately related to perceptions of politics in China, but it also became characteristic of China itself, even when it became a serious public health concern in Canada. The origination of SARS in Guangdong Province undoubtedly grounded the classification of SARS as Other, and more specifically, as Asian or Chinese. As the *New York Times* reports, "In China, the epidemic is clearly out of control. From its origins in south China, SARS has now spread to at least nine provinces, making it likely that the virus will range widely through the vast Chinese countryside, where health care is rudimentary" (2003:A24). Because of its beginning in rural China, SARS came to be seen as uniquely Chinese, but not *exclusive* to China. The trope that China is backwards and anachronistic persisted and characterized SARS in the international media: "…there were descriptions of life in 'rural China', where people routinely live in insanitary, cramped conditions in close proximity to poultry and other animals" (Washer 2004:2565). The major metropolises of China

were completely ignored during these reports. Beijing and Hong Kong were suddenly unavailable as references to China's modernity; instead, China became an antiquated backwater where health services were unavailable and the animals lived in such close proximity to the people that diseases were literally able to jump between the two. Between the reality that China was the origin of SARS and the perception of China as a backwoods, SARS became attached to similar ideas, thus contributing to the metaphorical framework of SARS. While it was feared as the coming plague due to globalization, SARS also developed in a unique habitat, and was thus almost exclusively associated with China itself; this simultaneously frightened and reassured media consumers.

SARS as War

Possibly due to the political tensions between China and the West, SARS also became envisioned as a war. Metaphorical wars against microbes are not uncommon, and as society becomes increasingly afraid of pollution and the unknown associated with illness, these metaphors increase in prevalence. Douglas demonstrated that fears of pollution could not only create a specific cognitive framework, as Lakoff and Johnson discussed, but that these fears could create a reactionary social rigidity: "A polluting person is always in the wrong. He has developed some wrong condition or simply crossed some line which should not have been crossed and this displacement unleashes 'danger for someone'" (Douglas 1966:113). When this is extrapolated to SARS, the apparent pollution from the threat of SARS itself, as well as its entailments would undoubtedly have been something to guard against.

Thus, in the case of SARS, it seemed that the war against microbes was also a war against the secrecy and denials of the Chinese. As Grady astutely observes, "…with a new host, no truce has been made" (2003:WK3). Political tensions between the West and China were undoubtedly heightened as a result of the apparent media black-out. Western media responded by associating SARS with these tensions and elaborating upon them until SARS became metaphorically militarized.

In describing situations in hospitals, Forney says that doctors "…became victims of what can only be described as the point-blank detonation of a virus bomb" (2003). Similarly, other media sources discussed the virus as a murderer: "The University of Hong Kong's pathology lab is one of the few places on earth where you can stare a newly accused murder suspect right in the face" (Lemonick 2003). The media created the metaphor of SARS as war not only to related the apparent danger of SARS, but also as a means of mobilization: against the Chinese government's secrecy, and the fear associated with the unknown, but also against SARS itself. The metaphor of war inspired solidarity amongst those who were in the wake of the war.

When SARS was declared a war, the staff and scientists working with patients and studying the virus became the metaphorically entailed heroes fighting the battles: "'…the language of war functioned as a tribute to the 'front-line' health 'heroes'" (Baehr 2006:55). The heroes of SARS served as a rallying point in China and in the West. The media used this as a rare point of solidarity between the U.S. and China, and thus perceptions of doctors on both sides of the Pacific were positive and sympathetic. When the Chinese government closed a hospital, the press sympathized with the isolated workers: "At Peking University People's Hospital, the quarantine orders left some 2,000 healthworkers and patients isolated and at the mercy of the rampaging virus" (Ratnesar et al. 2003). SARS continued to be classified as the virus with the agency to wage war against the human race. The Chinese healthworkers who faced it head-on became the heroes.

Unlike the negative press discussing the Chinese government, the press here is compassionate and concerned. This operates within the idea of cognitive metaphors presented by Lakoff and Johnson: "Metaphors have entailments through which they highlight and make coherent certain aspects of our experience" (1980:156). The portrayal of health care workers as heroes acts as an entailment to the general metaphor of SARS as war. If SARS is a metaphorical war (indeed, a war not just on the human body, but on the structure of public health), the metaphor highlights the

struggle with the disease and relates this to the American public. In turn, the entailment of healthworker heroes allows the public to recognize the fears of the disease by glorifying those handling it. Thus, these metaphors and their subsequent entailments "…highlight and coherently organize…aspects of our existence" (Lakoff and Johnson 1980:156). It seems that in war, anyone who is a hero is universally appreciated. The representation of SARS as war paradoxically does not divide, but unites the West and China. Additionally, SARS becomes imbued with the characteristics of war, making it an urgent problem that requires the attention of international public health organizations, and which causes fear among populations without experience of the disease.

Transmission of SARS

The American understanding of China became heavily associated with SARS as a result of its intimate association with China. Like the belief that SARS began in a cramped and rural setting, the cultural explanations for the transmission of SARS became emblematic of the disease itself. In the media, this served to reassure, but also to promote fear about SARS. Cultural explanations reassured individuals in the West by suggesting that SARS was only transmissible in ways that the West did not partake in. In spite of this, however, it also perpetuated the fear that SARS was contagious in part due to public health deficiencies.

Cultural Explanations of SARS

The most prominent cultural explanation for the transmission of SARS dealt with hygiene and habits in rural and urban China: "[It] is a common habit in southern China, where most people cough and sneeze without covering their faces. Pools of saliva are frequent sights in restaurants, trains, and buses…such practices make Guangdong province one of the world's most dangerous breeding grounds for infectious viruses" (Sheriden 2003 in Washer 2004:2566). Hygiene practices related to bodily excretions are incredibly rigid in the West, and contrast sharply to what is presented by the media. As Douglas suggests, for us, excretions from the body are liminal, and therefore

representative of danger (1966:121). Here, it seems remarkable that everyone in China isn't dead from disease; thus, the linkage of SARS to apparently cultural habits creates a certain fear about contagion in China. Anecdotes relating the lack of hygiene among the Chinese are common: "…the disease became associated with the alleged Asian circumstances of: the cultural acceptability of spitting in public, pollution, dirt, living in close proximity to animals and the existence of previous epidemics emanating from Southern China" (Ali and Hooker N.d.:11). Media coverage developed the metaphor of SARS as unclean or polluting based on American standards, and thus provokes fear over liminal subjects of the body. They also, however provide reassurance that SARS is unique to cultural circumstances in China. It therefore seems unlikely that someone with Western standards of hygiene could contract an infection.

While this provides a certain amount of reassurance, the media nevertheless provokes fear with these descriptions. It became clear that SARS was traveling with passengers on international flights, making people more susceptible to catching the disease without participating in customs supposedly unique to China. The relation of cultural customs to China entailed them to SARS, which increased fear and uncertainty about China. Previous experience with new viruses emanating from China (namely H5N1) created new fears about the next deadly illness originating in China. By suggesting that SARS was uniquely Chinese, the media simultaneously spread reassurance that it was unlikely to be contagious to Westerners, but also heightened fears about contagious diseases emerging from China.

Superspreaders

Methods of transmission became another way by which the media simultaneously spread fear and reassured their readers. The role of so-called "superspreaders", highly infectious individuals, became a common theme which paradoxically inspired and assuaged fears of contagion: "Researchers had suggested that certain individuals might be 'super-spreaders' – that is, people who

were spraying out extra-large numbers of viruses" (Waltner-Toews 2007:120). Superspreaders became a means by which the media could discuss the transmission of SARS and the efficiency with which it traveled around the world.

Superspreaders, however, were not the first time that highly infectious individuals had been portrayed as the main means for the transmission of infectious diseases. Wald speaks to this extensively: "The media treatment of superspreaders…[was] fueled by the regular appearance of their more notorious predecessors" (2008:4). These included "Typhoid Mary", a healthy human carrier of typhoid in the early 20th century. A woman who was demonized for her unwitting transmission of typhoid, Mary Mallon became famous as an asymptomatic transmitter of tyhpoid (Wald 2008:92-100). Gaetan Dugas, an airline steward, was also a predecessor of the superspreader metaphor. Dugas was criticized for bringing AIDS into the United States and for transmitting the disease to others (Wald 2008:4). These ideas gained traction largely due to fear; while diseases were new and emerging, these metaphors gave an at-fault individual to the media and the government. The possibility of highly infectious individuals made the perfect scapegoat. People living at the margins of society (women, gay men, and foreigners) all acted as people with the power to metaphorically pollute. Blaming them gave society something to cling to in times of uncertainty.

As a result of laying blame on marginal individuals, "superspreaders" were regularly conceptualized as an average Chinese citizen who was unknowingly transmitting the disease at an unusual rate. As *Time* reported, "Another factor scientists do not understand is the superspreader, a person who appears to pass the disease on with extraordinary efficiency" (Lemonick et al. 2003). Without implicating the doctors or the scientists, the media could still illustrate that much about SARS was unknown, heightening fears about the disease and its method of transmission. It became a disease to which anyone was susceptible; someone could unknowingly be exposed to a superspreader and contract SARS without even realizing it. And what if the individual was a

superspreader? Fear and condemnation followed anyone identified as a superspreader: "She was one among the SARS 'superspreaders', as the media termed the 'hyperinfective' individuals who ostensibly fostered infection by 'spewing germs out like teakettles'. The media treatment of superspreaders survived the scientific refutation of the concept…" (Wald 2006:4). Individuals suggested to be superspreaders were feared and shunned in society. There was a steady concern that they were constantly contagious, even after the outbreaks cleared. While Wald denies the reality of the superspreader, the media suggested that superspreaders were at fault for the extent of the global infection. In discussing one particular superspreader, Forney demonstrates the reach of the superspreaders: "A seafood dealer, he would become known to the Chinese as the 'Poison King', the first super spreader of what would later be identified as the SARS virus…by the time he went home, he had infected as many as 90 people" (2003:1).

Superspreaders were only ever individuals of Asian descent – even when superspreaders were detected elsewhere (particularly in Toronto) they were inevitably and generalizeably Asian. The media phenomenon of superspreaders demonstrated the distance between individuals and the disease – it appeared that in order to contract SARS, one had to be exposed to a superspreader, someone with either an unusual propensity for spreading the disease, or someone who had an unusually high virus load. While this provided reassurance to much of the West, the idea of the superspreader also demonstrated the extent to which SARS was outside the capability of even the most innovative and modern public health systems. If superspreaders were unaware of their propensity, anyone was at risk, and there was little that public health organizations could do to prevent mass contagion.

SARS and Meat Markets

Other explanations of transmission and generation referred again to the cultural aspect of SARS. Meat markets in rural China became the site of origin and transmission, both in the media,

and apparently, in the mind of the Chinese government. Because SARS was a suspected zoonotic illness, there may be some validity to these claims, but no biological connection has been made between the meat market and the transmission of SARS. Nonetheless, this was yet another entailment exploited by the Western media that indicated the Other nature of SARS. The meat market explanation also worked beautifully as a means of reassurance.

In discussing the origin of SARS, many media sources pointed to the meat market and the exotic species often consumed by the Chinese: "Did the SARS virus jump species from an exotic animal in a food market in China to infect a human and start a chain of transmission…?" (Altman 2003b:F1). Pointing to the Other nature of people in China, this exoticizes cultural customs by highlighting the difference between what is done in China and what is acceptable in the West. The media's fascination with the "exotic species" concept seemingly knew no end, and indeed became a fixation: "… the Chinese practice of putting exotic species of animals on the dinner plate have led many scientists to theorize that SARS may have originated from handling or eating wild game" (Altman 2003b:F4). The possibility that the meat markets served as an origin and site of transmission is not without possibility. As Altman also demonstrates, "…the earliest case found an unusual preponderance of food handlers caterers and chefs, about 5 percent of the first 900 patients…" (2003b:F4). Nonetheless, the likelihood that the meat markets were either the source or the point of transmission is highly unlikely (CDC 2011b).

This did not, however, prevent the media from continuing to place them in Douglas' liminal framework as polluted and dirty areas where illnesses were likely to attach themselves to unaware individuals. Identified as the site of earlier outbreaks of H5N1, the Avian Flu, the meat markets were once again vilified as a place of cultural contamination. These were considered to be unique to Chinese culture, and were seriously harmful not only to China, but to the rest of the world. These suspicions and fears were transmitted via the media:

> Hong Kong health officials have become particularly skilled at identifying respiratory diseases because the city is located so near the rich agricultural zones of southeastern China, where pigs, poultry, and millions of people live in close proximity. Illnesses such as influenza routinely jump from animals to humans, which is why new strains of flu often arrive from Asia [Lemonick 2003].

Simultaneously conceived as the breadbasket of the country and the site of terrible contamination, agricultural zones became associated with the meat market, and thus with the emergence of SARS.

This theme remained prominent in the media as a means of continuing to associate the outbreak with a distant Other. Meat markets in the United States, articles suggested, were sterile and healthy environments, and so diseases like SARS could not emerge in the U.S. as they did in China. Conversely, markets in China were painted as unsanitary; using this as a cultural explanation for the emergence of SARS demonstrated not only the stark differences between the U.S. and China, but also the superiority of systems in the U.S. The ignorance of the apparent danger in the meat markets in China featured prominently as a way to emphasize this: "In late summer, the live-animal markets of southern China are usually buzzing with street vendors and their wares – a flurry of fur, scales and feathers, blood and gore, and the inevitable stench" (Liu et al. 2003). While vividly depicting an apparent scene at a meat market in China, the media also succeed in contrasting the safety of meat consumption in the United States and the apparent danger of doing so in China, thus successfully creating a metaphor of culture and contamination within which the American public could understand the disease. It also emphasizes the cultural difference in taste: "China's stern measures…to combat the SARS outbreak…has taken its toll on the poor farmers, butchers, traders and cooks who cater to the Cantonese taste for freshly killed exotic meat" (Liu et al. 2003). Wild meat is seen as foreign; domestically raised meat is considered to be so common in Western thought that the idea of consuming wild meat inspires concerns about zoonotic disease, thus further emphasizing the difference between China and the U.S., and inspiring fear of the Other.

The fixation on wild-caught meat as the source of SARS is remarkably similar to the perseverance upon the bush-meat hypothesis in media representations of Ebola. Both diseases are considered to be zoonotic in origin, and while a zoonotic disease could come, as smallpox did, from a domesticated animal, the media instead focused upon the consumption of undomesticated meat in both China and, more broadly, Africa. In both situations, this represents a metaphor of Otherness that attempts to reassure the American populace; by relating the disease to foreign cultural practices, the media assert the security of the US from these diseases.

SARS and Nature

That SARS, like Ebola, could have come from wild game also influences concerns about the origin and emergence of the disease. The media imply that SARS emerges as a result of the meat markets. The origin itself, however, is suggested to be from nature. Researchers sought the source in wild animals killed for meat:

> …the SARS coronavirus is believed to emanate from palm civet cats or raccoon dogs that populated the live animal markets in Guangdong Province, China…Such 'exotic' animal species are used in both food and traditional medicine in southern China, but contact with these species in live animal markets facilitates the zoonotic transfer [Ali and Keil 2006:497].

While the meat market continues to be demonized for apparently allowing the transfer of SARS from animals to humans, the source in nature also inspires fear. As with Ebola, the possibility that humans are encroaching too much on the environment and facilitating the movement of new or re-emerging diseases inspires fear of the unknown, and of what is 'hiding' in nature.

Multiple news sources employ this theme: "…a SARS virus lurk[ing] in nature will most likely mean that SARS is here to stay, ready to be exported from an affected area elsewhere at any time" (Altman 2003b:F4). While the thought of SARS originating from nature and existing separately from human society at first seems reassuring, the presentation of SARS in nature is anything but reassuring. Instead, it makes it more threatening by making it unpredictable. A SARS attack could happen at any point; any time a volatile and mercurial nature chooses to unleash one.

As Grady goes on to suggest, this volatility often has serious consequences: "It is possible that an animal virus 'jumped' into humans. Such jumps are known to occur, occasionally with dire results. A virus and its usual host may have adapted to each other to coexist" (2003:WK3). While the non-human host of SARS may be able to withstand its virulence, Grady suggests that the human host is not adapted to do so – and the uncertainty about the timing of a SARS outbreak makes this even more concerning. Furthermore, the coexistence of SARS and its host means that it would be difficult to eradicate, and makes humans more susceptible: "…the virus is simply lurking in civets, raccoon dogs and other animals of Guangdong waiting for colder weather to trigger another outbreak" (Liu et al. 2003). It is not simply the cold weather that SARS waits for, but for an unsuspecting victim. These accounts grant SARS both agency and cunning, making it much more alarming. The metaphorical tie of SARS to the forest, whereby the forest became representative of SARS and the fears therein became prevalent to the point that it deeply influenced the cognitive framework within disease operates.

The fear of an animal reservoir of SARS is not limited to the Western press; in a notable instance of the media informing the actions of governing bodies, the press' fixation with the meat markets of China, and the civet cats in particular, led to several consequences. The first and most remarkable is the slaughter of civet cats in meat markets:

> Officials in Guangdong Province…ordered this morning the immediate killing of every civet cat in captivity in the province after researchers found that a Guangdong man had fallen ill with a new strain of SARS virus that is genetically similar to a strain found in civet cats [Bradsher and Altman 2004:A4].

This instance is the only time SARS was biologically linked to civet cats; while speculation suggested a connection between the two during the initial outbreaks, no biological linkage was ever found. Nevertheless, the fear of these animals led to the slaughter of at least ten thousand civet cats and the possibility of hunting and killing wild civet cats to prevent a resurgence of SARS.

The United States and Responses to SARS

While China slaughtered civet cats by the thousands to prevent SARS, the United States banned their import: "Some (maybe a hundred a year) were imported to the United States as pets; importing them into North America is now, as a result of their association with the SARS virus, forbidden" (Waltner-Toews 2007:123). Importing foreign animals is often suspect or illegal in the United States for biodiversity and conservation reasons. In this case, however, the prohibition had little to do with conservation, and everything to do with fear. The United States was remarkably unaffected by the SARS outbreak, and the suggestion that the civet cats might bring SARS to North America was enough to prevent their importation.

SARS inspired any number of other responses. While governments responded quietly, if at all, to outbreaks of Ebola, SARS caused significant responses from Western nation-states and organizations, particularly from the World Health Organization (WHO), the United States, and Canada. The WHO was deeply involved in the management and containment of SARS, and its response was often unprecedented: "For the first time in its 55-year history, the World Health Organization (WHO) recommended last week that travelers avoid nonessential trips to an entire region…" (Lemonick 2003). The response of the WHO demonstrates the extent to which fears of contagion influenced global policies. The unique response of the WHO in the instance of SARS illustrates not only the fears of contagion, but the fears associated with China and Hong Kong themselves.

The United States responded with a similar urgency. Post-9/11 and Amerithrax, public health began to be perceived as a national security issue, and as a result, SARS was handled differently than other emerging diseases. Like the WHO, the United States government suggested that individuals should avoid traveling to areas with high reported cases of SARS, including Hong Kong, Vietnam, Singapore, and mainland China (Grady 2003:WK3). The fear of SARS allowed the government to interfere with the lives of their citizens by discouraging their travel. Discouraging

travel, however, was the least of the US government's response to SARS. The US government reacted in many ways to SARS, and President George Bush's responses were remarkable: "Meanwhile, US President George W. Bush made SARS the first new entry to the country's list of quarantinable diseases in two decades" (Lemonick 2003). Certainly motivated by fear-instilled citizens, the US government reacted in order to prevent not only a serious public health concern, but a panic. Ironically, the media's attention to SARS and the prevalence of their metaphorical framework resulted in a panicked American public nonetheless. SARS as an emerging disease associated with fears of China's Otherness were enough motivation to change conceptualizations of the disease.

In addition to adding SARS to the list of quarantinable diseases, President Bush's administration took even more stringent measures to prevent the entrance of SARS to the United States: "…the Bush administration has authorized immigration and customs agents at the nation's international airports to use force to detain arriving passengers who appear to have symptoms of [SARS]" (Shenon 2003:A10). The unusual use of force highlights the extent to which fears about SARS determined responses to the disease. The 9/11 attack and subsequent anthrax scares changed perceptions of disease from something worthy of avoidance to something worth fearing. In addition to the barrage of news reports, the American public and the government were subject to an extraordinary number of alarming images of SARS. The combination of these forms of media encultured an immediate panic response. That an emerging disease could be part of a bioterror threat enabled the US government to treat SARS not just as a public health concern, but as a national security issue: "…travelers who arrive on our shores cannot bring this disease with them. This is a national security issue" (Shenon 2003:A10). While fears of SARS were heavily influenced by fears of China, many of the fears about China were reassuring in comparison to fears about

bioterrorism; these fears allowed new and stringent restrictions for citizens and travelers and changed public understandings of both disease and security.

SARS in Toronto

The responses in Canada, particularly in Ontario, perhaps merit more investigation for their significance. Toronto is considered a global city, one which "…links together and expands human activity across regions and continents" (Held et al. 2002:61). SARS became a serious issue in Toronto for any number of reasons, some of which relate to the biomedical understanding of SARS and others of which indicated fears of other cultures within Toronto. SARS entered Toronto because it "…is Canada's prime destination for new immigrants and tourists; its airport is the biggest in the country" (Ali and Keil 2006:491). It happens that many of these immigrants and tourists happen to be from Asia; this reality added to the conceptualization of the Asian "Other" as the spreader of SARS, and augmented the representation of SARS as itself Asian. Additionally, the globalization of disease became an early concern for Toronto because the rapidity of air travel led to the spread of SARS within Toronto.

Responses to the SARS Outbreak

Initial efforts to combat SARS in Toronto were effective once the disease was recognized. SARS likely reached Toronto before it was identified and the symptoms codified, leading to its spread. Once the disease was widely recognized, however, Toronto did a remarkable job of quarantining and preventing the spread of the disease: "In an extraordinary measure, Ontario health officials yesterday asked anyone who has even one symptom of SARS to stay home for a few days out of fear that anyone developing the respiratory disease might spread it during the Easter holiday weekend" (Altman 2003a:A1). While the United States' government focused its efforts on preventing the entrance of SARS, the government in Ontario attempted to prevent the spread of

SARS. This meant that widespread quarantine and serious (if only temporary) cultural changes had to be made.

The quarantine in Toronto resulted in the isolation of a significant number of individuals: "More than two thousand people were in quarantine – which in Canada is a somewhat leaky concept, relying on goodwill and a sense of civic responsibility" (Waltner-Toews 2007:119). In contrast to the apparently harsh and stringent quarantines in China, the quarantine in Toronto appeared moderate, although it impacted a large number of people in the city. Additionally, city officials suggested cultural changes to prevent the transmission of SARS: "…Churches are advising worshippers to suspend sharing communion wine and to replace handshakes, hugs and kisses with bows and smiles…" (Altman 2003a:A6). The fear of the contagion of SARS led the government and other associations to ask people to modify their behavior. While behavior modification (such as increased hand-washing) is often advocated during cold and flu season, the suspension of sharing communion wine is quite significant.

These notable measures worked – at least for a short time. The media later said that the initial quarantine effects were beneficial, but that the beneficent effects vanished when the city of Toronto let down its guard: "A few weeks ago, Toronto believed that the epidemic was winding down. Now with 20 deaths, it's the first place outside Asia to be put on a do-not-visit list issued by the World Health Organization (WHO)…" (Lemonick et al. 2003). The media suggest that the success of the early quarantine efforts also allowed the city to become vulnerable when containment measures stopped. It was at this point that the city became overwhelmed and had to close and quarantine entire hospitals (Lemonick 2003).

The influx of disease in Toronto is related to both socio-political and cultural elements, as it was in China. Fiscal concerns were prominently discussed as being to blame for the additional outbreak of SARS: "The Ontario government reduced funding for a range of public programs in the

mid-1990s, claiming the cuts were a necessary strategy to prevent fiscal crisis…Health care and public health were among such programs" (Salehi and Ali 2006:377). The loss of health care and public health resources impacted the city of Toronto and made the SARS crisis more difficult to handle, although the relaxation of quarantine standards was featured as the biomedical reason. With the loss of public health funding, the ability to handle an outbreak seemed to decline as well:

> …the number of public health workers and expertise within the organization was found to be inadequate to deal with an outbreak situation effectively…many working within the TPH organization did not necessarily have adequate training in infectious disease control [Salehi and Ali 2006:377].

The lack of funding and lack of preparedness undoubtedly increased the chaos of the outbreak, although the outbreak would have increased in spite of these losses. Fears underlying this, however, include concerns about bioterrorism: primarily, that a biological weapon could be used to flood the system with patients and create chaos, and then make a country vulnerable to other attacks, unable to defend itself or see an attack coming because of its preoccupation. The fear of SARS, and more broadly, of the elements to which it was already metaphorically attached, shaped not only the cognitive framework of the American public, but that of Canadians as well, as the outbreak in Toronto demonstrates.

SARS, Asian Immigrants, and Toronto

The lack of resources was frequently mentioned as contributing to the SARS outbreak in Toronto, but there were cultural insinuations that also acted to explain the outbreaks. People from Asia were regularly vilified in the press as the bearers of SARS, and it was suggested that their ongoing cultural Otherness contributed to further outbreaks:

> These types of ethno-cultural linkage…have implications for the microbial traffic of the SARS virus – both in relation to the microbial traffic between global cities, as well as to the lateral spread of the disease within particular local *diaspora* communities commonly nestled within global cities [Ali and Keil 2006:500].

The diaspora communities mentioned here were often associated with contagion, and from the media perspective, it appeared that these groups of people were highly contagious. Meetings of white Canadians were never portrayed as vectors for the disease, but when a group of Filippinos met, their contact resulted in widespread contagion. Thus, while cultural ideas did not pervade the outbreak in Toronto as they did in the initial discussions of the outbreak in Asia, culture and ethnicity continued to play a significant role in conceptions of SARS.

Globalization and SARS

While the response to SARS was significantly different from the responses to Ebola and was encultured and distributed using somewhat dissimilar metaphors, the resulting fears were extraordinarily similar. The metaphors used by the media developed a similar cognitive framework that simultaneously frightened and reassured the public. Fears of the globalization of disease and of contagious elements associated with those diseases remained the same, and were if anything more pronounced in the case of SARS due to fears of terrorism. The idea of preparedness and containment remains prominent in news sources, but concerns about boundaries and contagion also linger.

Globalization and the lack of distinct boundaries between contagious and healthy countries very much remained a concern and were repeatedly explored by the press. These ideas perpetuated fear, rather than reassuring the citizens of various nation-states. Prominently explored was the concern about health as a form of security: "States can have their individual rules and regulatory mechanisms for governing health and disease at the local level, but it is no longer possible to ignore health risks that happen beyond our boundaries" (Salehi and Ali 2006:379). SARS was used as a means of suggesting that countries had to work in tandem to prevent outbreaks, and that it wasn't enough for the United States to screen incoming travelers, or for Toronto to quarantine its

citizens. SARS acted as a catalyst to demand comprehensive solutions and preparedness for global health threats.

This philosophy was promotable because of the spread and indiscrimination of SARS. As Salehi and Ali demonstrate, "…SARS was perceived as an 'everyone disease', and not just a 'disease of the poor' or 'the other'. And, as such SARS's message – that everyone is at risk and everyone needs protection, was more clearly heard" (2006:380). Unlike Ebola, SARS had a much greater reach, and while it was associated with certain cultural elements in China, few of these elements had the fear attached to them that elements from Zaire or Africa do. Ebola has also been exclusive to black Africans – it has never infected a white person, African or otherwise. SARS was much less discriminating in its contagion. While it was continually associated with people from Asia, it did infect white individuals, and as a result, was more frightening – but also received a greater response.

Because SARS was perceived as being an undiscriminating disease, however, it also created more fear and wreaked more havoc. Its ability to infect anyone caused SARS to be recognized as a global public health threat, something that had only just begun to be introduced to the public health and security lexicon. If SARS is not the sole reason that public health and security became linked, it nevertheless greatly increased the perception that the two should be linked: "If SARS is a threat anywhere, it's a threat everywhere, so this is a matter of global health security" (Bradsher and Eckholm 2003:A7). The possibility that diseases could be a threat to society was born out of 9/11 and fears of anthrax; as the fear of bioterrorism became an ongoing issue, so too did the need to control disease by means of security. The securitization of SARS in this case also acted as a reassuring force; securitization regularly requires exclusion, which demands bounded entities. The securitization of SARS reassured the American public not only that they were safe from SARS, but that they could be safe from other incursive elements, and that their society would once again be bounded and defined.

The understanding and fear in the United States is somewhat ironic because, while the United States reacted quite strongly to the threat of SARS, there were very few individuals in the U.S. who were infected with SARS. That the other shoe was constantly waiting to drop and impact the U.S. health system with the same chaos SARS created elsewhere was a constant fear: "In a world as interconnected as ours, it may just be a matter of time before SARS strikes in the US the way it has elsewhere" (Lemonick et al. 2003). Concerns about globalization and boundaries are regularly tied up in fears of the spread of SARS. Unlike with Ebola, where the cultural paradigms were used to reassure Western citizens, globalization is used as a greater threat that cannot keep cultural methods of transmission at bay. Culture is still clearly used as an explanation for the transmission or emergence of SARS, but the boundary-less globalized world trumps that reassurance. *Time* regularly played this up, saying "Microbes can go wherever jet airlines do these days, so it is a very real possibility that the disease has not yet shown its full fury" (Lemonick et al. 2003). The media largely portrayed SARS as an incredibly threatening disease, one that could infect anyone, anywhere, and at any time. There were, however, also moments of reassurance.

By associating SARS with China specifically and Asia more generally, the cultural distinctions and Othering tendencies allowed individuals to feel reassured that SARS might not impact them. As with Ebola, it became possible to see SARS as a uniquely Chinese concern: "…'it couldn't happen here' because the Chinese are so different to 'us'…China and the Chinese are portrayed as an inevitable breeding ground for new infection" (Washer 2004:2570). While the reassurance schemes were less common in the media than those propagating fear, they nevertheless occurred. Similarly, doctors were occasionally interviewed who demonstrated that even by biomedical definitions, SARS was not the deadly disease the media portrayed it as: "…so far, experts say, most Americans do not have to worry about catching the disease. 'If you haven't traveled to an affected area or been exposed to an ill patient, there's no evidence you're at risk at all'" (Grady

2003:WK3). While this is also another Othering strategy, the "expert" consulted here also demonstrates that SARS was not the crisis situation it was portrayed as.

The media's use of contagion and globalization rhetoric in the SARS outbreak thus presented some very concerning issues, raised questions related to those issues, and encultured nation-states and their citizens to fear "the coming plague": SARS. The SARS outbreaks underscore serious fears, and the SARS outbreaks in Toronto do so especially. Toronto, in Western thought, is a modern city, one that is as prepared to handle diseases or attacks as an American city. Yet, if a modernized, global, Western city is not prepared to handle an outbreak on this scale, what place is? Furthermore, SARS was not a particularly virulent disease. Its lethality was extremely low by the standards of infectious diseases, and it primarily presented a threat to the elderly, or individuals with pre-existing health conditions. It was not a threat to the majority of the populace, and it was the largely due to the media hype that panic ensued across the globe. What, then, does SARS suggest about how the West could handle an emergent disease that presented a serious threat? And what would it mean for the global South?

For the global north, SARS created a notable paradigm shift in the cognitive framework within which we understand contagious diseases in an era of globalization. SARS contributed very significantly to the development of global health as national security:

> The spread of SARS, therefore, to a large extent can be viewed as a 'borderless' problem; one which reminds us that, in the contemporary globalised context, infectious diseases cannot simply be considered as a public health threat that is exclusively confined to the developing world or pegged to a particular scale [Ali and Keil 2006:496].

Contagion now becomes not only an issue of biomedicine, but an issue of security, and in becoming specifically an issue of security, SARS becomes metaphorically intertwined with a host of fears about contagion, including fears about war and habits that seem primitive. These elements become metaphors for SARS, such that we could not understand SARS without also referencing these ideas. Through the lens of the media, SARS becomes representative of the possibility of regressing, rather

than progressing in society, but also becomes intricately wrapped up in the idea of protection: from diseases, but also from the unknown that lurks on the fringe of collapsing borders. SARS as an emerging disease from an unknown source points to fears about the next threat to nation-states, and how these fears would be handled. The apparent lack of preparedness only increases fears, because it indicates our vulnerability to contagious elements and to our own fears. SARS thus represents a microcosm of the fear felt by the American public as a result of the cognitive metaphorical framework within which the media situates it.

Health Hazards: Security and Global Public Health

Perceptions of Ebola and SARS do not exist in a vacuum; the populace of the United States has been encultured to understand these diseases within certain metaphorical frameworks. Yet even these frameworks are not without outside influences. Major biomedical and geopolitical events in the last thirty years have shaped not only the metaphorical frameworks within which diseases are considered, but have also altered the perceptions and handling of contagious diseases. The Cold War, the intial HIV/AIDS outbreak, and 9/11 are all events which have radically altered the course of public health, which has in turn changed understandings not only of public health, but of diseases themselves.

Historical Framework: From the Cold War to 9/11

The Cold War was one of the first times in history that the United States began to fear the possibility of a bioterror attack; prior to the Cold War, bioterrorism was not in the public lexicon. At the time, many scientists began to believe that science had triumphed over disease: "The miracle of antibiotics and other medical victories (such as the eradication of naturally occurring smallpox in 1977) seemed to have made infectious diseases a relatively minor inconvenience in the global North…in 1969 the Surgeon General had called the problem of infectious disease in the United States 'marginal'…"(Wald 2008:29-30). During the initial years of the Cold War, the United States

began to seem safe from microbial threats; eventually, however, the Cold War itself began to symbolize a biological threat. While biological warfare was not unknown at the time, the threat of bioterrorism was new to the populace. At a time of perennial uncertainty, bioterror loomed as a threat and suggested that perhaps science hadn't exorcised the threat of microbes: "In the early years of the Cold War the U.S. military had treated anticipated epidemics, which they feared would follow a germ-warfare attack, as a national priority" (Wald 2008:29). While many scientists were delivering reassurances, the American government was preparing for the possibility that geopolitics would threaten public health. For the first time, bioterror entered the common lexicon. The Cold War was also one of the first times that the government and the media identified disease with a specific place; by suggesting that the Soviet Union could create an unknown epidemic, the media also suggested that elements of the Soviet Union were by proxy contagious; this linking of place and disease has continued to dominate representations of contagious diseases, and has led to new understandings of public health.

The Cold War also led to changing perceptions of health and security. For the first time, biological warfare wasn't directed at soldiers; it was hypothetically directed at a noncombatant population. This not only meant that a major populace could become contagious, but that public health for the first time was a security concern. This possibility resulted in changing conceptions of public health and security, and began their linkage: "…the end of the Cold War has heralded a broadening and deepening of IR [International Relations] and an engagement with questions about *how* we understand what security is, what peace looks like and how conceptions of order, power, identity and interests are constructed and change" (Davies 2010:1170). The threat toward a combatant would have made bioterror a security threat; the threat to the entire American populace made it a threat to public health. If a contagious disease broke out due to a bioterror attack, the

public health system would have to be prepared; thus, international relations entered the realm of public health.

While the Cold War was undeniably influential in transforming understandings of public health and its relation to international relations and security, it was only the first of several events. HIV/AIDS was both concomitant with and continued beyond the Cold War. Perhaps the most influential biomedical event in the past fifty years, it was crucial in changing understandings of public health. It was the biomedical event that demonstrated that, contrary to the Surgeon General's statement in 1969, humanity was certainly not immune to infectious diseases. Because of the initial uncertainty surrounding HIV/AIDS, it also became categorized as a security threat. Indeed,

> …the AIDS pandemic was the first infectious disease to appear on the radar screen of security analysts…[there] were, at least initially, quite plausible links between the spread of HIV/AIDS and the core traditional concerns of national security policy – such as the military, armed conflict, state stability and even international-peace keeping operations [Elbe 2011:850].

HIV/AIDS acted as a threat because its transmission was not yet fully understood; while it was initially believed to be only transmissible to certain groups of people, the fear surrounding the disease clearly demonstrated a wider fear of contagion. This fear of contagion was in part due to the apparent vulnerability of society; Mary Douglas suggested that, cognitively, societies are secure as bounded entities (1966:114). This metaphor provides reassurance against vulnerability. If that society was not bounded, however, it was fallible. This fallibility could destabilize entire countries; economies could collapse, peace-keeping missions could fail, leaders could abruptly die. The disease itself was ambiguous enough at the time to allow fears of contagion to run rampant.

HIV/AIDS was not only the first disease that security analysts examined, it was also the first disease addressed as a security threat by the United Nations (Hwenda et al. 2011:7). While understandings of HIV/AIDS have greatly improved, it is nevertheless still a serious concern, and the initial fears of destabilization have not worn off. As Elbe suggests, "…the AIDS pandemic was

also a threat to national and international security because it could threaten the vital organs of the state, such as the military, and in the worst-case scenario might cause some states to collapse" (2011:850). As the discourse and actions surrounding HIV/AIDS progressed, public health became increasingly intertwined with international relations and security. If a disease could be perceived as a threat to geopolitics and stability, it had to be controlled, regulated. Thus, the United Nations intervened:

> …HIV/AIDS, the first health problem addressed by the UN Security Council, was declared a security threat in 2000. This led to a subsequent increase in its political prioritization which culminated in efforts to establish the Global Fund to Fight AIDS, Tuberculosis and Malaria and increased health development financing between 2000 and 2005" [Hwenda et al. 2011:7].

Not only did HIV/AIDS become characterized as a security threat, but so too did Tuberculosis and Malaria by their association with HIV/AIDS. The involvement of the United Nations ensured that disease was not only associated with security, but with the miasma of global politics.

While the advent of HIV/AIDS was one of the most prominent biomedical phenomena to catalyze perceptions of public health, the events of 9/11 dramatically altered American's cognitive framework in relation to security, international relations, and public health. The initial attack indelibly changed international relations and perceptions of security. While 9/11 and Ground Zero ultimately did pose a threat to public health, the initial ramifications primarily represented a significant change to understandings of geopolitics. The domestic Amerithrax attacks that followed aggrandized and cemented these changes by demonstrating that terror could be directly linked to both public health and security:

> After the events of 11 September 2001, and in particular the anthrax attacks that followed, this emerging infectious disease discourse was strengthened and gained salience through concerns about bioterrorism and through the securitisation of public health that occurred after public health institutions and officials were drafted in the war against bioterrorism [Abraham 2011:803].

The events of 9/11 suggested that the United States was vulnerable; the Amerithrax attacks seemed to confirm that. The events related to 9/11 created the climate of fear which Wole Soyinka (2004)

suggests we now operate within; we are consumed by fear to the extent that it has drastically changed our cognitive framework. This has validated the tying of public health to security and international relations. The fluidity of international relations changes the security threats to which the American populace is exposed. This uncertain exposure justifies a strong public health system that works in tandem with security.

Indeed, as Abraham says later, these fears have been a driving force in changing security and public health: "The anthrax attacks pushed along the process of securitisation of emerging infections by blurring the distinctions between naturally occurring infectious diseases and deliberate acts of bioterrorism and placing the response to both within a security framework" (2011:806). While securitized public health had previously been limited to contagious diseases, Amerithrax changed perceptions of disease until they included non-contagious agents, including anthrax. Increased feelings of vulnerability due to an apparent lack of reassuring borders left the American government and its populace feeling exposed; securitization of disease, including of biological agents, acted as a reassuring device.

These events, along with the general trend of globalization, suggested to countries and international organizations that increased exposure to new elements (including disease) as a result of fallible borders would require governments to protect their own people from new health security threats, and that this could only be done by cooperating with other countries. Thus, as Davies suggests, "States realize that they must now cooperate in the 'post-Westphalian era' because infectious disease spreads regardless of state border" (2010:1178). International cooperation has only increased the interconnectedness of countries, yet this has often been an uneasy situation. Countries linked by necessity might prefer not to cooperate; yet public health and security make these uneasy bridges seemingly necessary. The new context of globalization seems to demand that uneasy bedfellows compromise on issues of health, and "This means recognizing that we now live in a

context where the actors and factors that determine our health are shaped not by linear relationships between individuals, doctors, states and the international realm, but by a complex range of factors that interact in myriad ways" (Davies 2010:1169). Nations that operate under the metaphor of health as security are compelled to cooperate in order to attempt to control the multitude of entities creating the entropy that seems to threaten their control.

International Relations

International relations, particularly related to public health and security operate within this historical paradigm. Within this, a disease becomes internationally concerning when it is threatening on a grand scale. As Magnusson and Zalloua suggest, diseases are alarming when they represent a "…kind of threat to the body, the body politic, the nation, global institutions, and the essential infrastructure of global life" (N.d.:3). It is not enough that diseases threaten individual health; when a disease threatens enough of the right people to represent a threat to a larger governing body, security and international relations become attached to public health.

The threat to the body politic can start with the infection of many people, but it focuses on the repercussions of this infection, rather than on the disease itself. If, as happened with SARS, people are forced into quarantine, entire economies can collapse. If the leader of a country is incapacitated or killed by a disease (as was possibly feared when then-President George W. Bush received the first smallpox vaccine in twenty years), a country could fall into panic or civil war (Eans 2002). Thus, "…[Price-Smith] invoked the term 'health security' to warn that infectious disease had the potential to cripple developing *and* developed states. Health security…referred to the threat of a country's economic and political stability being rendered unsustainable as a result of a pathogen wiping out the core population base" (Davies 2010:1173). Fears about contagious diseases increased almost in tandem with fears about and threats to security. Security, unlike public health, is often perceived as a more effective force for protection; thus, as a means of reassurance to the world, but

particularly to the American public, health and security were linked. This linkage reassured the populace, but also attempted to mitigate threats to the American government itself.

When a disease becomes a threat to health security, it can be considered from at least two different perspectives: "…the international politics of health is understood in two principal ways: the statist, primarily security-focused approach and the globalist approach, which is focused on the well-being and rights of individuals" (Davies 2010:1167). When she elaborates on each of these perspectives, Davies demonstrates that the statist perspective emphasizes the importance of the state in regulating public health, and therefore security. She suggests that the state is uniquely positioned to mitigate concerns about public health security because it has the capability to regulate on a grander scale (Davies 2010:1170). The globalist perspective, she suggests, focuses more on the organizations, and places the state not as the uniquely positioned actor which solely mitigates health threats, but as one of many agents capable of contributing to managing disease. These perspectives are uniquely focused on diseases that have already been classified as security threats; they ignore public health concerns that have not threatened governing bodies.

Fears about public health increasingly became notable not only in the country of origin, as had often been the case before globalization, but became concerning the world over. Abraham suggests that health fears have drawn increasing notice in part due to their prevalence, which is often portrayed as a side-effect of globalization. He says that "…anxieties about the consequences of modernity and globalisation and the risks that flowed from them provided the broader context within which the emerging infectious disease world view of humanity threatened by viruses played out" (Abraham 2011:804). While global geopolitical and biomedical events have linked security and health together in our cognitive framework, fears about public health have only increased, in part because of the tie of disease not only to security, but to also to globalization. Globalization has acted

as the catalyst that brought many of these issues together and has intertwined them in often surprising ways.

Health Fears

While health fears have regularly pervaded the overarching cognitive framework, the post-HIV/AIDS world seems increasingly concerned with threats to public health. While the Surgeon General in 1969 suggested that we had sublimated microbial diseases, recent events have clearly demonstrated otherwise. It is perhaps in part because of this misinformation that diseases continue to be a source of concern. As much of this research has demonstrated, however, that framework is only the beginning of the explanation needed to explore public health fears. Indeed, the common trope that microbes are everywhere has pervaded thought to an extreme. We are taught to fear that "A virus lies in wait, ready to breach the most elaborate hygienic, physical, intellectual, and moral defenses of sovereign states and sovereign individuals" (Magnusson and Zalloua N.d:1). The virus or microbe itself is frightening for the damage it can inflict on the individual body; it is more frightening for its apparent ability to inflict greater damage. Disease is already linked to imminent global disaster, one that can no longer be checked by the traditional boundaries we believed in before globalization. Douglas' belief that a bounded society is cognitively important remains true; its increased importance is due to the concern that arises when borders are no longer as metaphorically sound as they once were.

One of the greatest fears of microbial disaster originates in the fear that international boundaries are no longer the safe, impermeable "substances" they used to be. These boundaries have primarily existed within Lakoff's metaphorical framework; yet they have provided the reassurance to the public that they are safe from the outside world. Now, globalization and increasingly close international relations threaten the sanctity of these boundaries and allow health threats to enter: "…the threat emanates either from the cross-border spread of infectious diseases,

whether naturally occurring, deliberate or accidental; or from the effect of major health crises on state stability and security" (Rushton 2011:782). Health concerns are no longer couched in the possibility of getting a seasonal flu; they are now tied to the practices of other cultures and the possibility that any number of factors could allow a dangerous disease into an area that previously would have been impervious to such an introduction. These fears are no longer just about the individual; rhetoric (and indeed, biomedical evidence) suggests that the entire world is a petri dish where microbes move freely to find new hosts.

The rampant fear of viruses in particular led to changes in international relations. The changes in international relations do in fact reflect fears of diseases: "…in broadening the definition of a reportable event, the IHRs [International Health Regulations] require that nations report a range of known and yet-to-emerge global public health disease threats, including pathogens that may be used in a bioterrorist attack" (Nuzzo and Gronvall 2011:3). The International Health Regulations were designed to reinforce metaphorical boundaries between countries by warning countries of threats to health. This alert would allow the warned countries enough time to prepare. After the events of 9/11, the IHRs were expanded to include bioterrorism, linking health to international relations and security. The IHRs represent one of the most tangible effects of increasing public health fears. They almost demand the impossible by encouraging countries to report "yet-to-emerge" health threats; this suggests that fears related to health security have been taken to an extreme.

Fears for and about public health and security also react against the IHRs, however. As was seen in the 2002-2003 outbreak of SARS in China and Hong Kong, China failed to report the outbreak of a new virus; as Nuzzo and Gronvall demonstrate, reporting is disincentivized by the reactions of the world. China's tourism industry and economy suffered when SARS was reported. Economic troubles are a principle reason to choose not to report an outbreak, but they are not the only reason:

> …there are few incentives for reporting the presence of a disease to the international community. This political decision is often not made (or made in a timely manner) because of clear disincentives – significant drops in tourism and trade, closings of borders and other measures that the IHRs are supposed to prevent, and other negative economic effects" [Nuzzo and Gronvall 2011:5].

Countries that depend heavily on trade and tourism are likely to be reluctant to follow the IHRs out of their own fears that are often directly related to health. Their fears, however, often run counter to the norm; while the majority fears the outbreak of the disease itself, the consequences, either direct or indirect, are also frightening.

These health fears, whatever their manifestation, emerge because our metaphorical framework, encultured by the media, has told us that diseases are omnipresent, and need only a catalyst to become a serious threat to our selves or our society. These fears have led to a framework within which we conceptualize threats, but have also led to the new health as security paradigm. As Magnusson and Zalloua suggest: "Viral contagion is always imminent, from sources human or exotically wild, unidentifiable and uncontainable within national boundaries until it is 'too late', demanding…the institutionalization of global biopolitical strategies of surveillance, diagnosis, containment, eradication, and therapy" (N.d.:4). The fears of omnipresent disease dictated a response beyond that of the IHRs; the fears themselves, in tandem with larger geopolitical uncertainties, seemed to demand a securitization of health.

Health as Security

The idea of public health security is a recent development, and is heavily tied to fears of terrorism and geopolitical unrest. The domestic Amerithrax attacks of the early 2000s increased these fears, until, in the early 2000s, the World Health Organization (WHO) linked health and security for the first time: "The WHO began using the term global health security in 2001 to describe the global public health measures required to protect the world from transborder infectious disease threats…" (Abraham 2011:806). As globalization and 9/11 demonstrated the permeability of

supposed national borders, entities such as the WHO felt the increased panic of global societies and designated "global health security" as a new paradigm to discuss the management of health on an international and interconnected scale. As Hwenda et al. suggest, "Public health security policies are thus considered as policy areas in which national security and public health concerns overlap" (2011:2). When the Amerithrax attacks followed shortly after 9/11, it appeared that security and health should be connected. When earlier concerns about the power of HIV/AIDS to transform global geopolitics were factored in, the securitization of health seemed very promising.

Yet the securitization of health seems to require the idea of borders, which seem to be lacking in a globalized world. Davies suggests that "…security has been traditionally associated with structures of friend and foe – there is an inside to protect and an outside to protect against" (2010:1175). Davies' belief that securitization requires a friend/foe dualism responds to Douglas' idea that bounded societies are metaphorically important to the participants; it gives them a reference as to what is normally constructed for them by giving them an opposite or a foil. The securitization of health responds, therefore, not simply to threats to public health, but also to the unease felt by "boundary-less" nations in a globalized era.

While health security does fulfill a reassuring purpose for societies in our interconnected world, it also functions within the biomedical paradigm. Biomedical events such as H5N1, SARS, and H1N1 all serve as warnings of the possible repercussions of ignoring the impacts of disease in an interconnected world. As previously noted, the impacts of these diseases often go far beyond the direct impact on human life: "National health security emergencies, especially those arising from infectious diseases such as severe acute respiratory syndrome (SARS), can escalate into regional and international crises with global repercussions on public health, international trade and commerce" (Hwenda et al. 2011:5). That health threats could drastically impact not just populations (a fear engendered by HIV/AIDS) but entire countries fed the desire to securitize health. SARS

demonstrated the economic impacts that a serious outbreak could have not just on one country, but on many. The securitization of health reassures the populace that this is at least mitigated, if not entirely controlled.

Because of our connections with other countries, the securitization of public health almost by necessity has become an international relations issue. SARS also demonstrated that communication between nations was imperative in order to prevent the spread of disease. The cooperation between countries that is espoused in the IHRs seems necessary in the health as security paradigm, in part because: "Nobody seriously argues that states can unilaterally defend their borders against the ingress of disease. All agree that protecting health security requires international cooperation within a robust global regime" (Rushton 2011:785). Many of the "emerging" diseases of the past thirty years have originated in countries outside the United States, yet the U.S. has been impacted by the movement of these diseases internationally; thus, to control the movement of diseases, nations must cooperate to prevent the ingress of disease. As Davies demonstrates, however, this is often challenging: "National health policies and provisions are intertwined with international considerations about how states relate to each other and to other actors" (Davies 2010:1168). The international relations component of securitized health demonstrates the challenges of regulating health in a time when geopolitics is often fraught with tensions.

These tensions, and the current balance of global power often make it difficult to determine whether the securitization of health is universally beneficial, or if it benefits certain persons and countries. Magnusson and Zalloua suggest that the health as security framework benefits specific groups of people:

> The question is, then, not only when cooperation becomes a security threat but who becomes secure and who becomes vulnerable in the cooperation game. Moreover, isolation and quarantine, in the context of leaky borders, reduce the sociability necessary for the implementation of cooperative counter-epidemiological policies" [N.d.:9].

The securitization of health often leads to very specific outcomes for certain people. The United States is frequently the determining global actor, and therefore often benefits the most from the outcomes.

Health Security and the United States

The United States, due in part to its role as the subject of the 9/11 and domestic Amerithrax attacks, has been a notable leader in the securitization of health. As Abraham suggests, as the United States does, so too does the rest of the world: "The concerns felt in the United States, the world's most powerful nation and the leading actor in global politics, soon spread out into the rest of the global system" (Abraham 2011:805). While the time around the events of 9/11 was fraught with global tension, the United States was often at the center of this dynamic due to its unique position. Wole Soyinka's climate of fear particularly gripped the United States: "And we [came] to realize that something sinister [had] been planted in our midst, not just the threat but also the fear of the threat" (Gibbs et al. 2001). The new threats led to new fears, and resulted in an entirely new management of security. Fear and tension leaked out to the international community as the United States began to manage health and security simultaneously: "Rather than focusing on well-established measures for protecting the lives and health of Americans, policymakers have recently embraced an approach that views public health policy through the prism of national security and law enforcement" (Annas et al. 2008:5). The United States took Davies' statist approach to health and security and began to mitigate the potential dangers to these aspects of society, both of which had been hard hit.

The fear that the United States experienced, meanwhile, was spreading to other parts of the world, and the reactions often interacted to make a more cogent whole. The US became a catalyst for changing ideas about health and security internationally: "In terms of actors, if a threat is to be securitised at the global level, it is reasonable to state that United States' involvement, either in the form of initiating the securitisation, or actively supporting the actors involved in securitisation, is

essential" (Abraham 2011:799). The importance of the United States to the development of this discourse is partially couched in their immediate involvement in concerns of bio/terrorism and the fears that the country somewhat uniquely experienced; the United States also has incredible political clout, which used to promote the securitization of health.

The involvement of the United States has also been argued to be a limiting force in approaching the securitization of health. The U.S. is uniquely positioned in its privilege, and thus the diseases which pose an apparent threat to the U.S. are not the same diseases that might affect other countries: "…the discourse of health security has tended to be a relatively narrow one, focusing in practice (although this is rarely made explicit) on the protection of the West from threats emanating from the developing world" (Rushton 2011:780). The threats to the West or the U.S. are often diseases which are big and somewhat showy; SARS is one such disease that became a security threat. While SARS impacted the economies of China and Canada, it was a security threat perhaps only to these two countries; conversely, Malaria is a much more serious public health threat in many developing countries and is often overlooked. Thus, the perception of diseases as a public health threat is deeply rooted in an American notion of what is threatening.

Ebola in the Securitized Health Paradigm

Ebola and SARS both fit within this framework; while SARS was perceived as a more significant threat, Ebola was nevertheless represented a highly threatening illness. Ebola is notable as a threatening virus because it was largely discussed before 9/11 and the securitization of health. Nevertheless, bioterrorism was still feared in relation to Ebola. As early as 1997, the New York Times suggested that Ebola could be weaponized by Iraq and deployed anywhere in the world (Preston 1997:A31). Yet Ebola was never discussed as a security threat per se, and no travel regulations went into effect during the duration of the Ebola outbreaks in the past thirty years.

Post-9/11, however, the rhetoric surrounding Ebola changes somewhat. Any media discussing a new outbreak maintains the metaphorical framework within which Ebola is traditionally couched. When bioterrorism is discussed, however, Ebola begins to fit into the health as security paradigm. While Ebola was first perceived as a possible bioterror threat in 1997, in the 2000s, its possible weaponization became a source of concern: "Not much research money was spent on Marburg or Ebola until recent years, when fears of bioterrorism grew and it became apparent that the viruses could be used for germ warfare" (Grady 2005a:F1). While previously Ebola had been relegated to Africa, the threat of its use in a bioterror attack made it a much more imminent possibility; as a result, Ebola began to fit into the securitization framework.

It was also perceived as a security threat because of its high lethality: "'Marburg and Ebola are not as significant threats as smallpox would be, but one could wreak incredibly human health tragedies in this country and couple probably create a huge economic burden even if the disease didn't spread like wildfire'" (Grady 2005b:A9). The same realities of Ebola continued to apply; while it was not highly contagious, it was incredibly lethal. Because of its virulence, it still represented a serious threat to public health. This made its weaponization incredibly alarming; it could easily threaten nation-states as a whole. Yet Ebola was still regularly couched in its "natural home": "The [Ebola] vaccine, administered by injection, was designed to try to prevent outbreaks of the lethal hemorrhagic fever where it occurs naturally in Africa. It is also a bid to thwart any efforts to use the highly infectious disease as a bioterrorist agent" (Altman 2003:A23). The possibility of the Ebola vaccine was primarily useful in the context of preventing its use as a bioterror agent, which was threatening in part due to its location of origin and the metaphorical entailments therein. Ebola fits within the security paradigm in a limited way: it poses a previously unconsidered security threat, particularly through the possibility of weaponization.

Nevertheless, Ebola exists largely outside the realm of securitization; the most prominent outbreak, which made Ebola (if only temporarily) a household name, took place in 1995, well before bioterrorism was a common concern. While Ebola outbreaks have continued in the era of the health as security paradigm, they have existed somewhat outside the realm of fear. This is likely for two reasons, the first of which is the virulence of Ebola. Because Ebola is so suddenly and noticeably symptomatic, it is unlikely that an individual who was experiencing symptoms of Ebola would be able to board a plane. From a practical standpoint, Ebola is less threatening, even though it is undeniably more deadly than SARS. Yet this is not the only explanation; Ebola also originates, and has been restricted to a continent that, for the West, operates within a very specific metaphorical framework. Ebola is consistently associated with violence and unusual customs, but it is restricted to the forest. The forest acts as the boundary which prevents Ebola from threatening the West, and so the reaction to Ebola is fear, not panic.

SARS in the Securitized Health Paradigm

SARS, unlike Ebola, operates within the securitization paradigm not just because it occurred solely within the post-9/11 and securitization era, but also because it was a more direct threat, and individuals in the US did contract SARS. SARS also, for the first time made real the possibility that dangerous and terrible diseases were not restricted to Africa and could not be kept in check by the metaphorical forest: "…SARS demonstrated that spatially those threats were relevant beyond the African continent, and certainly beyond the borders of developing countries with comparatively weak public health infrastructures" (Elbe 2011:851). For this reason, as well as those advanced above, SARS was a more powerful threat, and therefore one that needed the health as security paradigm to mitigate it.

SARS also acted as a trigger in creating the health as security framework. As SARS became increasingly frightening, due in part to its ability to transgress the sacred borders of the state, the

security framework was built up around it, not only to manage the health threat itself, but also to reassure the populace. The securitization of SARS demonstrated that if there was a security threat, it was because the friend/foe dualism still existed, which suggested that the sanctity of national borders was not entirely violated. The securitization of disease also demonstrated the threat of disease itself: "…SARS too became rapidly elevated to a national and international security threat – reinforcing the perception that in the twenty-first century the domain of security could not be restricted to military issues, and would have to include the international spread of infectious diseases as well" (Elbe 2011:851). The military was no longer the only means by which to establish boundaries; if microbes could transgress borders, it seemed there must be a way to repel them and continue to maintain bounded entities, both national and human.

Like Ebola, SARS was also securitized because of its possible connection to bioterrorism. The threat of bioterror became a major theme of the early 2000s and greatly influenced understandings of disease and the reactions they received. While the possibility that SARS was a bioterror scheme were quickly debunked, they nevertheless made headlines news: "Almost from the moment the new Asian respiratory disease was first identified last month, scientists – and many ordinary citizens in chat rooms on the Internet – wondered whether it might have been the work of terrorists" (Broad 2003:A17). The quick succession from 9/11 to Amerithrax to SARS fit precisely into Soyinka's climate of fear: the concern of "what is next?" and "is nothing sacred?" caused people to dread and fear the next event (Soyinka 2004). SARS followed so quickly on the heels of two frightening and paradigm-shifting events that, unsurprisingly, made it a security concern. That SARS was a possible bioterror threat was not perseverated upon, but it was mentioned as a security threat: "Nearly everyone interviewed raised the parallel [of SARS] to smallpox and other possible bioterror weapons. Since 9/11, governments and the health care industry have been trying to prepare for a smallpox or other germ attack…Much of SARS preparation this year has simply piggybacked on that

work" (Perez-Pena 2003:N35). Health was viewed as a security threat in the US not simply due to infectious disease, but also due to the possible increase of bioterrorism. SARS was an unknown entity, which allowed it to be an easy target for fears of bioterrorism; it was thus easily securitized.

SARS was ultimately one of the first diseases to be considered as a security threat, but it was not the last. The United States continued to use its securitization paradigm to mitigate the threat of H5N1 and H1N1, and it was one of the major organizers of these efforts: "The United States was the prime mover in the securitisation of avian and pandemic influenza…" (Abraham 2011:802). Neither influenza has materialized; seasonal influenza continues to be the most significant and relatively constant viral threat. Seasonal influenza is not securitized because it rarely kills, and does not have the potential to threaten geopolitics as we know it. Nevertheless, the securitization of pandemic and avian influenza has been notable: "The Bush administration had declared pandemic influenza 'a danger to our homeland' and the US Congress had authorised over US $6 billion in spending on pandemic preparedness" (Abraham 2011:797). Concerns about this possibility falls into the WHO's regulation about reporting emerging diseases; while pandemic influenza has not yet become a serious threat, the United States is nevertheless nominally prepared for it. Within Lakoff's framework, this disease has become so imminently threatening that securitization (and preparation) have become two of the only ways in which individuals can manage their own anxieties.

Health as Security, Metaphors, and the Media

The pursuit of the health as security paradigm has its basis in fears of biomedical disease, and it has had far-ranging results and consequences. Disease has become intimately intertwined with ideas about international relations, and has significantly impacted representations and understandings of contagious diseases internationally. As Magnusson and Zalloua demonstrate, fears of disease have become representative for a host of different concerns: "…how [does] the inchoate fear of microbial disaster become a framework for larger questions about the nature and location of

sovereignty and the related questions of contact and hygienic isolation…the hazards of sociability, the security of surveillance, and what a health security might mean[?]" (N.d.:3). Certain metaphors are attached to diseases, which have recently been co-opted to fit other concerns. While this is interesting, what is perhaps more interesting is what the linkage between these issues and disease represents. While disease has become a metaphor for war and unrest (which are frightening and possibly contagious elements), these elements have also become symbolic of disease itself. This demonstrates the highly complex metaphorical framework within which disease operates, and, more importantly, demonstrates that fear is attached to diseases through multiple means.

These fears are only the precipice of the reasons that led to the securitization of health; the emphasis on reifying borders is yet another major factor that led to the development of the health as security paradigm. The reassuring metaphor of a bounded nation has led to the increased perseveration on maintaining these ideas in the minds of the American populace: "Furthermore (while there are good public health reasons for it) the emphasis on containing outbreaks of those diseases within the developing world heightens the suspicion that global health security is really about protecting 'us' from 'them'" (Rushton 2011:793). The biomedical details of Ebola and SARS demonstrate their unique threats to public health; yet they are securitized in part to re-establish the idea of a bounded world, one that makes people feel safe from outside threats. As diseases have become more about their entailments (metaphorically and literally) than about their biomedical effects, these boundaries are increasingly important to prevent the ingress of diseases without limiting the benefits that globalization provides to the global North.

As Abraham suggests, "It has been persuasively argued that all states require a discourse of danger to remain credible and in order to maintain their identity" (Abraham 2011:805). The state requires the perpetuation of certain metaphors in order to maintain their legitimacy. The use of security and international relations in the realm of public health brings certain metaphors and fears

to the realm of public health that make apparent the importance of the state's interference in these affairs. The inevitable association of public health and security with globalization makes the rhetoric of boundaries incredibly important. An already important cognitive metaphor, the idea of a bounded society reassures the society itself; this is apparently only possible if the state intervenes in public health and reifies the metaphorical boundaries that seem to have been destroyed in the process of globalization. By posing public health as a security problem, the state creates a problem into which they can neatly step and demonstrate their importance. It is thus that public health is securitized, which has greatly shaped the metaphors and rhetoric within which Ebola and SARS operate in the media, and thus in public thought.

Containment: A Conclusion

Ebola and SARS are examples of contagious diseases that have recently been prominent in American media. Within American media, they have been represented very specifically; to each has been attached as series of metaphors and entailments relating concerns about contagious elements. Each has also been represented, to various extents, as a security threat. While the securitization of health is a new phenomenon, the use of metaphors to communicate is not. The media's discussion of Ebola and SARS provided the framework within which the American public understood new diseases; this paradigm simultaneously created understandings of disease and shaped by the biomedical events themselves. The framework within which Ebola and SARS operated was therefore simultaneously frightening and reassuring.

Following Sheldon Ungar's (1998) *contagion-mutation* and *containment* packages, Ebola and SARS were originally each depicted as threatening to the American public due to the possibility of their international transmission and mutation. Only in the later dialogue did the media begin to Otherize these diseases and thereby make their ingress less imminent. The media openly employed metaphors of war and cultural Otherness to create fear among their readership; Ebola was

particularly depicted as an imminent threat that could easily jump from its location of origin in Africa to the United States. The media then reassured the readership by locating the diseases regionally and associating specific ideas with the disease; this made it seem that it was virtually impossible to contract them unless one had immediate contact with an infected individual. Thus, while the contagion-mutation package was initially utilized, the containment model was subsequently used as a method of reassurance.

One of the methods of reassurance employed by the media intensively focused on location. This was particularly true with Ebola, although the importance of location was also integral in discussions of SARS. Cognitive understandings about Ebola are centrally focused in Africa as a place. Metaphors about location of origin, but also about traditionally "African" elements quickly became attached to Ebola. Ideas about Africa were primarily influenced by the idea of Joseph Conrad's Heart of Darkness; equally pervasive were metaphors of war and violence, and the prevalent notion that the entire continent of Africa practices backward cultural traditions. These associations and metaphors, while initially employed to make Ebola frightening, make it more foreign and Otherized; this sets up a cultural barrier between the American media consumers and the individuals directly affected by an Ebola outbreak. Thus, these metaphors counter-intuitively assuage fears about the possibility of contagion: if the disease is unique to such a foreign place and people, it can only be transmitted by their customs, or so the reasoning goes. Thus, these metaphors provide an unusual method of reassurance.

Similar methods were used to address the SARS outbreak. Metaphors and entailments surrounding China are perhaps less cemented than those of Africa; media coverage of Africa continues to feature tales of despair and war, further solidifying ideas about continent. Media coverage of China, however, is less direct. Media coverage of China regularly refers to the economy, and only in certain events refers to the policies of China, which are often described as oppressive.

Yet, this news in and of itself is enough to instill unease in the American public about China; this unease led to use extensive use of metaphors in discussions of SARS. It was also this unease that may have contributed to the vitriol of the press when the cover-up of the early SARS infections was uncovered. SARS was thus constructed as threatening to the United States due to its ability to move easily between nations; nevertheless, the media often suggested that it was only transmissible to individuals within the Asian population. While SARS was transmitted to both Toronto and the United States, in both places it was remarked upon that those who transmitted the disease as well as those were infected were individuals of Asian descent or nationality. Thus, SARS was also associated with metaphors of Otherness – not only that it was seemingly specific to an Otherized population, but that this population had its own host of apparently cultural habits, including the consumption of wild meat. These reports, like those of Ebola, simultaneously encouraged fear and provided reassurance that SARS would not strike American media consumers.

The media used many metaphors and entailments to describe these diseases, both to make them understandable and to reify elements of American culture. Standard metaphors and entailments were used to describe Ebola and SARS; by associating each disease with certain elements, the media reified their Otherness and helped to substantiate the borders between America and Africa or China, respectively. By placing these diseases within these pre-existing metaphors, the media attempted to simultaneously relate the fear of the diseases and to mandate public perception of them. Yet, these diseases themselves became enmeshed in metaphorical frameworks in another way; they quickly became metaphors for fears of contagion and concerns about international public health and the securitization of health. In a reinforcing cycle, metaphors of disease caused them to be concerning and fit into paradigms of health security; yet as health security became an increasingly common paradigm, it reinforced fears of disease. This cycle attached further metaphors to the

diseases and the health security paradigm, and demonstrated the prevalence of metaphorical thought not only in the American populace, but at higher levels of government.

Because fears of disease were often related to the idea of location and contagion, Ebola and SARS act not just as examples of the prevalence of metaphorical thinking among the American public, but as case studies for the continued relevance of Mary Douglas' exploration of pollution, contagion, and borders. These themes were intertwined long before globalization was recognizable to us as it is now; nonetheless, these theories continue to be incredibly relevant. The importance of the bounded entity serves as another metaphor in a long line-up of ideas that influence the rhetorical portrayal of contagious diseases. While these are merely cognitive ideas, this does not diminish their importance. Richard Preston aptly suggests that "A hot virus from the rain forest lives within a twenty-four-hour plane flight from every city on earth. All of the earth's cities are connected by a web of airline routes" (1994:11-12). While Preston's quote fits into the fear-mongering contagion-mutation package that is meant to frighten, it is nevertheless relevant. SARS notably demonstrated that a mere plane was indeed all that prevented the disease of one country from entering another country. The omnipresent and simultaneously shifting concept of borders do very little to separate us bodily from other countries and their envisioned threats to us.

Within this complicated and complex framework, the climate of fear was generated not just by the increased paucity of borders, but also by the events of 9/11. The terrorist attacks on the United States and the subsequent Amerithrax attacks suggested that contagious diseases were not the only contagious elements in the world. They also demonstrated the importance of the metaphor of contagion. While Ebola demonstrated that disease could be associated with elements such as war and violence, post-9/11, elements such as terrorism, war, and social unrest were all contagious, and were elements from which citizens required protection. The simultaneous concerns about public health (generated by the HIV/AIDS pandemic, the Amerithrax attacks, and the later SARS epidemic)

and the confluence of the rhetoric of contagion in relation to terrorism and war led to the conceptualization of the securitization of health. As it became increasingly apparent that one country alone could not possibly protect its insubstantial borders from contagious elements, including diseases, the possibility of a more cohesive, international conceptualization of public health was born.

As public health became increasingly internationalized, it also became increasingly securitized. Health was suddenly seen as a factor that could heavily impact economic patterns and national viability through the world; indeed, SARS demonstrated the extent to which a disease could impact local and global economies. Where before health had been viewed as an individualist concern, it now became a security concern, and thus, an international concern. Countries had to take an interest not only in the health of their citizens, but of other countries' citizens. While this opened doors for funding, it also perpetuated the perception of diseases and locations as particularly threatening which in turn made the lack of substantial national borders increasingly alarming.

Ultimately, Ebola and SARS serve as the lenses through which we can observe the changes in cognitive metaphorical thinking, both in relation to perceptions of the diseases themselves and the contagion with which they are related. These perceptions change understandings of bounded entities and influence the development of international health and health security. The American media have been integral in creating the cognitive framework within which the American public understands international health and security. This metaphorical framework teaches us to fear disease; the paradigm within which we understand Ebola and SARS demonstrates that these metaphors are indeed frightening, although they are also strangely reassuring. They are reassuring in that they reassert the status quo in a world that is constantly shifting. As nations appear to be increasingly permeable and susceptible to elements from each other, these metaphors suggest to the American public that they are still safe; the media acknowledge the presence of terrifying diseases,

but suggest that the Otherness of these diseases will prevent their transmission to the US. Similarly, because the United States is often integral in developing the metaphors surrounding disease, the securitization of disease continues to leave the US in a position of power and dominance, which also reassures its citizens. As the American media are often responsible for creating and disseminating the cognitive metaphors within which disease is constructed, they change some perceptions and reify others; they are the organizations on whom we rely to create and value the bounded nation.

The media are regularly responsible for enculturing the American public through the creation and use of metaphors and entailments; they create fear and disseminate reassurance in equal measure. The American public consumes these ideas until they are embedded deep within our culture and influence our everyday understandings of disease. Because of the prevalence and insidiousness of metaphors in the media, we now associate diseases with other elements; war, famine, terrorism, political systems, and countless other elements which have all become "contagious". As these often frightening entities are associated with diseases, we ultimately fear diseases beyond their biomedical capacity. SARS and Ebola are only two small diseases in a much wider microbial world; yet they represent the extent to which metaphors and cognitive thinking, as circulated by the media, can change understandings of disease and public health, often in unprecedented and surprising ways.

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