DOCTORAL THESIS

Re-establishing the Utility of Hans Morgenthau‘s Classical Realism for 21st Century International Relations

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The Pandemic Threat:

Re-establishing the Utility of Hans Morgenthau's Classical Realism for 21st Century International Relations

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Statement of Authorship

To the best of my knowledge and belief the thesis entitled: *The Pandemic Threat: Re-establishing the Utility of Hans Morgenthau's Classical Realism for 21st Century International Relations*, represents my own work and contains no material which has been previously submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

Signature: Date: ……/……/……

Table of Contents

List of Tables and Figures

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
AZT	Azidothymidine
CAD	Canadian Dollar
CDC	Centers for Disease Control and Prevention
CGI	Clinton Global Initiative
DDT	Dichlorodiphenyltrichloroethane
GDP	Gross Domestic Product
GRID	Gay-Related Immunodeficiency Disease
HIV	Human Immunodeficiency Syndrome
IGO	International Government Organisation
IHR	International Health Regulations
ILO	International Labour Organization
IR	International Relations
MNC	Multi-National Corporation
NGO	Non-Government Organisation
NTST	Non-Traditional Security Threat
OPEC	Organization of Petroleum Exporting Countries
PEPFAR	President's Emergency Plan for AIDS Relief
PLA	People's Liberation Army
PMTCT	Prevention of Mother-to-Child Transmission
PSI	Pandemic Severity Index
SAR	Special Administrative Region
SARS	Severe Acute Respiratory Syndrome
SMS	Short Message Service
STD	Sexually Transmitted Disease
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNSC	United Nations Security Council
USA	United States of America
USAMRIID	United States Army Medical Research Institute of Infectious Disease
WHO	World Health Organization
Y. Pestis	Yersinia Pestis
ZDV	Zidovudine

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Abstract

While the health related implications of pandemics are well established, and some attention has been paid to the security implications of pandemics in the past, a comprehension of the political impact of pandemics has been lacking within international relations literature. This thesis takes on the responsibility of assessing the political implications of pandemics. The thesis reasserts the dominance of Morgenthau's classical realism within the field of international relations. The utility of Morgenthau's work exists within his particular framework of national power. This thesis seeks to assess the veracity of Hans Morgenthau's 20th century classical realism, in the 21st century international environment, and investigates the threat posed to nation states by infectious disease; and in particular the widespread and lethal pandemic.

The thesis ultimately adapts Morgenthau's original elements of national power to the modern international environment to gain an understanding of how the modern state perceives its national power. The result is a clear indication of states behaving in an orthodox realist manner that seeks to protect their national power above all else. This thesis provides an understanding of the political implications of pandemics.

The task of the thesis is to utilise Morgenthau's realism to assess a non-state actor and thereby establish the adaptable nature of his original work to a non-traditional security threat such as a pandemic. Then the thesis establishes the political nature of the pandemic threat by assessing three significant pandemics, namely: Plague, Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), and Severe Acute Respiratory Syndrome (SARS). The aetiology and pathogenesis of each pandemic is then presented as case studies.

The aim of each case study is straightforward. They seek to establish the pandemic agency an actor, in a relationship of power, and then assess the political implications of the pandemic actor. The case studies do so by applying Morgenthau's framework of national power to assess the political threat of that pandemic.

The results of the thesis indicate first, that Morgenthau's framework is both adaptable and relevant in the study of modern international relations. Historically, the utility of Morgenthau's work is rarely questioned; however it remained to be seen as to the usefulness of Morgenthau in the modern international environment, where the power of state actors is being increasingly subverted by the rise of non-state actors.

The second result of the thesis surrounds the nature of Morgenthau's framework and its adaptability for the 21st century. Not only has Morgenthau's framework of national power established the multi-faceted political implications of pandemics, but also in doing so, the framework has established its validity in modern international relations studies. While the threat of pandemics is ongoing, the ability to garner a stronger appreciation of the implications of pandemics for the modern state cannot be overlooked. The responsibility of this thesis, in part, has been to develop such an appreciation.

Preface

> *Contemporary man, living in a scientific age in which epidemic disease is understood and to a large extent controlled, is apt to lose appreciation of the enormous, uncomprehended losses of life in past generations, to say nothing of the prolonged and widespread emotional strain occasioned by such disasters.*
>
> -Sigmund Freud[1]

Within the remote mountain village of La Gloria, in the state of Veracruz, Mexico, a statue of a five-year-old boy, Edgar Hernandez, sits gloriously in the town's central park. While the beaming statue of Edgar, complete with frog in hand, could be mistaken for any typical five-year-old child, it is Edgar's infamous role as the 'first person known to have contracted swine flu' in 2009 that has lead to his enshrinement as the boy who sparked a global health crisis.[2] Pandemic (H1N1) 2009, or the more generically known Swine Flu pandemic, dominated the minds and actions of the world's medical and political elite for a period of seventeen months. Despite the best efforts of scientists and governments, between March 2009 and August 2010, Swine Flu would be reported in 'more than 214 countries and overseas territories or communities,' and lead to the deaths of over 18, 449 people.[3] Efforts by various state governments to prevent the spread and impact of a pandemic were tested during the 2009 pandemic; a test that impacted governments admit they ultimately failed.[4] Providentially, the low mortality of the H1N1

[1] Freud, S. (1915) 'Thoughts For The Times On War And Death', *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, Volume XIV (1914-1916): On the History of the Psycho-Analytic Movement, Papers on Metapsychology and Other Works, pp.273-300.
[2] Lacey, M. (2009) 'Politician's Novel Idea for Mexican Tourism-Statue of Swine Flu Survivor', *New York Times* [online], 25 May, available: http://www.nytimes.com/2009/05/26/world/americas/26mexico.html [accessed 21 Aug 2011]. Keating, J. (2010) 'Foreign Policy: When Bad Art Meets Bad Politics', *NPW* [online], 6 April, available: http://www.npr.org/templates/story/story.php?storyId=125617551 [accessed 21 Aug 2011].
[3] Global Alert and Response, World Health Organization (2010) *Pandemic (H1N1) 2009 – UPDATE 112*, [online] available: http://www.who.int/csr/don/2010_08_06/en/index.html [accessed 21 Aug 2011].
[4] House of Lords Science and Technology Committee (2009) *Pandemic Influenza: Follow-Up*, London: The Stationary Office Limited. Secretary of State for Health (2009) *Government Response to the House of Lords Science and Technology Committee Report on Pandemic Influenza – 3rd Report of Session 2008-09*, London: The Stationary Office Limited. Kite, M., Donnelly, L., Ralph, A. (2009) 'Swine Flu: Ministers Blamed for Chaos', *The Telegraph* [online], 25 Jul, available: http://www.telegraph.co.uk/health/swine-flu/5908539/Swine-flu-ministers-blamed-for-chaos.html [accessed 1 Sep 2011]. Yee, J. (2009) 'Canada's Swine Flu Shame, *The Guardian* [online],

pandemic meant that while the flaws in government preparedness were exposed and weaknesses assessed, this occurred with a relatively low-impact pandemic and without a significant mortality on the global population.

The success of the Swine Flu in propagating globally was likely a result of international authorities pre-ordaining the Asian region as the epicentre for the next great influenza pandemic; not the mountain village of La Gloria, in Veracruz, Mexico. In other words, the unpredictable nature of disease outbreaks was reinforced when speculation that Asia would be the epicentre of the next disease was mistaken. Relman, Choffnes, and Mack highlight the surprise this blunder brought with it.

> In a world poised to prevent a devastating H5N1 avian influenza pandemic originating out of Asia, the appearance of an influenza pandemic in the form of a relatively mild (to date) swine-origin virus originating (apparently) in the Americas was a surprise.[5]

The wrong-footed preparedness also meant that the scientists and governments were underprepared to counter the attack by this contagion on their states' medical and political vulnerabilities. Initially, and spurred on by increases in modern day transportation, the Swine Flu pandemic exposed the vulnerability of the modern state to the multitude of swift and medical threats posed by pandemics.[6] Over time, the impacts broadened to include the political and the protective functions of the state.[7] The belief that pandemics merely threaten the health and wellbeing of humankind is outdated and fails to account for the wider implications of a pandemic for the state. The feverish media and academic attention to the swine flu

30 Jun, available: http://www.guardian.co.uk/commentisfree/2009/jun/30/swine-flu-canada-first-nations [accessed 1 Sep 2011].

[5] Relman, D.A., Choffnes, E.R. and Mack, A. (Rapporteurs) (2010) '*The Domestic and International Impacts of the 2009-H1N1 Influenza A Pandemic: Global Challenges, Global Solutions: Workshop Summary*', Washington D.C.: The National Academies Press, p.15.

[6] Waterer, G.W., Hui, D.S., and Jenkins, C.R. (2010) 'Public Health Management of Pandemic *(H1N1) 2009 Infection in Australia: A Failure!', Respirology*, 15, pp.51-56.

[7] *Ibid.* Relman, D.A., Choffnes, E.R. and Mack, A. (Rapporteurs) (2010), *op. cit.*

outbreak and its implications for the continued success and longevity of the state, as an entity of power, attest to this.[8]

But the swine flu outbreak is not the first event to spur such contemplation. Other recent epidemic/pandemic outbreaks have increased attention to the wider threat posed by pandemics. One example is the Influenza H5N1, or avian flu, within South East Asia, which started in 1996 and continues to be a concern for health authorities.

Avian flu has mainly been isolated within South-East Asia, and, more recently, within Egypt.[9] . As of August 2011, the World Health Organization (WHO) had received reports of a total of 565 human cases globally, with 331 of those cases being fatal - equating to a mortality rate of nearly 60%.[10] The progression of avian influenza has been slow in human populations in comparison to other pandemics.[11] The virus was first isolated from a farmed goose in Guangdong, China in 1996, with

[8] Joffe, H. (2011) 'Public Apprehension of Emerging Infectious Diseases: Are Changes Afoot?', *Public Understanding of Science*, 20(4), pp.446-460. Seale, H., McLaws, M., Heywood, A.E., Ward, K.F., Lowbridge, C.P., Van, D., Gralton, J., MacIntyre, C.R. (2009) 'The Community's Attitude Towards Swine Flu and Pandemic Influenza', *Medical Journal of Australia*, 191(5), pp.267-269. Kates, B. (2009) 'WHO Declares Level 6 Swine Flue Pandemic—First Time Since 1968', *New York Daily News* [online], 11 Jun, available: http://articles.nydailynews.com/2009-06-11/news/17926564_1_swine-flu-flu-pandemic-vaccine [accessed 1 Sep 2011]. BBC (2009) 'WHO Declares Swine Flu Pandemic', *BBC News* [online], 11 Jun, available: http://news.bbc.co.uk/2/hi/8094655.stm [accessed 1 Sep 2011]. Cheng, M. (2009) 'WHO: Swine Flue Pandemic Has Begun, 1st in 41 Years', *Guardian.co.uk* [online], 13 Jun, available: http://www.guardian.co.uk/world/feedarticle/8556387 [accessed 1 Sep 2011]. Gardner, A. (2009) 'Study Supports Swine Flu's Pandemic Potential', *US News & World Report* [online], 11 May, available: http://health.usnews.com/health-news/managing-your-healthcare/infectious-diseases/articles/2009/05/11/study-supports-swine-flus-pandemic-potential [accessed 1 Sep 2011]. Wagnell-Egger, P., Bangerter, A., Gilles, I., Green, E., Rigaud, D., Krings, F., Staerklé, C., and Clémence, A. (2011) 'Lay Perceptions of Collectives at the Outbreak of the H1N1 Epidemic: Heroes, Villains and Victims', *Public Understanding of Science*, 20(4), pp.461-476. Cohen, J. (2009) 'Flu Researchers Train Sights on Novel Tricks of Novel H1N1', *Science*, 324(5929), pp.870-871. Enserink, M. (2009) 'Swine Flu Name Evolving Faster Than Swine Flu Itself', *Science,* 324(5929), p871.

[9] Egypt has had significant outbreaks of H5N1 over the period of 2009-2011 accounting for just over 55% of H5N1 infections within that period. (*see* Global Alert and Response, 2011)

[10] Global Alert and Response, World Health Organization (2011) *Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO*, [online] available: http://www.who.int/csr/disease/avian_influenza/country/cases_table_2011_08_19/en/index.html [accessed 28 Aug 2011]. Mortality rate is the percentage of fatal cases, in this instance the exact mortality rate is 58.584%.

[11] The slow pace of avian influenza is a result of those working directly with infected animals mainly contracting H5N1, with very few instances of infection being transmitted from human to human. *See* Aberth, J. (2011) *Plagues in World History*, Plymouth, UK: Rowman & Littlefield, pp. 128-130.

the first human cases being reported in Hong Kong in 1997 where 18 people were infected, six of them fatally.[12] The watershed for avian influenza was its re-emergence in November 2003, where a man, initially diagnosed with Severe Acute Respiratory Syndrome (SARS), was retrospectively identified as H5N1 positive.[13] Avian influenza has - since the retrospective diagnosis in 2003 until 2011[14] - been detected in sixty-three countries, and 'caused an estimated $20 billion of economic damage across the globe'.[15] Such a significant economic impact indicates the ability of pandemics to be a political threat to a state. Indeed, the high mortality of avian influenza has served as the impetus for governments, and international organisations, to ultimately create preparedness plans designed to minimise the impact on the state (and its power) from the medical and political effects of influenza pandemics.

The eruption of SARS took place almost thirty years after the 'US Surgeon General declared that modern public health and medicine had finally conquered infectious diseases, freeing the energies and technologies of epidemiology, medicine, and science to wage war on the rising scourge of non-communicable diseases.'[16] While the Surgeon General's proclamation turned out to be premature, if not ill-judged and medically scandalous, he was not the first to wrongly herald the death of infectious diseases. Nobel prize winner for Physiology or Medicine (1960) F.M. Burnett argued in 1951 that,

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[12] World Health Organization (2011) *H5N1 Avian Influenza: Timeline of Major Events*, [online] available: http://www.who.int/csr/disease/avian_influenza/ai_timeline/en/index.html [accessed 28 Aug 2011], p.1.
[13] World Health Organization (2011), *op. cit.*
[14] The most recent situation update regarding avian influenza from WHO contends that the most recent fatal case of avian influenza took place in a four-year-old Cambodian girl. Global Alert and Response, World Health Organization (2011) *Avian Influenza – Situation in Cambodia – Update 5* [online], 2 Aug, available: http://www.who.int/csr/disease/avian_influenza/country/cases_table_2011_08_19/en/index.html [accessed 28 Aug 2011].
[15] Food and Agriculture Organization: Media Centre (2011) '*Bird Flu Rears Its Head Again'* [press release], 30 Aug, available: http://fao.org/news/story/en/item/87196/icode/ [accessed 30 Aug 2011].
[16] Fidler, D.P. (2004b) *SARS, Governance and the Globalization of Disease,* Basingstoke, Hampshire: Palgrave Macmillan, pp.1-2.

> If one looks around the medical scene in North America or Australia, the most important current change he sees is the rapidly diminishing importance of infectious disease. The fever hospitals are vanishing or being turned to other uses. With full use of the knowledge we already possess, the effective control of every important infectious disease, with the one outstanding exception of poliomyelitis, is possible.[17]

Burnett's statement reinforces that infectious diseases have been a constant burden to governing authorities, regardless of medical advances. While advances in scientific technology have arguably decreased the magnitude of the infectious disease burden, the scourge of infectious disease pandemics remains unabated, as has been witnessed in the outbreaks of SARS, avian and swine influenza.

The responsibility to confront minor and major outbreaks of infectious diseases, in a way that mitigates any potential impact on society, remains the responsibility for all governing authorities. This means that all governing authorities have to be attuned to changes that may herald a new or previously unidentified contagion and be on the lookout for a 'host of interacting factors…including ecological changes, changes in human demographics and behaviour (particularly the explosion of air travel in the past twenty years), technology and industry, and microbial adaptation and change' that will conflate into a pandemic and a threat to the authorities' status. [18] The contamination of a significant proportion of citizens is the likely consequence of inaction or failing to identify a newly exposed disease. The most recent pandemic with a decidedly, at least initially, lacklustre response by political authorities, remains the Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome (HIV/AIDS) pandemic.

The eruption of HIV/AIDS in the 1980s highlights the importance of governing authorities addressing infectious disease pandemics with immediacy and urgency. Not to do so encourages a magnification of the diseases impact. Initially the HIV

[17] Burnet, F.M. (1951) 'Viruses', *Scientific America*, 184(5), p.51. Pier, G.B. (2008) 'On the Greatly Exaggerated Reports of the Death of Infectious Diseases', *Clinical Infectious Diseases*, 47(8), p.1133.

pathogen was prescribed an appearance of a disease isolated to a politically maligned demographic of society, and victims branded as deviate and deserving casualties.[19] The reluctance of authorities to take aggressive action to mitigate the pandemic for all sectors of the public tainted the initial response to the outbreak. Such a hindered response has seen HIV/AIDS, in some states, become endemic thereby impeding the ability of the state to prosper. HIV is a pathogen with the potential to dominate politically weak states as they struggle to combat the impacts of the virus on their public, as well as their economies. Furthermore, the HIV/AIDS pandemics are now considered a long-wave event, meaning the impact reoccurs over multiple generations. So great has the personal and political influence of the HIV pandemic been on the human population that the only comparable global event is the Black Death pandemic(s).[20]

The scourge of the Black Death on medieval society remains notorious. The 14th century outbreak of this plague decimated the European populations, radically altering the demographic distribution of Europe.[21] So grand was the potency of the Black Death on society that governing authorities were forced to make fundamental changes and interfere in the structure of society. The realisation of the importance of a healthy population became a priority for city-states and the national interest. Garrett goes so far as to contend that 'in the immediate wake of the Black Death…Florence, and…England, recognized that social services are components of state survival'.[22] The action taken by governing authorities to ensure their survival is at the bedrock of the study of international relations.

[19] Behrman (2004) confirms the misnomers surrounding the spread of AIDS in the nascent years of the pandemic. In describing the first International AIDS Conference, organised by the CDC in 1985, Behrman contends that journalists, on hearing 'that the origins of the disease could be traced back to monkeys in central Africa' asked African delegations 'Is it true? Do Africans have sex with monkeys?'. (p.15) Altman (1981) furthers the myths surrounding AIDS in reporting AIDS' spread for *The New York Times*, argued that there was 'no apparent danger to non homosexuals of contagion.'
[20] Garrett, L. (2005a) *HIV and National Security: Where Are the Links?,* New York: Council on Foreign Relations, p.17.
[21] *Ibid.*
[22] *Ibid.* p.18.

Understanding the role of governing authorities in the both the mitigation of, combat during, and recovery from pandemics, has garnered little attention. Yet, the response of the state, or governing authorities since the instance of the Black Death has remained constant: to use resources that are available to them to undertake such actions as to ensure the survival of the state. Survival of the state is a key component of the international relations theory of realism. Therefore, this thesis aims to assess the actions taken by governing authorities to mitigate the impact of pandemics on their respective national power through the application of the international relations theory of realism. The thesis argues that throughout history the response of the state to the various pandemic threats has remained constant, that is, to primarily protect the power of the state so that the agents of the state can, secondly, ensure the survival of the public of the state.

To undertake this investigative task, this thesis utilises two prominent aspects of international relations theory to establish the national power implications of pandemics. The first aspect reveals pertinent characteristics of power and validates the situation of pandemics within an international relations framework. Daniel A. Baldwin establishes the relational power through the dimensions of scope, domain, weight, and cost: all are designed to explore the relationship between two actors. Within this thesis those actors are the state and the pandemic. The dimensions provide a framework to comprehend both the power possessed by the pandemic actor, and the relationship of power between the state and pandemic actor. In establishing such a relationship the ability to understand the effect of pandemics on the behaviour of a state is crystallised, validating the assertion that pandemics constitute an actor in international affairs. Only by understanding the power wielded by the pandemic actor can a further exploration of the impact of the pandemic actor on the state actor take place. The impact of a pandemic on a state's

national power requires a theoretical vehicle of sufficient robustness to be able to authoritatively interpret the primary, secondary, and anecdotal evidence that traverses multiple centuries and pandemic events. Such a theoretical vehicle can be seen in the international relations theory of realism as articulated by Hans J. Morgenthau in *Politics Among Nations: The Struggle for Power and Peace.*[23]

Hans J. Morgenthau conceived of a state's national power as being aspirational: the aspiration to maintain power already acquired, and/or aspire to increase acquired power, and/or aspire to demonstrate that power. Morgenthau understood that the underlying motivation for self-preservation is the most obvious element of human motivation and that of *homo politicus.*[24] But to achieve power and sustain the state there needed to be identifiable elements that accounted for the acquisition of power. This thesis contends that the nine Morgenthau elements[25] do provide a measure of a state's national power, and constitute a malleable framework to assess threats to a state's national power. The use of pandemics as a basis to test Morgenthau's framework within this thesis is a result of the frequent emergence of, and devastating impact from, pandemics throughout human history that have largely been ignored by political analysis. While Morgenthau's seminal work establishes the respective power elements, this thesis broadens the possibility of the original elements to confirm the utility of Morgenthau's original work for threats to the state that are not traditional and which have occurred in history and which continue to occur unabated. Pandemics are not the traditional threat envisioned by Morgenthau against which the self and political entity strives to combat, survive, and exert power over. However pandemics do attack the conditions necessary for the survival

[23] Morgenthau, H.J. (2006) *Politics Among Nations: The Struggle for Power and Peace*, 7th ed., New York: McGraw Hill/Irwin.
[24] Frei, C. (2001) *Hans J. Morgenthau: An Intellectual Biography*, Louisiana: Louisiana University Press, pp.126-127.
[25] Morgenthau's nine elements consist of geography; natural resources; industrial capacity; military preparedness; population; national character; national morale; the quality of diplomacy; and the quality of government. Each of these elements, and their role in the provision of national power, is explored in *Chapter Two: Morgenthau's Classical Realism.*

of the self and trigger the impulse for self-defence by the individual and the political state. Morgenthau's realism and the nine elements allow us to understand how the state reacts to the pandemic actor threat. Once understood the impact of the pandemic can reveal the responses of political agents of the state.

Morgenthau's framework of national power is unique in that it provides the foundation of both a quantitative and qualitative analysis of threats to the state that neatly embrace the totality of the pandemic threat. While initial impacts of non-traditional security threats, such as pandemics, take a quantitative toll on society, it is the qualitative impacts of the threat that magnify the initial impact. Therefore, it becomes the responsibility of this thesis to illustrate the viability of Morgenthau's framework in assessing the totality of the pandemic threat towards the national power of the state.

In order to assess the utility of Morgenthau's classical theory, this thesis is presented over six chapters. *Chapter One: Power and Pandemics* lays bare the bedrock of this thesis: that pandemics constitute an actor in a relationship of power with the state. The chapter establishes that pandemics are an actor in international relations. In order to develop an appreciation of the central element of realist theory the chapter first addresses the notion of power and international relations, before exploring the notion of relational power. Relational power provides a foundation for the thesis; it establishes the dimensions necessary for a pandemic to be considered an actor in international relations. The chapter reinforces the notion of pandemic actors by highlighting the role of pandemics in the evolution of both international society and the notion of international health security.

Chapter Two: Morgenthau's Classical Realism expands on the notion of power and pandemics. The chapter argues that the international theory of realism, specifically

Hans Morgenthau's classical realism, provides the strongest framework of assessment to determine the threat posed to the international community by pandemics. The chapter has two main components. First, the chapter offers a brief review of realist literature in order to establish the centrality of realism in modern international relations. Realism's focus on the survival of states provides an ideal underpinning for an exploration of the political implications of pandemics. Second, the chapter then introduces Hans Morgenthau's realism and provides a detailed account of Morgenthau's elements of national power in order to establish the primary methodological approach of this thesis. Realism will then be applied over three individual case studies to establish its voracity over time and circumstance.

Chapter Three introduces the first, and perhaps most infamous, pandemic: *The Plague Pandemic*. Plague provides the foundational case study of the thesis in recognition of its considerable physical and psychological power. In order to explore the power of the plague pandemics, the chapter, after offering a brief background of the pandemic actor, utilises Baldwin's dimensions of relational power to establish the power wielded by the plague pandemic actor. Having established the plague pandemic as an actor the chapter then uses Morgenthau's elements of national power framework to indicate the impact of the pandemic on the national power of the state. The bulk of the pandemic assessment within Chapter Three is concentrated on the effect of the Black Death. By adopting such a concentration the chapter showcases the effect of a highly virulent, high mortality pandemic on a "state" prior to the recognition of states through the Treaty of Westphalia. *Chapter Three: The Plague Pandemic* thereby establishes the utility of Morgenthau's classical realism in assessing historical events where the response of governing authorities remained designed to protect their national interests from the impact of the pandemic.

Chapter Four: The AIDS Pandemic aims to provide an insight into the implications of pandemics for the state in the Westphalian era of modern government systems. In a similar vein to its predecessor the chapter first provides a background of the AIDS pandemic placing an emphasis on the socio-political background of the pandemic. The use of Baldwin's dimensions, once again, establishes the relationship of power between the AIDS pandemic actor and the state. The dimensions reveal the AIDS pandemic to be a long-wave pandemic whose impacts are felt over a number of generations. The chapter will then assess the impact of the AIDS pandemic on Morgenthau's elements of national power. The AIDS pandemic highlights the implications for a state's national power when the governing authorities are unable, and unwilling, to deal with a growing epidemic. The unwillingness of authorities to address the growing AIDS pandemic in its nascent years was largely associated with the social stigma attached to the disease. The chapter establishes that when governing authorities focus on the psychosocial aspects of a disease, as opposed to the threat posed by a pandemic towards the state's national power, the longevity of the pandemic is extended. Having established the utility of Morgenthau's realism, in both the pre-Westphalian and Westphalian eras, the final case study looks to assess the response of both state and non-state actors to a 21st century pandemic from its eruption to its conclusion.

The final case study of the thesis investigates the response of states to the 2002 outbreak of SARS. *Chapter Five: The SARS Pandemic* adopts a narrative approach to assessing the SARS pandemic in order to illustrate the realist reaction of both state, and non-state entities, to a pandemic. The SARS pandemic actor's short lifespan allows for a strategic assessment of the response of governing authorities to the pandemic. To provide such an assessment, the chapter first provides a background of the SARS virus, including both the medical and socio-political effects of the pandemic. The chapter then concentrates on SARS' initial outbreak in China to

confirm the realist response of the communist state to this pandemic actor. Just as the SARS pandemic flowed onward to Canada, so too does the chapter. The Canadian response, while somewhat different to the Chinese, was fundamentally in line with classical realism, that is, Canadian authorities took actions designed to protect their power. The SARS pandemic also exposed the realist nature of other actors, both state and non-state, when confronting a pandemic, which is detailed within the third section of the chapter.

Chapter Six: The Pandemic Threat provides a synthesised account of the threat posed by pandemics towards the national power of the state. In order to do so the chapter first asserts that Baldwin's dimensions provide a flexible framework that allows for a more detailed analysis of the power possessed by non-state actors. The broadness of Baldwin's dimensions allow for an element of discipline to be applied to the assessment of international actors. The chapter then argues the utility of Morgenthau's classical realism in the modern era. Central to the assessment of the pandemic threat has been the impact of the various pandemics on the traditional elements of national power. Chapter six illustrates the versatility of Morgenthau's traditional elements of national power to confirm the utility of his classical realism in 21st century international relations.

Chapter One: Power & Pandemics

1.0 Introduction

This chapter will review existing interpretations of the notion of power within the international relations (IR) theory of realism. As a theoretical approach, realism has habitually focused on conflict between states, and 'expects to find conflict as the usual pattern of interaction in international politics.'[1] The determinant of conflict within international politics is relative to the 'power' of the actors within that conflict. Within realism, what constitutes an actor in international affairs is orthodoxly restricted towards that of a political community or state. This thesis contends that such a restriction has constrained the potential of realism as an analytical tool. In utilising realism as a theoretical grounding, the thesis adopts a broader analysis of conflict within international affairs, specifically, the conflict between state actors and non-state actors. In order for such an analysis to transpire, there is an inherent need to reinterpret the label of actor within international affairs to establish what constitutes an actor in IR, and to better appreciate the threats to the modern-day state.

The chapter introduces the dominant ideas and debates within the realist framework, and shows that the existing literature has yet to account for non-traditional security threats (NTST): specifically, pandemics. Theorists and analysts have steered away from assessing the impact of infectious disease on international relations. In the same narrow focus, international organisations involved in infectious disease research and control, routinely focus only on the domestic impact of the disease. Such narrow interpretation by theorists, analysts, and preventive

[1] Thompson, K.W. and Clinton D.W. (2006) 'Foreword', in Morgenthau, H.J., *Politics Among Nations: The Struggle for Power and Peace*, 7th ed., New York: McGraw Hill, p.xviii.

practitioners, thwarts a sharper theoretical and international understanding of the pandemic threat.

Realist literature has focused almost entirely on the traditional threat of inter-state conflict.[2] There is a tendency for realist theoretical works to be constructed in the immediate aftermath of inter-state war seeking to facilitate a greater appreciation of the causes of that particular conflict.[3] The influence of traditional inter-state conflict on the construction of these theoretical works is a significant contribution to the elevation of the state as the quintessential actor. Realism contends that states, due to their predominance, 'are always searching for opportunities to gain power over their rivals,'[4] as they seek to secure their position as the consummate actor. Indeed, Schmidt argues that 'the close relationship that exists between the realist school and the concept of power stems from its basic, [but most useful], insight: conflict and competition are intrinsic to the practice of international politics'.[5]

By focusing on the state, or states, as the primary actor, the use of the realist paradigm to analyse threats toward a state has been vigorous, but limited. By realigning realist thought to assess the potential damage caused by a NTST a greater

[2] Major contributors to the Realist school of thought include: Thucydides (2004) *The Peloponnesian War*, Trans. Richard Crawley, Colorado: Project Gutenberg E-Book. Hobbes, T. (1973) *Leviathan,* London: Dent. Carr, E.H. (2001) *The Twenty Years' Crisis,* Hampshire: Palgrave Macmillan. Morgenthau, H.J. (2006), *op. cit.* Waltz K.N. (2001) *Man the State and War: A Theoretical Analysis*, New York: Columbia University Press. Waltz, K.N. (1979) *Theory of International Politics*, San Francisco: McGraw Hill. Mearsheimer, J. (2001) *The Tragedy of Great Power Politics*, New York: Norton and Company. Zakaria F. (1998) *From Wealth to Power*, New Jersey: Princeton University Press. All of whom framed their theoretical perspectives based on historical accounts of inter-state conflict.

[3] The influence of inter-state war on the main authors of realist works (see above n.2) is significant in that it allows insight into the psyche of the author. Long considered to be the father of the realist theory, Thucydides' account of the Peloponnesian War establishes the foundation of realism: state competition. Thomas Hobbes' immense fear caused by the civil disorder following the civil war in Britain contributed to the concept of the Leviathan. Hans Morgenthau's seminal textbook *Politics Among Nations* was heavily influenced by the author's own experiences as a refugee from the Nazi Germany. Indeed *Politics Among Nations* has been explained by Robert Jervis (1994), as Morgenthau's desire to give American students greater insight into European politics. More recently authors such as Waltz, Mearsheimer, and Zakaria, have used various aspects of prior interstate conflicts to demonstrate their own theoretical perspective.

[4] Mearsheimer, J. J. (2001), *op. cit.* p.29.

[5] Schmidt, B.C. (2007) 'Realist Conceptions of Power', in Berenskoetter F. and Williams M.J. eds. (2007) *Power in World Politics*, Oxon: Routledge, p.45. [Brackets Added]

understanding of the 'conflict and competition' that impedes states from reaching their utmost power potential, when confronted with an NTST, is generated. While realism is still considered by analysts to be the dominant theory of IR,[6] there has been an influx of theoretical division over the accuracy, and thereby supremacy, of realism in determining the proliferated threats of the 21st century.[7]

The central objection to the theoretical supremacy of realism involves the prominence of power as the foundation of the IR system. Berenskoetter argues that 'critics of realism [have] gained their academic currency by either refining or rejecting realism's focus on [national] power, instead of forcefully articulating an alternative reading of [realism's focus].'[8] Therefore, the central premise of this chapter becomes that assessments of the impact of pandemics on a state's "power" have lacked complexity and, consequently, meaningful political assessment, to develop an understanding of the threat posed by the impact of pandemics on the state has also been retarded. In providing such an analysis, this thesis widens the focus of realism where the state is embraced as the predominant actor, to contend that pandemics meet the determinants of an actor in the field of IR. The thesis

[6] The dominance of realism in IR theory is a point continually acknowledged within modern IR texts and textbooks. *See* Dunne, T. and Schmidt, B.C. (2005) 'Realism' in Baylis, J. and Smith, S., eds., *The Globalization of World Politics*, 3rd ed., New York: Oxford University Press. Shimko, K.L. (2005) *International Relations: Perspectives and Controversies*, Boston: Houghton Mifflin Company. Smith, M.J. (1986) *Realist Though From Weber to Kissinger*, Baton Rouge: Louisiana State University Press. Hutchings, K. (1999) *International Political Theory*, London: Sage Publications. Jørgensen, K.E. (2010) *International Relations Theory: A New Introduction*, Basingstoke: Palgrave Macmillan. Goldstein, J.S. and Pevehouse J.C. (2008) *International Relations*, 8th ed., New York: Pearson Longman. Baylis, J., Smith, S., and Owens, P. (2011) *The Globalization of World Politics: An Introduction to International Relations*, 5th ed., New York: Oxford University Press. Griffiths, M. (2011) *Rethinking International Relations Theory*, Basingstoke: Palgrave Macmillan. Donnelly, J. (2000) *Realism and International Relations*, Cambridge: Cambridge University Press. Frankel, B., ed. (1996) *Roots of Realism*, London: Frank Cass and Co. Goldstein J.S. (2004) *International Relations*, 5th ed., New York: A.B. Longman. Weber, C. (2009) *International Relations Theory: a Critical Introduction*, 3rd ed., Oxon: Routledge. Griffiths, M. (1992) *Realism, Idealism, and International Politics,* London: Routledge. Griffiths, M., O'Callaghan, T., and Roach, S.C. (2008) *International Relations: The Key Concepts*, 2nd ed., New York: Routledge.

[7] Walt (1998) provides a condensed summary of realism and the main challenges posed towards it. In particular he highlights the importance of theories in that 'it is hard to make good policy if one's basic organizing principles are flawed, just as it is hard to construct good theories without knowing a lot about the real word.' (p.29) Furthermore, while acknowledging that 'realism remains the most compelling general framework for understanding international relations' (p.43) he concedes that 'no single approach can capture all the complexity of contemporary world politics' and that 'we are better off with a diverse array of competing ideas rather that a single theoretical orthodoxy'. (p.30)

[8] Berenskoetter, F. (2007) 'Thinking About Power', in Berenskoetter, F. and Williams, M.J., eds., (2007) *Power in World Politics*, Oxon: Routledge, p.1. [Brackets Added]

argues, in short, that the use of realism as a framework for analysis of pandemics is viable and timely.

Because analysts of IR theory have focused primarily on the role, or power, of the state they have failed to incorporate the vulnerabilities of the nation state when faced with any threat other than another state. Such a univocal concentration within IR has prevented recognition of the impact of medical threats, such as pandemics, on international affairs.[9] That the state is the primary actor in international affairs remains constant throughout the following assessment.

The challenge, then, for this chapter becomes to substantiate that pandemics constitute an actor within IR. To do so, the chapter first looks towards the role of power in IR, paying particular attention to traditional power politics and the international state system to show that the possession of power is not indigenous to the state actor. Second, by adapting a relational power approach, the chapter shows that pandemics have constituted, and continue to constitute an actor within the international state system. Third, by assessing the unmitigated impact of pandemics on the international community the argument of pandemics being an actor is supported. This chapter lays the foundation for the greater task of the thesis: to provide an account of the power of pandemics and the threat towards state security whenever they emerge as a viable (realist) political actor in the 21st century.

[9] Historians such as William McNeill (1998) and Professor A.J. McMichael (2001) provide a substantial account of the evolution of human culture and the disturbance such evolution has bought to the natural equilibrium between 'man and microbe.' In particular, McMichael has managed to confine these disturbances into three historical transitions, which were 'processes of equilibration: the first between humans, animals and pest species; the latter two between regional and then transoceanic populations.' (p.115) McMichael's thesis is further explored in section 1.4 *Power and Pandemics: Pandemics and the Evolution of International Society*.

1.1 Power and International Relations

Considered to be one of the more complex dimensions of international relations to define,[10] power plays a vital role in 'international political theorizing'.[11] Indeed, the common perception that international politics is the arena for states to seek and obtain power in an increasingly anarchic world has become the foundation of modern international relations theory.[12] In particular, 'realists throughout the ages have argued that power is the decisive determinant in the relations among separate political communities.'[13] According to Guzzini, 'power has been of central importance in IR, because it seemed essential for the understanding of two central issues: who [one or more] can be expected to win a conflict? And, related to this, who [one or more], governs international politics?'[14] Such a determination can only be made on evaluating the attributes of a state's power.

Evaluation of state power in international relations can be reduced to two main schools of thought: 'the elements of national power approach, which depicts power as resources, and the relational conception of power, which depicts power as an actual or potential relationship.'[15] The actual, or potential, relationship is usually one of conflict or aggression, traditionally such aggression has been perpetuated by another state; however, pandemics provide an opportunity for greater insight into states' preservation of national power in the face of a non-state aggressor. In providing a method to assess a state's power, both approaches enable the observer

[10] Nye, J. (2004a) *Power in the Global Information Age: From Realism to Globalization,* New York: Routledge, p.54. Baldwin D. A. (1979) 'Power Analysis and World Politics: New Trends versus Old Tendencies', *World Politics,* 31(2), (Jan 1979), p.161.
[11] Baldwin (1979), *op. cit.* p.161.
[12] *See* Nye, J. (2005) *Understanding International Conflicts: An Introduction to Theory and History*, 5th Ed., New York: Pearson Longman. Morgenthau, H.J. (2006), *op. cit.* Waltz, K. (2001), *op. cit.* Guzzini, S. (2000) 'The Use and Misuse of Power Analysis in International Relations Theory', in Palan, R., ed., *Global Political Economy: Contemporary Theories*, London: Routledge, pp.53-66.
[13] Schmidt, B.C. (2007), *op. cit.*, p.43.
[14] Guzzini, S. (2000), *op. cit.* p. 53. [Brackets added]
[15] Baldwin D. A. (2002) 'Power and International Relations', in Carlsnaes, W., Risse, T., Simmons B.A. eds. (2002) *Handbook of International Relations,* London: Sage Publications, p.185; Schmidt, B.C. (2007), *op. cit.* p.47.

not only to understand particular state actions[16] but also to scrutinise the impact of external aggression.

In the first 'power as resources', school of thought, elements of national power, according to Schmidt, 'define[s] power strictly in terms of measurable material attributes, such as the size of a country's population and military forces'[17] to determine the power of the state. The idea is to combine 'all of the important resources that a state possesses…in some fashion to determine its overall aggregate power'.[18] In strong support of such an argument, Mearsheimer goes so far as to proclaim that the material basis of 'power…represents nothing more than specific assets or material resources that are available to a state,'[19] and derives further power from the 'socio-economic ingredients that go into building military power'.[20] In other words the responsibility of the state is to convert resources at its disposal into power - the very notion of power conversion.

According to Joseph Nye, 'power conversion is the capacity to convert potential power, as measured by resources, to realized power, as measured by the changed behaviour of others.'[21] Power conversion is a significant barrier to the elements of national power approach, in large part because 'what functions as a power asset in one situation may be a power liability in a different situation'.[22] The case studies of this thesis would certainly support this point. Furthermore, when 'determining which resources provide the best basis for a particular context',[23] the elements of national power approach encounters further difficulty, because 'power resources

[16] Typical state actions may include the expansion of territory through war and the implementation of beneficial trade agreements.
[17] Schmidt, B.C. (2007), *op. cit.* p.45. [Brackets Added]
[18] *Ibid.* p.47.
[19] Mearsheimer, J. J. (2001), o*p cit.* p.57.
[20] *Ibid.* p.55.
[21] Nye, J. (2004a), *op. cit.* p.54.
[22] Baldwin, D.A. (2002), *op. cit.* p.179.
[23] Nye, J. (2005), *op. cit.* p.60.

always depend on the context'.[24] Pandemics provide an insight to the meaning of context here, as they emerged and receded over protracted times in history, thereby allowing a comparison of context and impact as a political actor. Insight into context also emerges, as there are few, if any, resources of which pandemics will not take advantage.[25] Therefore, while the elements of national power approach allows for insight into the prospective power of the state, it is the relational power approach that serves to determine whether or not the state, or actor, has actual power.

The second school of thought, being the relational conception of power, argues that 'power is a process of interaction whereby a state is able to exercise influence over the actions of another state.'[26] Sometimes referred to as the Dahlian formulation of power,[27] the approach essentially follows Robert Dahl's basic 'intuitive idea of power' being that 'A has power over B to the extent that he can get B to do something that B would not otherwise do.'[28] The foundation of a relational conception of power is 'the ability to demonstrate change in outcomes'.[29] Relational power challenges the notion of 'power as a set of material resources' on the grounds that the 'actual ability of Actor A to change the behaviour of Actor B' is more important than the mere possession of resources.[30] Dahl concedes that such a simple statement 'is not very interesting, informative, or even accurate',[31] however, by embracing multiple dimensions of power it is possible to provide a greater

[24] Nye, J. (2005), *op. cit.* p.60.
[25] For example, according to Nolen (2007), 'the relationship between AIDS and mining is not just a social or medical issue but an economic one. In a 2006 assessment of the South African economy…the Economist Intelligence Unit listed HIV/AIDS before any other factor (a volatile currency, powerful unions) as the one to watch in terms of impact on growth. The big mining companies have been forced to acknowledge that the disease is pushing up the cost of operations – through absenteeism, funeral costs, lowered productivity due to illness, [and] poor staff morale.' (*See* Chapter 4, Section 4.3.3 *The AIDS Pandemic: Industrial Capacity*)
[26] Nye, J. (2005), *op. cit.* p.60.
[27] *See* Barnett, M. and Duvall, R. (2005) 'Power in International Relations', *International Organization*, 59, pp. 135-140.
[28] Dahl, R.A. (1957) 'The Concept of Power', *Behavioural Science,* 2(3), p.202-203.
[29] Schmidt, B.C. (2007), *op. cit.* pp.47-48.
[30] *Ibid.* p.48.
[31] *Ibid.*

understanding of the actors involved. Central to Dahl's formulation was the emphasis that 'power is a relation…' and that 'the objects within that relationship' of power are actors.[32] Importantly for this thesis, Dahl's composition allows for the possibility of a non-sentient organism being considered an actor in international relations, providing a relationship can be established.

In seeking to establish the existence of a power relationship between actors Baldwin[33] provides a synthesised account of four dimensions of power, which he deems to be the 'most important' in establishing the relationship of power.[34] First, the dimension of scope; which 'refers to the aspect of B's behaviour affected by A' inferring that an actor may possess a variety of influences and/or behaviours. Second, the domain of an actor's power; which 'refers to the number of actors subject to its influence,'[35] meaning the influential alliances an actor possesses. Third, weight of influence; the probability that 'B's behaviour is or could be affected by A,' or, more simply, the reliability of A's influence. Fourth, the cost of exercising such influence; whether it is 'costly or cheap for A to influence B' or 'costly or cheap for B to comply with A's demands.'[36] The power dimensions provided by Baldwin, traditionally utilised to assess the power of a state, are advantageous in understanding that pandemics not only have the ability to assert power in line with the various dimensions, but in doing so, pandemics obtain the status of actor.[37] The lesson this thesis draws from Baldwin is that a state, or an individual, can hardly ignore the behavioural pattern of a pandemic, any more than they ignore the other

[32]Dahl, R.A. (1957), *op. cit.* p.203. Dahl defines actors as 'individuals, groups, roles, offices, governments, nation-states or other human aggregates' (p.203).
[33] While the dimensions of relational power have been interpreted by a number of analysts specifically Dahl (1957) and Guzzini (1993), Baldwin's assessment provides an amalgamation of the main aspects of these dimensions.
[34] Baldwin, D.A. (2002), *op. cit.* p.178.
[35] *Ibid.*
[36] Baldwin, D.A. (2002), *op. cit.* pp.178 – 179.
[37] *See* section 1.3 *Power & Pandemics: Pandemics as an International Actor*, for a detailed account of pandemics as an actor within IR.

actors in the international system. As a result, pandemics challenge interpretations of the traditional power politics and the orthodox international system.

1.2 Traditional Power Politics and the International State System

The expansion driven and self-interested nature of the state is central to Martin Wight's analysis of power politics, where 'it is the nature of powers to expand'.[38] The desire for expansion by powers is indicative of a system where 'great powers… are always searching for opportunities to gain power over their rivals, with hegemony as their final goal.'[39] Wight interprets the modern states-system to be the 'continuous and organised' relations between 'independent units, which we call states, nations, countries or *powers*'.[40] The structure of these relations has taken many forms, such as diplomacy, trade or even war. The overarching goal of such relations is to 'gain mastery of the states-system,'[41] meaning that 'the [international] system encourages states to look for opportunities to maximise their power vis-à-vis other states.'[42] In other words, Wight perceives the 'international scene' to be 'properly described as an anarchy – a multiplicity of powers without a government.'[43] Indeed, Wight insists that the 'absence of international government, or, the anarchy of sovereign states,' is the 'fundamental cause' of all wars.[44] The existence of anarchy is what 'distinguishes international politics from ordinary politics';[45] thus, 'while in domestic politics the struggle for power is governed and circumscribed by the framework of law and institutions, in international politics law and institutions are governed and circumscribed by the struggle for power.'[46] Within the struggle for power among states, international law, and institutions,

[38] Wight, M. (1978) *Power Politics*, London: Leicester University Press, p.144.
[39] Mearsheimer, J.J. (2001), o*p. cit.* p.29.
[40] Wight, M. (1978), *op. cit.* p. 23.
[41] *Ibid.* p.30.
[42] Mearsheimer, J.J. (2001), *op. cit.* p.29. [Brackets Added]
[43] Wight, M. (1978), *op. cit.* p.101.
[44] *Ibid.*
[45] Wight, M. (1978), *op. cit.* p.102.
[46] *Ibid.*

non-traditional security threats, especially pandemics, are able to capitalise on the disorder that is prevalent in the anarchy and maximise their own power potential.[47]

For Wight, the primary duty of the state is to 'preserve the interests of the people it rules and represents against the competing interests of other peoples.'[48] Such interests are 'certain things that a power deems essential to its continued independence' and are of such importance that the state 'will go to war to defend'.[49] Importantly, Wight argues that the state determines what these 'vital interests are'[50] and, in doing so, the state will not be cajoled by another power in this determination. Such an argument is highly conducive to the global health environment, where often one state is afflicted by diseases that other states have managed to eradicate successfully from their population.

Historically, communicable disease has yet to evoke bloody conflict between two powers, yet the impact of disease on a state's population can be just as vicious. As Pirages illuminates,

> Over the centuries the number of deaths and injuries from military combat have paled in comparison to those from disease. It is estimated that all the wars of the twentieth century killed 111 million combatants and civilians, an average of about 1.1 million a year. Communicable diseases are now killing 14 times as many people annually.[51]

Wight concedes that vital interests are likely to change as the international society continues to evolve.[52] Evolution is also fundamental to the development, prediction, and containment of pandemics. In large part the analysis of historical accounts allows for such preparation to take place. Classical realists utilise historic state versus state conflict to support their theoretical discourses on the international state

[47] As will be addressed later in the chapter, nowhere within the international state system is this 'struggle' more evident than within the global health arena. The disparity between the 'Have and Have Not States' (Bull, 1968) has never been more evident then when looking at the health of respective citizens.
[48] Wight, M. (1978), *op. cit.* p.95.
[49] *Ibid.* p.95.
[50] *Ibid.*
[51] Pirages D. (2005) 'Containing Infectious Disease', in Starke L., (ed), (2005) *State of the World 2005: A Worldwatch Institute Report on Progress Toward a Sustainable Society,* London: Earthscan, pp.42-43.
[52] *Ibid.*

system. By adopting a similar approach, it becomes possible to establish a framework to assess how states respond to non-traditional threats, including pandemics. The utilisation of such a framework provides an indication of any 'evolution' of state interest that transpires when that state is confronted with a pandemic. Regardless of the evolution of 'interest' the primary role of the state, being to preserve and protect that interest, is still predominant.

Additionally, Wight contends that the true motivations of the state are to preserve 'the influence derived from power' which the state possesses; Wight refers to this influence as 'prestige'.[53] Importantly, Wight contends that 'unless the power is *present* power there can be little prestige'.[54] In looking towards a state's prestige, Wight offers a greater insight into one aspect of power in international relations: the ability for one state to influence, not only other states, but also the path of international organisations. E. H. Carr supports this explanation of prestige, being 'the recognition by other people of your strength…[is] extremely important; for if your strength is recognised, you can generally achieve your aims without having to use it.'[55] In essence, prestige is 'not only something that other people recognise, it is also something that you assert; and it can be asserted wisely or unwisely, necessarily or unnecessarily.'[56] However, the possession of prestige by a state varies considerably between the have and the have-nots states. Arguably, the possession and assertion of prestige when confronting a pandemic provides for states to seek assistance in developing the tools necessary to defend their national interest successfully from the non-state actor.

Indeed, the central premise of Wight's argument is that while the international society may be anarchical, in that there is no 'common government' there is, clearly,

[53] Wight, M. (1978), *op. cit.* p.97.
[54] *Ibid.*
[55] Carr, E.H. (1937). *Great Britain as a Mediterranean Power,* Cust Foundation Lecture, University College, Nottingham, p.10, in Wight, M. (1978) *op. cit.* p.98. [Brackets Added]
[56] Wight, M. (1978), *op. cit.* p.98.

'co-operation in international affairs.'[57] However, within this cooperation the practice of prestige, that basic element of power politics, prohibits a level of cooperation which benefits both the 'Have and the Have Nots.'[58] The possession of prestige contributes toward the level of influence a state possess over another state or international organisation, as they seek assistance to confront various threats.

This ability to influence or 'control others' is, according to Nye, closely associated with the amount of resources in the control of the state.[59] When defining a state's power in line with the resources that it possesses, the notion of power becomes much 'more concrete, measurable, and predictable'[60] than the relational power approach. What is required, according to Nye, is the ability to convert the 'potential power, as measured by resources, to realized power, as measured by the changed behaviour of others'.[61] In endorsing both notions of power, Nye echoes the complex approach of Morgenthau by seeming to endorse 'both the relational and the elements-of-national-power approach'.[62]Nye also agrees with Wight in that special attention must be paid by states towards what Nye has termed the 'changing sources of power'.[63] Nye asserts that 'in assessing international power…factors such as technology, education, and economic growth are becoming more important, whereas geography, population, and raw materials are becoming less important.'[64] With such lists, both authors allude to the necessity not to neglect the complex

[57] Wight, M. (1978), *op. cit.* p.105.
[58] Prestige highlights the power distance between developed and developing countries. The degree to which a state is willing to cooperate with another state is reliant on the benefit derived from that cooperation for the state.
[59] Nye, J. (2004a), *op. cit.* p.53. Nye further contends that these resources incorporate the population of the state, the territory possessed by the state, its natural resources, economic size, military forces and political stability. Nye's assertions further reinforce Hans Morgenthau's elements of power, which are addressed in Chapter Two: *Morgenthau's Classical Realims*, indicating the vitality and increased relevance of Morgenthau's assertions.
[60] Nye, J. (2004a), *op. cit.* p.53.
[61] *Ibid.* p.54.
[62] Schmidt, B.C. (2007), *op. cit.* pp.48-49.
[63] Nye, J. (2004a), *op. cit.* p.55.
[64] *Ibid.* Nye's contention is made with a view to assessing international power, whereas this thesis contends that these same measures provide a framework of analysis to assess the *impact* of pandemics *on* a state's international power. In doing so, the thesis contends that the 'importance' of all measures remains equal. Chapter Two: *Morgenthau's Classical Realism,* provides greater insight into the elements of national power.

frameworks established by Morgenthau. This thesis concurs with that finding: Morgenthau's theoretical frameworks remain integral to any assessment of power in respect to pandemics. In conforming with Wight's original assertion of evolving interests, Nye opines the importance of being able to influence other states, without resorting to military force.[65] For example, alternatives to military force may include the use of financial aid or economic power as a source of influence. When confronting a pandemic the ability to influence states is necessary to comply with international health regulations for the protection of power within the IR system.

Indeed, the mutual correlation of military force, economic power, combined with the influence over opinion, was the focal point in E. H. Carr's discourse on power in international politics. According to Carr, *The Twenty Years' Crisis* was authored 'with the deliberate aim of counteracting the glaring and dangerous defect of nearly all thinking, both academic and popular, about international politics…the almost total neglect of the factor of power.'[66] Furthermore, and importantly for this thesis, Carr professes that his study 'too readily and too complacently accepts the existing nation-state, large or small, as the unit of international society.'[67] Such a confession adds weight to the potential for pandemics being considered an actor within international society, by suggesting that a wider focus on international society, incorporating non-state actors and their influence on power, is plausible. Furthermore, by delving into *The Twenty Years' Crisis* it becomes possible to garner a greater appreciation of the impact of pandemics on that power in international relations.

With Carr's admission that his primary goal was to address the neglect of power within academic work, there is an element of concern in his reluctance to provide

[65] Nye, J. (2004a), *op. cit.* pp. 54-57.
[66] Carr, E. H. (2001), *op. cit.* p.cv.
[67] *Ibid.* p.cvi.

'an explicit definition of power'.[68] As Schmidt points out, 'Carr argued that power was indivisible, yet he claimed for the purposes of discussion it could be divided into three categories: military power, economic power, and power over opinion.'[69] In limiting the aspects of analysis for a state's power to three categories Carr has stopped short of elucidating a concise argument. Indeed, Carr offers more of a statement of fact rather than a theoretical justification of state power, a point substantiated by Mearsheimer who goes so far as to argue that in avoiding 'why states care about power or how much power they want,' Carr stops short of producing any theoretical argument for international politics.[70] However, as contended by Smith, the central premise of Carr is to 'emphasize the ubiquity of power, not to explain how and under what circumstances it is used'.[71] Carr's work provides an interpretation, albeit somewhat limited, into some of the foundational aspects of the elements of national power approach towards state power.

Carr pays specific attention to establishing how the term international politics is to apply to his framework of analysis. He contends that the term 'political' should only apply 'to issues involving a conflict of power'.[72] Furthermore, once 'this conflict is resolved, the issue ceases to be 'political' and becomes a matter of administrative routine'.[73] For example, the alliance between Japan and America following Japan's surrender after World War II arguably moved the conflict away from the political towards administrative. However, Carr fails to provide adequate explanation as to what he deems to be the actual meaning of administrative. A similar example can be illustrated with pandemics: the global struggle to eradicate smallpox was a complex conflict between humans and a combative microbe, in which the human race eventually declared victory, and states now administratively protect their citizens

[68] Schmidt, B.C. (2007), *op. cit.* p.49.
[69] *Ibid.* Carr, E.H. (2001), *op. cit.* p.102.
[70] Mearsheimer, J.J (2001), *op. cit.* p.18.
[71] Smith, M. J. (1986), *op. cit.* p.75.
[72] Carr, E.H. (2001), *op. cit.* p.97.
[73] *Ibid.*

against the microbe.[74] However, recently established fears of a bioterrorism attack, with smallpox as the infectious agent, have prompted speculation that the initial victory, and relegation of dealing with the virus to the administrative, may have been somewhat premature.[75] While there is an element of validity within Carr's argument, the idea of any political conflict becoming resolved and then relegated to administrative status seems optimistic.

Indeed, Carr goes as far as relegating the prevention of 'the spread of epidemics'[76] to a non-political status, describing the notion of prevention as 'non-political or technical'.[77] While Carr's reference to epidemics is anecdotal, evidence of states' behaviours in relation to pandemics in the 21st century, indicates a somewhat different perspective. In regard to the level of state co-operation on the non-political issues, two examples dominate: first, the Chinese government's initial unwillingness to cooperate with international health authorities during the outbreak of SARS in 2002[78] and, second, Indonesia's "power play" in withholding avian influenza samples from the World Health Organization in January 2007.[79] In both circumstances the ramifications of non-cooperation further ameliorated the epidemics, with the SARS outbreak proliferating to the status of pandemic.[80] Carr's

[74] World Health Organization (2007) *The World Health Report 2007: A Safer Future Global Health Security in the 21st Century,* Geneva: World Health Organization, p.6.
[75] McKay, B. (2011) 'Bioterror Fears Prompt U.S. to Keep Its Smallpox Cache', *The Wall Street Journal* [online], 18 Jan, available: http://online.wsj.com/article/SB10001424052748704029704576088032149613692.html [accessed 12 Feb 2011].
[76] Carr, E.H. (2001), *op. cit.* p.97.
[77] *Ibid.* Carr contends that when states seemingly forego conflict and embrace cooperation, such as 'maintaining postal or transport services…or suppress the traffic in drugs all issues become non-political or technical'. (p.97)
[78] McNally (2003) contends that 'miscalculation and a long held penchant to bury unfavourable information and statistics in China led to a news blackout about the nature and extent of the SARS epidemic. The viral disease was therefore able to penetrate deep into Beijing, China's cultural and political center'. (p.70) (*See* Chapter Five: *The SARS Pandemic*)
[79] The suspension of supplying WHO with samples of the virus threatened the ability of WHO to monitor the evolution of the virus. At the time Indonesia argued that it would 'not provide virus samples to the WHO as long as pharmaceutical companies can use them to make vaccines…[the]… country cannot afford.' (CTV Edmonton, 2008) The utilisation by Indonesia of the avian influenza samples as leverage to protect its national interest, specifically, the health and well-being of its citizens.
[80] The SARS outbreak provided justification for a number of changes to the International Health Regulations, in particular, the ability for WHO to take into account sources of information other than

concession that 'as soon as an issue arises which involves, or is thought to involve, the power of one state in relation to another, the matter at once becomes 'political,'[81] and opens the door to further assessment of the role of pandemics in the international state system. In both 'non-cooperation' examples noted here, other states were immediately affected by the power reaction of one state.

Carr further divides power in the 'international sphere' into three categories. In the first category, military power is seen as one of 'supreme importance,' which, 'lies in the fact that the *ultima ratio* of power in international relations is war'.[82] In echoing the teachings of Carl Von Clausewitz,[83] Carr contends that 'every act of the state, in its power aspect, is directed to war, not as a desirable weapon, but as a weapon which it may require in the last resort to use'.[84] Furthermore, with 'potential war being…a dominant factor in international politics, military strength becomes a recognised standard of political values.'[85] The importance of a state's military strength is incorporated as a common theme within the realist framework. The reasoning behind such a focus draws on the expansionist and self-interested nature of states. Carr illustrates the longevity of this realist tradition arguing that;

> International politics amply confirm the aphorisms of Machiavelli that 'men never appear to themselves to possess securely what they have unless they acquire something from another' and of Hobbes that man 'cannot assure the power that means to live well which he hath present, without the acquisition of more'.[86]

Mankind's desire for further acquisition of power closely mimics the behaviour of infectious disease, in that neither man nor microbe has shown evidence of constraint.[87]

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the state. Such a move raises questions in regard to the respect of sovereignty when countering global health concerns, and further highlights the increased importance of global health in the 21st century.

[81] Carr, E.H. (2001), *op. cit.* p.97.

[82] *Ibid.* p.102.

[83] Clausewitz, C.V. (1968) *On War*, London: Penguin Books.

[84] Carr, E.H. (2001), *op. cit.* p.102.

[85] *Ibid.*

[86] *Ibid.* p.105.

[87] As is explored in Section 1.4 *Power and Pandemics: Pandemics and the Evolution of International Society*

Carr's second category, economic power, is largely based on a state's economic strength being an 'instrument of political power, if only through its association with the military instrument.'[88] At the centre of a state's economic power exists the concept of autarky, or self-sufficiency. Autarky is considered to be 'not only a social necessity, but an instrument of political power'.[89] In other words, a state that is able to provide for itself holds power over another state that is unable to provide for itself. During World War I, the appeal of autarky led to 'the development of synthetic materials by Germany' as well as 'the accumulation by Great Britain of stocks of foodstuffs';[90] both actions sought to increase the overall power of the respective state and insulate each state from any impediment to survival. During a pandemic, states have created preparedness plans that strongly endorse the notion of autarky. The reactive 'stockpiling' of medication is but one example of states edging closer towards that autarkical goal.[91]

In Carr's third category, 'power over opinion,' he devotes 'specific attention to analysing propaganda as a form of power'.[92] The idea of power over opinion indicates a movement away from the harder, more established forms of power, towards what Joseph Nye has termed 'soft power.'[93] Carr illustrates the increasingly vital role of propaganda in establishing a state's power. Through the use of propaganda the skilled statesman is able to 'mold and form the will of the people.'[94] The increased prominence of propaganda, according to Carr, stems from the

[88] Carr, E.H. (2001), *op. cit.* p.105.
[89] *Ibid.* p.111.
[90] *Ibid.* p.114.
[91] There are a number of risks inherent in adopting an autarkical policy, the least of which is the 'expenditure that may turn out to be wasteful'. (Carr, p.114) The stockpiling of antiviral medications, embraced by a number of developed countries during the 2009 Influenza A(H1N1) outbreak, is one example of expenditure that may turn out to be wasteful, as states prepare for a pandemic. Recently the United States Food and Drug Administration was forced to issue a reminder of the pending expiration of stockpiles of Tamiflu and Relenza (Food and Drug Administration, 2010).
[92] Schmidt, B.C. (2007), *op. cit.* p.50.
[93] Nye (2004b) refers to soft power as 'the indirect way to get what you want' essentially 'getting others to want the outcomes that you want'.(p.5) The implementation of a soft power ideal can provide further legitimacy to a state in the eyes of others. (Nye, J. (2004a), p.57) The idea of soft power is 'becoming more important in world politics today.' (*Ibid.*)
[94] Bernays, E. (1928) *Propaganda,* Brooklyn, NY: Ig Publishing, p.109. [Brackets Added]

'broadening of the basis of politics, which has vastly increased the number of those whose opinion is politically important'.[95] Carr maintains that 'universal popular education' is the 'oldest, and still perhaps most powerful tool'[96] that a state possesses to maintain power over opinion. However, the ability and instruments by which a state disseminates information, have greatly expanded since Carr first published his works in 1939.[97] A state's ability to control the flow of information allows that state to exercise its power over the population, thereby shaping both action and reaction.[98] In the face of a pandemic, there are serious implications for both how much, and what type of, information is divulged to the public. The inherent fear of pandemics stems from dark memories of plagues past, yet as history has shown, any over or under reaction to the presence of a pandemic has the ability to extend the length, and power, of that pandemic.[99] Carr argued that 'it was a condition of success on the military and economic fronts that the 'morale' of one's own side should be maintained, and that of the other side sapped and destroyed.'[100] A similar mindset is applied when confronting a pandemic, in order to prevent an assault against the power of the state. In order to validate the theoretical finding presented thus far, the thesis now requires the establishment of pandemics as a political actor.

[95] Carr, E.H. (2001), *op. cit.* p.120.
[96] *Ibid.* p.121.
[97] For example, Lloyd N. Cutler (1984) contends that 'TV news now has a much greater effect on national policy decisions – especially foreign-policy decisions – than print journalism has even been able to achieve.' This is in large part because 'TV news has a wider reach and faster impact that must now be taken into account'. (p.113) Given the increased popularity of the internet and the proliferation of mobile communication devices, any government trying to exert influence, through propaganda, over its population, will have a difficulty. *See* Hanson, R.E. (2010) *Mass Communication Living in a Media World*, 3rd ed., Washington: CQ Press.
[98] Government control of education systems, particularly within African states, has led to an increase in enrolments within primary schools throughout the region. However, as argued by Boler and Archer (2008) such an increase has placed unprecedented strain on already fragile systems. Furthermore, the quality of education, particularly in relation to sexually transmitted diseases remains questionable. (pp.7-18)
[99] In analysing the outbreak of Plague in Australia during the early years of the 1900's Townsend (2007) contends that 'Australia had six years to prepare for plague, but when it arrived in January 1900 it infected thousands, killed hundreds, and stayed for more than twenty years'. (pp. 63-64)
[100] Carr, E.H. (2001), *op. cit.* p.123.

1.3 Pandemics as an International Actor

The aim of this section is to show that pandemics constitute an actor in a relationship of power with states. Baldwin's four dimensions of power: scope, domain, weight, and cost, when applied to pandemics clearly illustrate the power of this non-state actor. In recognising the relationship of power between states and pandemics, the possibility of applying a wider framework of analysis to assess the impact of infectious disease pandemics is validated.

The shift towards the relational conception of power is considered to have 'constituted a revolution in power analysis'.[101] The move allowed for the idea that power was more multi-dimensional than previously thought, and that 'power could increase in one dimension while simultaneously decreasing in another'.[102] The malleable nature of conceiving power across a number of dimensions creates the ability to assess various actors within IR. The use of Baldwin's dimensions to establish the relationship between the non-state pandemic actor, and the state actor is vital, as the dimensions provide the tools necessary to confirm the power of the pandemic in question.

1.3.1 Scope

Baldwin's first dimension of scope encapsulates the aspect of behavioural change that transpires in the state affected by the pandemic. The impact of any pandemic on any state is multifaceted. Hughes provides a strong example of this impact in relaying the significance of The Bubonic Plague on Sydney in the early 1900s.

> One day no one gave it a thought; on the morrow it was in all men's mouths. Before noon, alarm bordering on panic had spread throughout the community, and by nightfall the trains to the mountains were crowded with citizens fleeing from the infected city. The columns of the Press were full of stories well calculated to arouse the fears of the people: articles by distinguished specialists; ghastly stories of the Great Plague of 1665, when the doors of the stricken houses were daubed with a red cross, and the drivers of the carts into which those who had succumbed were dumped, cried, "Bring out your Dead!" All this

[101] Baldwin, D.A. (2002), *op. cit.* p.178.
[102] *Ibid.*

> and much more of the same kind put the fear of God into the people. Normal Business in Parliament and outside it was almost at a standstill.[103]

Initially, the immediate impact of a pandemic places extra strain on established health infrastructure. Yet, in order to counter successfully the spread/scope of the pandemic, a state must also look towards the coordination of effective border response programs and other non-health areas, for greater insulation from the pandemic actor. Indeed, the scope of The Bubonic Plague pandemic on Australia 'had a profound effect on Australia's healthcare systems'.[104] In more recent years, states have established preparedness plans to counter the scope of any potential outbreak,[105] yet the success of these plans has been moderate at best; the type of contagion, as well as the severity of its mortality rate, requires changes in the established behavioural pattern of states. Those changes will be determined by the scope of the pandemic. Essentially two main components of assessment determine the scope of a pandemic: first, the changes within the domestic behaviour of the state that is a result of the pandemic, and, second, the changes in the international behaviour of the state and the ramifications for the state's power, when responding to a pandemic. As the contagion spreads, the scope of the pandemic will become more impactful and significantly more difficult for the state to counter.

1.3.2 Domain

As the pandemic impact deepens both nationally and internationally, the domain of its influence continues to grow. The technical definition of a pandemic, as offered by the WHO is an infectious agent that causes 'sustained community level outbreaks in two or more countries in one WHO region'[106] and that the same infectious agent

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[103] Hughes, W.M. (1950) *Policies and Potentates,* Sydney: Angus and Robertson, p.37.
[104] Townsend, I. (2007) 'Learning from Forgotten Epidemics' in Schultz, J. ed., *Griffith Review 17: Staying Alive,* Griffith University: South Brisbane, p.64. Townsend maintains that the pandemic 'revealed widespread conditions of filth; it [the pandemic] resulted in the creation of a national quarantine service; and more money was spent on public health systems…In fact, the plague helped create the public health systems we know today.' (p.64)
[105] These preparedness plans were specific to an outbreak of pandemic influenza and are typically housed within a state's ministry or department of health.
[106] The WHO has established six regions around the world they are – Africa Region, Region for the Americas, the Eastern Mediterranean region, European Region, South-East Regions, Western Pasific [sic] Region. (WHO, 2009a) *See* Appendix One: *WHO Member States By Region.*

causes 'sustained community level outbreaks in at least one other country in another WHO region.'[107] Therefore, by virtue of definition, pandemics have a domain of considerable size.

The simplicity of such a definition posed some difficulty for the international community during the 2009 outbreak of pandemic influenza. Specifically, the contemporary media coverage allowed for a proliferation of misinformation. Jenkins maintains that:

> The role of the media in a pandemic situation is immensely influential. Initial media focus on the WHO Pandemic Phase step up to Level 6[108] led the public to believe we were on the brink of a catastrophic and devastating pandemic, rather than by way of explanation informing them that this is a predictable, natural evolution of spread of disease.[109]

When looking solely at the 'domain' of the pandemic, there is a need to limit the influential factor of the virulence of the contagion. In other words, regardless of the virulence of the pandemic in question, for the purposes of this thesis, the geographic spread of the pandemic is the contributory factor towards the domain aspect of power.

1.3.3 Weight

The third dimension refers to the weight or probability that the pandemic was responsible for the change in behaviour. In order to comprehend the probability of responsibility, an assessment of the severity of a pandemic is necessary. In gauging the severity of a pandemic, the United States of America (USA) based Centers for

[107] World Health Organization (2009a) *Pandemic Influenza Preparedness and Response: a WHO Guidance Document,* Geneva: World Health Organization, p.25.
[108] The WHO initially developed the pandemic phase framework in 1999 and revised the initial system in 2005. The aim of the phase framework, according to WHO (2009a), is to 'make the phases…applicable to the entire world and provide a global framework to aid countries in pandemic preparedness and response planning.' (p.24) The WHO stipulates that the pandemic phases are not 'designed to predict what will happen during a pandemic' nor are they 'always going to proceed in numerical order.' (p.24) A significant point of contention with the WHO document relating to the definition of pandemic adopted by the Organization. Specifically, the removal of the need for 'a new influenza virus…[appearing]...against which the human population has no immunity, resulting in several, simultaneous epidemics worldwide with enormous numbers of deaths and illness.' (WHO, 2005; Doshi, 2009)
[109] Waterer G.W., Hui, D.S., and Jenkins, C.R. (2010, *op. cit.* p.54.

Disease Control and Prevention (CDC) highlight the need to compliment WHO's Pandemic Phase's system with,

> a Pandemic Severity Index [PSI] based primarily on case fatality ratio, a measurement that is useful in estimating the severity of a pandemic on a population level and which may be available early in a pandemic for small clusters and outbreaks.[110]

The central purpose of the PSI is to assist in the planning stages for a state's response to a specific outbreak. By establishing a correlation between pandemic severity and the scope of behavioural change, the understanding of the relationship of power between the state and the pandemic actor becomes unambiguous. While other 'epidemiologic features that are relevant in overall analysis of mitigation plans include total illness rate, age-specific illness and mortality rates, the reproductive number, intergeneration time, and incubation,'[111] the likelihood of this information being available 'during the early stages of a pandemic,' is low.[112] More importantly, by adopting a historical analysis of past pandemics, it is possible to incorporate these particulars into the analysis of a pandemic's weight. In doing so, the contention becomes unmistakable of the pandemic in question being responsible for the scope of behavioural change exhibited by the state.

1.3.4 Cost

The cost of both preparing and countering a pandemic constitutes the fourth dimension of relational power. Baldwin maintains that this relational aspect of power needs to accommodate the cost to both actor A and actor B. Pandemics are unique in that 100% of the cost is borne by the state, the financial cost to the pandemic actor is nil.[113] Moreover, the cost to the state is likely to be varied relative

[110] Centers for Disease Control (2007) *Interim Pre-pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States- Early, Targeted, Layered Use of Nonpharmaceutical Interventions,* Centers for Disease Control [online], available at http://www.pandemicflu.gov/plan/community/community_mitigation.pdf [accessed 7 Jan 2011] p.31.
[111] *Ibid.*
[112] *Ibid.*
[113] When assessing one actor's power over another the calculation of financial cost to both actors can be extrapolated relatively simply. Similarly, the determination of the cost of a pandemic on the state actor can also be assessed. However, the cost to the non-state pandemic actor is significantly more difficult to assess. If a pandemic is to an infectious disease, as a state's foreign policy is to the state,

to the preparedness of the state to mitigate the specific organism constituting the pandemic. Such a diversity of scale propels the power status of pandemics significantly. As the past has shown, states incur considerable expense in order to counter pandemics; this, when combined with the impact on a states elements of national power, presents a serious imbalance in the power dichotomy between the state and pandemic.

When assessing the above dimension for 'meaningful scholarly communication,' Baldwin maintains the minimum set of conditions, as put forward by Jack Nagel, which should be used to establish a causal concept of power, to be the domain and scope of the actor.

> To say 'X has power' may seem sensible, but to say 'X causes' or 'X can cause' is nonsense. Causation implies an X and a Y – a cause and an effect. If power is causation, one must state the outcome causes. Stipulating domain and scope answers the question 'Power over *what*?'[114]

Pandemics do have significant scope and domain. By incorporating the dimension of weight within the analysis of pandemics, the significance of the actor's scope and domain is reinforced. The impact of pandemics has been well known: weighty losses of life, yet the threat of pandemics is still not taken as seriously as other threats. WHO has expressed concern that 'pandemic preparedness in most, if not all countries, remains incomplete'.[115] The lack of preparedness may be indicative of a lack of appreciation of the impact that pandemics can have, and have had on international affairs. Through the recognition of the power possessed by a pandemic, the possibility of enhancing that appreciation becomes reality. Furthermore, by investigating the relationship between pandemics and the evolution of international society, a wider understanding of the pandemic threat is developed.

the potential cost of the pandemic behaviour is the eventual eradication of the disease. While such a ramification would pose a significant deterrent towards a sentient being, the non-cognisant status of infectious disease makes the notion of cost towards itself mute.

[114] Nagel J. (1975) 'The Descriptive Analysis of Power', New Haven: Yale University Press, in Baldwin, D.A. (2002), *op. cit.* p.114.

[115] World Health Organization (2009a), *op. cit.* p.13.

1.4 Pandemics and the Evolution of International Society

Infectious disease has been a constant companion of humankind throughout the evolution of international society. Pirages contends that 'large scale disease outbreaks, epidemics, and even pandemics occur when something happens to disturb an evolutionary equilibrium that normally exists between people and pathogens.'[116] Indeed, this persistent disturbance in the 'biological equilibrium between man and microbe'[117] illustrated via three 'historic transitions,' provides a significant insight into the role assumed by pandemics in international relations.

The first such transition is believed to have occurred 'from around 15,000 years ago' as human population size expanded rapidly.[118] According to McMichael, the formation of stable agrarian communities allowed parasitic agents greater exposure to potential victims for two main reasons:

> First, human settlements were pervaded by their own accumulated waste and excreta, and this enabled the recycling of infectious agents, assisted by proliferating rodents and insects. Second, many new infectious agents were acquired from closely encountered animal populations.[119]

As communities expanded into towns and city-states the propensity increased for disease to become endemic. However, historic evidence for pandemics is difficult to ascertain, 'from around 3,500 years ago there are clear references to epidemic diseases in the Bible.'[120] Indeed, 'written evidence does…clearly attest the appearance of epidemic diseases in the ancient Middle East.'[121] As time progressed both human and microbe developed an ability to cohabitate. However, human propensity for exploration would lead, once again, to a disturbance of this re-established equilibrium.

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[116] Pirages, D. (2005), *op. cit.* p.44.
[117] McMichael, A.J. (2001) *Human Frontiers, Environments and Disease,* Port Chester NY: Cambridge University Press, p.98.
[118] McMichael, A.J. (2001), *op. cit.* p.100.
[119] *Ibid.* p.101.
[120] *Ibid.* p.104.
[121] McNeill, W.H. (1998). *Plagues and Peoples,* Garden City, NY: Anchor Books, p.96. Specifically McNeill singles out the 'disasters mentioned in the Babylonian *Epic of Gilgamesh* as preferable to the flood was visitation from the god of pestilence, and an Egyptian text of about the same age (ca. 2000 B.C.) compares fear of Pharaoh with fear of the god of disease in a year of pestilence,' as evidence of the presence of disease prior to biblical texts. (p.96)

Established civilisations started to branch out to make contact through 'trade, travel and regional warfare'[122] beginning around 2,500 years ago. Once again the world started to witness a disturbance of that fragile equilibrium. As the 'Roman Empire and China's Imperial Han Dynasty, at opposite East-West poles of Eurasia, began to make contact…epidemic convulsions began to occur as virulent, newly exchanged epidemics ravaged both populations.'[123] According to McMichael 'in the second century AD, the records indicate that both Rome and China were overwhelmed, and probably politically enfeebled, by pestilence.'[124] Throughout this transitional period, plagues of infectious disease ravaged throughout the civilised world.

The impact of the subsequent Black Death in particular highlights the severity of pandemics, and the widespread implications for society. The Black Death 'devastated the Western world from 1347 to 1351 killing 25% to 50% of Europe's population.'[125] James Thompson, expressing surprise at the similarities with more modern times,[126] argues that society experienced: 'economic chaos, social unrest, high prices, profiteering, depravation of morals, lack of production, industrial indolence, frenetic gaiety, wild expenditure, luxury, debauchery, social and religious hysteria, greed, avarice, maladministration, decay of manners.'[127] Regardless of timeframe, such societal impacts of pandemics contribute to the overall threat posed to a state's power.

[122] McMichael, A.J. (2001), *op. cit.* p.107.
[123] *Ibid.* p.107.
[124] *Ibid.*
[125] Gottfried, R.S. (1983), *The Black Death: Natural and Human Disaster in Medieval Europe,* New York, NY: The Free Press, p.xiii.
[126] Thompson authored his piece in 1921 following the conclusion of World War I and three years following the Spanish Influenza pandemic.
[127] Thompson, J.W. (1921). The Aftermath of the Black Death and the Aftermath of the Great War, *The American Journal Of Sociology,* 26(5), p565.

The third transition began 'as Eurasian and non-Eurasian civilisations made trans-oceanic contact.'[128] Throughout this transition, infectious disease became an impressive weapon, albeit accidentally, for the microbe-carrying conquering forces of Hernando Cortez over the Aztec Empire where pandemics thinned the indigenous populations.[129] The exposure of the indigenous peoples of New World America to 'Old World infections' ranged from European settlements in California, Louisiana and as far north as Canada.[130] The transition continued and during the period from 1490 to 1648 the world 'was scarred by warfare, religious schisms and fast moving epidemics'.[131] Even fiscal policy contributed, when 'in the seventeenth century the trans-Atlantic slave trade introduced the deadly falciparum malaria and yellow fever to the Americas'.[132] In Hawaii, the impact of disease outbreaks on the indigenous population was devastating; 'the native Hawaiian population declined from 300,000 to 37,000 within 80 years of Captain James Cook's first arrival'.[133] In exposing these indigenous populations to infectious disease, the ability multiplied for the Europeans to hasten the colonisation process and increase their state power.

Arguably, the global political system is currently experiencing the fourth transition, in large part due to 'the dynamics of industrialization, globalization, population growth, and urbanization'.[134] McMichael contends that:

> As populations become interconnected economically, culturally and physically, the mixing of people, animals and microbes from all geographical areas intensifies, long-distance travel and trade facilitates the geographical redistribution of pests and pathogens.[135]

As the international system has evolved to encourage cooperation on political, military, economic and even health security, the world has encountered a number

[128] McMichael, A.J. (2001), *op. cit.* p.111.
[129] McNeill (1998) contends that the exposure of the Aztec and Incan civilisations to smallpox a 'population [that] lacked inherited or acquired resistances' (p.20) enabled the group of 600 Spaniards to conquer the population of millions. McNeill estimates that the disease likely caused the deaths of 'something like a quarter to a third of them.' (p.20)
[130] McMichael, A.J. (2001), *op. cit.* p.112.
[131] *Ibid.* p.113.
[132] *Ibid.* (2001), *op. cit.* p.114.
[133] *Ibid.*
[134] Pirages, D. (2005), *op. cit.* p.45.
[135] McMichael, A.J. (2001), *op. cit.* p.115.

of newly identified pathogens.[136] However, substantial efforts have been made by the international community to enhance the level of cooperation among states in order to provide a coordinated approach to limiting the impact of the pandemic actor.

1.5 The Evolution of International Health Security

At the inaugural International Sanitary Conference in Paris (1851), the vital principle that 'health protection was a proper subject for international consultations' was established.[137] In describing the first International Sanitary Conference, Hiroshi Nakajima, former Director General of WHO, contends that the conference was 'convened by the ministries of foreign affairs of eleven European states and Turkey to standardize the international quarantine regulations aimed at preventing the importation of cholera, plague and yellow fever'.[138] Furthermore, within the conference:

> Each country was represented by a diplomat and a public health physician. Each representative voted separately. This example of international cooperation in communicable disease control demonstrated how states' foreign health policies could be coordinated. Governments realized that international cooperation provided the best means of combating the threat of infectious disease transmission.[139]

Ever since the convening of the Conference, the cooperation between states, international health organisations, and non-government organisations has led to the conclusion of a number of treaties on a myriad of health issues.[140] Such efforts commonly fall under the banner of public health security. WHO stipulates that public health security 'is defined as the activities required, both proactive and reactive, to minimize vulnerability to acute public health events that endanger the

[136] For example, Swine (A/H1N1) Influenza (2009), Severe Acute Respiratory Syndrome (2003), the Nipah Virus (1999), Avian (H5N1) Influenza (1997), Variant Creutzfeldt-Jakob Disease (1997), Australian Bat Lyssavirus (1997).
[137] World Health Organization (2007)*, op. cit.* p.7.
[138] Nakajima, H. (1997) 'Global Disease Threats and Foreign Policy', *The Brown Journal of World Affairs,* 4(1), p.320.
[139] *Ibid.*
[140] Fidler, D.P. (2005) 'Health as Foreign Policy', *The Whitehead Journal of Diplomacy and International Relations,* Summer/Fall, p.180.

collective health of national populations.'[141] When elevated to an international status, such a definition is widened to incorporate the impact of disease on 'economic or political stability, trade, tourism, access to goods and services, and…demographic stability.'[142] While quarantine is considered to be a significant advancement in the realm of international cooperation, it is widely accepted that two other advances, sanitation and immunisation, were also an impetus for such international coordination.[143]

1.5.1 Quarantine

The notion of quarantine is relatively simple: separate the elements of the population who are sick, from those who are not.[144] According to WHO, 'the practice of separating people with disease from the healthy population is an ancient one, with both biblical and Koranic references to the isolation of lepers.'[145] However it was not until the plague pandemic of the 14th century, when the governments of Europe were faced with an immense political challenge, that 'the great plague [not only] disrupted government, the economic, and social and cultural life…[but also]…made way for a restructuring of local governments'.[146] Bourdelais, in describing the impact of plague on Italian city-states, contends that when 'faced with the threat of plague, it was governments, rather than the physicians at the famous Italian universities, that equipped themselves with the tools to fight epidemics.'[147] The role of the government in countering the great plague provides

[141] World Health Organization (2007), *op. cit.* p.1.
[142] *Ibid.*
[143] *Ibid.* p.6.
[144] The International Health Regulations, as agreed to by the World Health Assembly (2005) define quarantine to mean 'the restriction of activities and/or separation from others of suspect persons who are not ill or of suspect baggage, containers, conveyances or goods in such a manner as to prevent the possible spread of infection or contamination.' (p.8)
[145] World Health Organization (2007), *op. cit.* p.2.
[146] Bourdelais P. (2006) *Epidemics Laid Low: A History of What Happened in Rich Countries,* translated by Bart K. Holland, Baltimore: The Johns Hopkins University Press, p.14. [Brackets Added]
[147] *Ibid.* p.16.

the first example of a government taking actions to protect the state's power from a pandemic.

Bourdelais contends that the black plague enabled Italian states to institute a number of measures designed to protect the population. These measures also had significant international ramifications:

> In 1374, Genoa and Venice refused to let into port ships that had come from infected areas. In 1377, the town of Ragusa required a month's isolation before ships could enter the port. Soon thereafter, in Venice, this was extended to forty days, on the basis of the Hippocratic doctrine that considered the fortieth day as the last possible day of illness for acute diseases such as the plague. Thus, quarantine – the protective strategy that was to be used until the middle of the nineteenth century – was born.[148]

Indeed the measure of quarantine became a staple of pandemic response globally. Over time, cities would establish committees tasked with the coordination of public health measures, inclusive of quarantine.[149] According to WHO, 'during the 18th century, all major towns and cities along the eastern seaboard of the United States passed quarantine laws, which typically were enforced only when epidemics seemed imminent.'[150] The success of quarantine measures in combating infectious disease pandemics contributed to quarantine becoming a staple of both state governments, and the arsenal of the wider international community for confronting outbreaks of infectious disease. The implementation of quarantine measures by any state should be perceived as the state taking action to protect itself against the potential impacts from the introduction of pathogens to the state's environment.

1.5.3 Sanitation

The second major advance, sanitation, transpired in the mid-19th century when London was experiencing a particularly devastating cholera outbreak. The outbreak

[148] Bourdelais P. (2006), *op. cit.* p.15.
[149] World Health Organization (2007), *op. cit.* p.2.
[150] *Ibid.* p.2.

of cholera prompted a stronger, albeit somewhat mild, domestic focus on combating the disease.

> The first outbreak of cholera in Britain (1832) promoted establishment of local boards of health. Being unpaid and locally elected, the personnel of these boards often lacked experience as well as legal power to alter living conditions; indeed, not everyone agreed that filth and ill health went together.[151]

However, a physician by the name of John Snow[152] was able to demonstrate that outbreaks of cholera, particularly the 1854 outbreak, 'could be traced to the original source,'[153] being the Broad Street water pump. Snow explained 'the dismal ratios of survival among the people living near the pump, and the unusual exemptions granted to people who had not drunk the water.'[154] While somewhat sceptical of Snow's argument, the St James Parish Board decided to close down the pump.

Johnson maintains that the decision to remove the pump would 'be more significant than the short-term effects'[155] of preventing the pandemic. The pump's removal provided the impetus for greater public health interventions based on evidence' as opposed to mere conjecture:

> For the first time a public institution had made an informed intervention into a cholera outbreak based on a scientifically sound theory of the disease. The decision to remove the handle was not based on meteorological charts or social prejudice or watered-down medieval humorology; it was based on a methodological survey of the actual social patterns of the epidemic, confirming predictions put forward by an underlying theory of the disease's effect on the human body.[156]

The effect of Snow's discovery, as well as the decisive actions of the board, contributed 'to improvements in sanitation in the United Kingdom that reduced the threat of cholera'.[157] The role sanitation played in combating cholera is widely recognised. Furthermore, the role of the state in ensuring sanitation illustrates the value the state places on a healthy population to maintain its national power.

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[151] McNeill, W.H. (1998), *op. cit.* p.276.
[152] For a comprehensive account of Snow's investigations *see* Johnson, S. (2008) *The Ghost Map: A Street, A City, an Epidemic and the Hidden Power of Urban Networks,* London: Penguin.
[153] Johnson, S. (2008), *op. cit.* p.159.
[154] *Ibid.*
[155] *Ibid.* p.162.
[156] *Ibid.* pp.162-163.
[157] World Health Organization (2007), *op. cit.* p.4.

1.5.3 Immunisation

The infectious disease smallpox was another particularly devastating disease, in large part for its propensity to attack, and kill, children. The unrelenting severity of the disease bought about the third advance in global health security, inoculation or immunisation. According to WHO, 'during the 18th century, smallpox killed every seventh child born in Russia and every tenth child born in France and Sweden'.[158] This significant impact on the general population prompted Edward Jenner, in 1796, to conduct experiments to inoculate persons against the disease.[159] Medical considerations aside, and within the realm of this thesis, the importance of this event rests in the dissemination of information throughout the world, as McNeill contends

> Personal and political accidents, scientific and professional organization, and a systematically expanded network of communication among men of learning all came together therefore in the course of the eighteenth century to bring a sharp reduction of smallpox deaths within the power of European doctors. Organized medicine thereby began for the first time to contribute to population growth in a statistically significant fashion.[160]

While quarantine, sanitation, and immunisation, developed separately, the trilogy of advances 'came to be seen as requiring international coordination in order to strengthen global public health security'.[161] At the centre of encouraging both the coordination and cooperation required to control communicable disease exists the World Health Organization.

The potential consequences of pandemics led WHO, during the Twenty-Second World Health Assembly (1969), to adopt a series of regulations designed to minimise the impact of communicable disease,

> The International Sanitary Regulations were founded on principles which "ensure the maximum security against the international spread of disease with

[158] World Health Organization (2007), *op. cit.* p.5.
[159] According the McNeill (1998) Jenner, 'an alert English country doctor, who published his results to the world in 1798…noticed that milkmaids seemed never to suffer from smallpox and surmised that they instead contracted cowpox from the animals they tended. Experiment with inoculation of human patients with cowpox showed that immunity to human smallpox did indeed result; and the dangers from cowpox for humans was negligible.' (p.257.)
[160] McNeill, W.H. (1998), *op. cit.* p.260.
[161] World Health Organization (2007), *op. cit.* p.6.

> the minimum interference with world traffic. These regulations…included conditions and measures to be taken for control of infectious disease at seaports, airports, and border areas open to international traffic."[162]

The Regulations were designed to allow not just for the evolution of microorganisms, but the way to address them as well. In 1969 the International Sanitary Regulations 'were renamed the International Health Regulations' (IHR).[163] Nakajima argues that the regulations 'constitute an area where the foreign policy concerns of WHO's member states to protect the health of their citizens have been translated into an internationally binding legal instrument'.[164]

Significant changes within IHR have transpired within the most recent incarnation of the regulations. For example, WHO 'is now authorised through IHR to take into account information sources other than official notifications'[165] highlighting the seriousness of pandemics in the 21st century. In other words, WHO is now legally authorised to ignore the representations of the state, thereby confronting the sacred concept of sovereignty, and accept reports of disease from other sources.[166] The evolution of international health security has shown that the impact of pandemics in the past has prompted major reforms for combating the scourge of infectious disease. The realisation for international cooperation is vital for any effort in defeating future pandemics. However, there can be no escaping the difficulties in bringing about such cooperation. In large part these difficulties have been limited by an omission to acknowledge that pandemics are an actor in international affairs.

[162] Nakajima, H. (1997), *op. cit.* p.321.
[163] According to Nakajima (1997), 'the International Health Regulations are the only piece of international legislation confronting the global threat presented by communicable disease.' (p.321) The most recently agreed on International Health Regulations took place in 2005 and came into force in June of 2007. According to WHO (2007) 'they provide a legal framework for reporting significant public health risks and events that are identified within national boundaries and for the recommendation of context-specific measures to stop their international spread.' (p.12)
[164] Nakajima, H. (1997), *op. cit.* p.321.
[165] World Health Organization (2007), *op. cit.* p.12.
[166] Specifically, Article 9 of the IHR makes explicit reference towards WHO taking into account reports from sources 'other than notifications or consultations and shall assess these reports according to established epidemiological practices and then communicate information on the event to the State Party in whose territory the event is allegedly occurring.'(World Health Assembly, 2005 p.12) WHO contends that this need arises from 'situations where countries may be reluctant to reveal an event in their territories' and in large part, 'reflects yet another of the realities stemming from the SARS outbreak: in an electronically transparent world where outbreaks are particularly newsworthy events, their concealment is no longer a viable option for governments.' (WHO, 2007, p.13)

1.6 Conclusion

By utilising the IR theory of realism, and the notion of relational power the chapter has laid the foundation for a more in-depth analysis of the impact of pandemics in the 21st century. The chapter contends that power is a determining factor of international relations, and that by looking towards the effects of a pandemic in terms of power, it becomes possible to establish a greater understanding of the politics and power of pandemics.

Infectious disease has played an important role in the evolution of human society. The requisite cooperation for actively fighting a pandemic has been widely recognised through the institution of IHR. As McNeill reminds:

> any effort to understand what lies ahead, as much as what lies behind, the role of infectious disease cannot properly be left out of consideration. Ingenuity, knowledge, and organization cannot cancel humanity's vulnerability to invasion by parasitic forms of life. Infectious disease which antedated the emergence of humankind will last as long as humanity itself, and will surely remain, as it has been hitherto, one of the fundamental parameters and determinants of human history.[167]

In arguing that pandemics are an actor in IR, the use of four dimensions of relational power, being the scope, the domain, the weight, and the cost of pandemics were assessed; in all dimensions pandemics easily constitute a challenge to a state's power. As an actor in IR, pandemics wield considerable power. While states do have an ability to combat the pandemic actor medically, such ability is usually delayed, while a viable treatment/prevention technique is discovered/adopted. By understanding the non-medical effects of a pandemic for a state's power, the state is able to minimise the wider implications derived from the pandemic actor and shield its national power.

The larger task of this thesis now becomes to establish realism as a valid theoretical framework of analysis for evaluating the threat to state power of the pandemic actor. By treating pandemics as an actor, and not merely an issue of health concern,

[167] McNeill, W.H. (1998), *op. cit.* p.295.

this thesis bridges a divide between IR and global health. The immediate task of the thesis now is to elaborate further the theoretical divisions within international relations to establish why realism, along with the use of an elements of national power approach, provides a strong and innovative framework for assessing the threat of pandemics to the state.

Chapter Two: Morgenthau's Classical Realism

2.0 Introduction

Theories of international relations provide a conceptual framework to analyse the complexities of the international political arena. According to Walt 'a theory is a causal explanation – it identifies recurring relations between two or more phenomena and explains why that relationship obtains.'[1] International relations theory allows this 'by providing…a picture of the central forces that determine real-world behaviour'.[2] As a subject international relations 'attempts to create criteria by which imperfections and injustices can be recognised, and dangerous risks avoided.'[3] In utilising a theoretical approach the possibility to create a framework for threat perceptions presents itself. As Hans Morgenthau notes,

> A theory of international relations performs the functions any theory performs, that is, to bring order and meaning into a mass of unconnected material and to increase knowledge through the logical development of certain propositions empirically established.[4]

By using a theoretical approach to assess the impact of pandemics on international relations it becomes possible to 'account for phenomena that would otherwise seem mystifying'.[5] The impact of pandemic actors on the power of a state is such a phenomenon that, with the use of international relations theory, the development becomes possible of a stronger understanding of the non-medical impacts of the disease.[6]

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[1] Walt, S.M. (2005) 'The Relationship Between Theory and Policy in International Relations', *Annual Review of Political Science,* (8), p.26.
[2] *Ibid.*
[3] Windsor, P. (2002) 'International Relations – The State of the Art' in Berdal M., ed. *Studies in International Relations: Essays by Philip Windsor,* Brighton: Sussex Academic Press, p.18.
[4] Morgenthau, H.J. (1970) 'The Intellectual and Political Functions of Theory', in Der Derian, J., ed. (1995) *International Theory: Critical Investigation,* London: Macmillan, p.46.
[5] Walt, S.M. (2005), *op. cit.* p.27.
[6] In the wake of the Spanish Influenza pandemic of 1918 George Soper, writing for *Science,* contended that 'the most astonishing thing about the pandemic was the complete mystery which surrounded it. Nobody seemed to know what the disease was, where it came from or how to stop it.' Furthermore, while 'floods, famines, earthquakes and volcanic eruptions have all written their stories in terms of human destruction…never before has there been a catastrophe at once so sudden, so devastating and so universal.' (Soper, p.501) The profound case of Spanish Influenza is that some 90 years later, the world is still troubled by its derivatives. (*See* Morens, D.M., Taubenberger, J.K., and Fauci, A.S. (2010) 'The 2009 H1N1 Pandemic Influenza Virus: What Next?', *mBio,* 1(4), e00211-

Having established pandemics as an actor in international affairs it now becomes the responsibility of this thesis to validate the use of IR theory to assess the political impact of pandemics. This chapter does so by providing a theoretical approach that will 'simplify reality in order to render it [the political response to pandemics] comprehensible'.[7] Traditionally, international relations theory has been utilised to 'explain or predict' the 'patterns of behaviour among various international actors'.[8] This chapter argues that the international theory of realism, specifically Hans Morgenthau's classical realism, provides the strongest framework of analysis to determine the threat posed to the international community by pandemics.

In order to validate such a position, the chapter will first provide an overview of the theory of realism, in particular the resurgence of realism in the 21st century, to establish the validity of the theoretical foundation of the thesis. Second, the chapter will draw on the work of Hans Morgenthau, particularly his interpretation of realism and the *politics among nations*[9] to confirm realism's utility as a diagnostic framework to assess the political impact of pandemics. Morgenthau's realist elements of national power approach, when assessing the pandemic threat develops a wider appreciation of the threats posed by pandemics to the nation state. This chapter illustrates the ability to bridge the theoretical divide between traditional and non-traditional security threats. By showing the adaptability of Morgenthau's framework the methodological approach of the thesis is exposed.

10.) Similar reports exist in regard to the devastation of Europe following the Black Plague, the impact of the HIV/AIDS pandemic throughout Africa, as well as the impact of Severe Acute Respiratory Syndrome outbreak. (*See* Chapter Four: *The Plague Pandemic*, Chapter Five: *The AIDS Pandemic* and Chapter Six: *The SARS Pandemic* for a more detailed account of the impact of these specific pandemics.)

[7] Walt, S.M. (2005), *op. cit.* p.26. [Brackets Added]

[8] Viotti P.R., and Kauppi, M.V. (1999) *International Relations Theory: Realism, Pluralism, Globalism and Beyond,* Needham Heights, MA: Pearson Education, p.3.

[9] Edward A. Kolodziej (2005) maintains that the title of Morgenthau's text indicates 'a sensitivity to nationalism as a force impelling state behaviour and shaping its value system and interests, a point lost to many theorists, such as Kenneth Waltz (1979), who implicitly transforms Morgenthau's pre-rational, pre-national, emotion-driven nation-states into cold-blooded rational entities inured to popular impulse of compulsions.' (p.119)

In his seminal work *Politics Among Nations: The Struggle for Power and Peace*, Hans Morgenthau develops a theory based on political reality. He aims to create a theory that would not be judged by 'some preconceived abstract principle or concept unrelated to reality', but one that could 'bring order and meaning to a mass of phenomena that without it [the theory] would remain disconnected and unintelligible.'[10] In order to develop such a theory, Morgenthau adopted 'the central terms "power" and "interest",' and in doing so created 'a realist model that described objective patterns in the structure and dynamism of world politics'.[11] In using Morgenthau's model to interpret the threat posed to nations by pandemics, the utility of his theory is magnified to accommodate the more recently termed non-traditional security threats.

The use of a traditional theory, to assess the non-traditional security threat of pandemics, seeks to realign the notion of threat perception within the realist framework. At the heart of realism is the premise that 'the overriding goal of states in this environment of international anarchy is to survive,'[12] and that, 'the only way that states can reasonably ensure their survival is to increase their power'.[13] Any actor that negatively impacts on a state's power threatens that state's ability to survive. Yet, when it comes to the study of health activity and international relations, David P. Fidler, contends that 'international health activity has been obscure and neglected,' a possible consequence of 'those who dissect international politics…[considering] health issues unimportant and uninteresting'.[14] Fidler reasons that such a scenario transpires because,

> The neglect of health has been considered a function of health's place in the so-called "low politics" of international relations. "High politics" involves issues of

[10] Morgenthau, H.J. (2006), *op. cit.* p.3. [Brackets Added]
[11] Hacke C. (2005) 'Power and Morality: On the Legacy of Hans J. Morgenthau', *American Foreign Policy Interests,* 27, p.171.
[12] Weber C. (2001) *International Relations Theory: A Critical Introduction,* London: Routledge, p.15.
[13] *Ibid.*
[14] Fidler, D.P. (2005), *op. cit.* p.180. [Brackets Added]

> war and peace, competition for power, the dilemma of national security, and the fight for survival in anarchy. "Low politics" concerns international cooperation on economic, environmental, and social issues. The distinction between "high politics" and "low politics" has been prominent in debates in international relations theory.[15]

The relegation of health to a low politics category insinuates that states will seek cooperation when attempting to counter the effects of a pandemic. In response to a pandemic, states have often acted collectively both to develop and embrace measures of prevention. Bourdelais argues that such cooperation indicated 'the determination of governments' and their desire 'to protect cities, provinces, and countries from danger,'[16] being largely derived from historic experience. Indeed, 'historians know quite well that [with] each step toward the globalization of trade and the economy…a new generation of epidemics'[17] was encountered. When a pandemic threatens, the desire and need for international cooperation is strong. However, rarely do the cooperative measures that transpire prove to be adequately effective. Such reluctance is indicative of the state confronting pandemics with an isolationist grasp, placing the survival of the state before any collective measures, and further reinforcing the realist notions of self-interest and survival.

Central to the debate surrounding the prominence of realism is the apparent disregard of the theory for international cooperation. Indeed, critics of realism refer to the end of the Cold War and the adoption of international cooperative regimes, and the increased prominence of the United Nations, as evidence of realism's demise.[18] However, realism does not rule out the notion of international cooperation as Thompson and Clinton confirm:

> By and large, realists have not maintained that international cooperation is impossible but only that, in order to be successful, efforts at international cooperation must accommodate themselves to the realities of power, rather

[15] Fidler, D.P. (2005), *op. cit.* p.180.
[16] Bourdelais, P. (2006), *op. cit.* p.xii.
[17] *Ibid.* pp.x – xi. [Brackets Added]
[18] Michael Cox (2007) argues that critics of realism often attach the theory to 'the Cold War as a particular kind of bipolar system that had bought about some form of stability to the world. Hence, its incapacity to predict the system's demise occurred not just for intellectual reason alone…but because of something far more disturbing: its identity with, and effective defence of an order whose structures it should have been analysing instead of rationalizing.' (p.168)

> than vainly attempting to suppress the desire for power or ignoring the pattern of relative influence that the current distribution of power creates.[19]

When a state is forced to confront the pandemic actor, more often than not, the state has little choice but to seek international cooperation, in order to minimise any disruption of its national power. Mearsheimer provides insight into the notion of cooperation within the realist world, conceding that such cooperation 'is difficult to achieve…and always difficult to sustain'.[20] The main difficulty in facilitating genuine international cooperation stems from two factors, 'relative-gains considerations, and concerns about cheating'.[21] These difficulties conform to the realist concept of survival being the primary motivation of state behaviour. In regard to a pandemic, the survival of the state is the impetus for all state cooperation. As the case studies contained in Chapters Three, Four and Five convey, the actions taken by a state to survive a pandemic are of an extreme parallel to state actions often reserved for times of war. At times of war, the bridge/barriers between theory and practice blur.

2.1 Realist Theory and Practice

Realism remains prominent in the field of international relations theory.[22] Legro and Moravesik summarise the situation with realism remaining, 'the primary or alternative theory in virtually every major book or article addressing general theories of world politics.'[23] Furthermore, political science academics such as William C. Wohlforth endorse realism as 'the foil against which many other schools of thought define themselves and their contributions,' and suggest that if one were to 'take realism out of the picture…the identities of these schools as well as the

[19] Thompson, K.W. and Clinton, W.D. (2006), *op. cit.* p.xviii.
[20] Mearsheimer, J. (1994-95) 'The False Promise of International Institutions', *International Security*, 19(3), p.12.
[21] *Ibid.* Mearsheimer echoes Grieco's 1988 *International Organization* article 'Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism'. Grieco's central thesis in regard to cooperation is predicated on 'realism find[ing] states are positional' and that 'state positionality is more defensive than offensive in nature.'(p.500) In essence, because 'states are uncertain about one another's future *intentions*…they pay close attention to how cooperation might affect relative *capabilities* in the future.' (p.500) [Brackets Added]
[22] *See* Legro J.W. and Moravesik A.M. (1999) 'Is Anybody Still a Realist', *International Security,* 24(2), p.5; Zakaria, F. (1992) 'Is Realism Finished', *The National Interest,* 20(Winter), p.21.
[23] Legro, J.W. and Moravesik, A.M. (1999), *op. cit.,* p.5.

significance of their argument' would become 'much less clear'.[24] In looking to define the theory Nikolas Gvosdev, executive editor of *The Nations Interest,* succinctly argues that 'realism is conflated with "being realistic," that is, adopting a particular course of action that is pragmatic or expedient'.[25] Gvosdev's definition lays bare a theoretical concept that maintains a rich history.

The central characteristics of realism have a tendency to 'converge around four central propositions' to establish the theoretical construct.[26] The first proposition pertains to the notion of groupism, the premise of which is that 'politics takes place within and between groups'.[27] The solidarity within these groups provides the foundation for 'domestic politics and conflict and cooperation between polities [being] the essence of international politics'.[28] In regard to the nature or essence of the polity 'realism makes no assumption' allowing realism to be applied 'to any social setting where groups interact'.[29] Wohlforth maintains that in order 'to survive at anything beyond a subsistence level, people need the cohesion provided by group solidarity, yet that very same in-group cohesion generates the potential for conflict with other groups.'[30] In respect to the likelihood of cooperation under a realist paradigm, Ilona Kickbuch contends that realism foresees 'the co-operation of sovereign states in global health as interdependent utility functions based on self-interest, security considerations and competition for power'.[31] While the desire for cooperation may exist, without the considerations of security and self-interest, the impetus for cooperation is lacking. Therefore, the essence of international politics is

[24] Wohlforth, W.C. (2008) 'Realism', in Reus-Smit, C., and Snidal, D., eds., (2008) *The Oxford Handbook of International Relations*, New York: Oxford University Press, p.131.
[25] Gvosdev, N.K. (2005) 'The Values of Realism', *The SAIS Review,* XXV(1), p.17.
[26] Wohlforth, W.C. (2008), *op. cit.,* p.132.
[27] *Ibid.* p.133
[28] Wohlforth, W.C. (2008), *op. cit.* p.133. [Brackets Added]
[29] *Ibid.* Mearsheimer (2001) elucidates on the realist worldview in that 'Realists tend not to draw sharp distinctions between 'good' and 'bad' states, because all great powers act according to the same logic, regardless of their culture, political system, or who runs the government.' (pp. 17-18)
[30] *Ibid.*
[31] Kickbuch, I. (2003) 'Global Health Governance: Some Theoretical Considerations on the New Political Space', in Lee, K. ed., (2003) *Health Impacts of Globalization: Towards Global Governance,* Basingstoke: Palgrave, p.194.

epitomised through either 'conflict' or 'cooperation' among political groupings or polities.[32] The behaviour of these political groupings is reflected by the second proposition of realism, egoism.

Egoism is defined by Wohlforth as political action by individuals or groups 'driven principally by narrow self-interest'.[33] Egoism is central to the realist argument that 'all politics is an expression of the same human drives'.[34] Hans Morgenthau informs Wohlforth's assertion in arguing that interest, or egoism, 'is indeed the essence of politics, and is unaffected by the circumstances of time and space'.[35] While egoism is capable of being 'overcome by national and international political structures, institutions and values,'[36] Zakaria contends that the longevity of these regimes can be limited as,

> International regimes serve to regularize cooperation, reduce transaction costs, and provide institutional support for multilateral policies. These regimes often play a positive role in international life, but they cannot make member-states choose international over national interests.[37]

The inability for international regimes to enforce compliance from members in line with the regimes', or international, interest makes a contribution to the third proposition articulated by Wohlforth; anarchy.

Simply put, 'the absence of a government dramatically shapes the nature of international politics' and relates to the anarchic international system.[38] The constant flux of anarchy imposes 'distinctive constraints on the ability of

[32] Wohlforth, W.C. (2008), *op. cit.* p.133.
[33] *Ibid.*
[34] Lebow, R. N. (2010) 'Classical Realism', in Dunne, T., Kurki, M., and Smith S., eds., (2010) *International Relations Theories: Discipline and Diversity,* New York: Oxford University Press, p.61. Central to Morgenthau's (2006) concept of realism is that 'political realism, like society in general, is governed by objective laws that have their roots in human nature.' (P.4) Thompson and Clinton (2006) go as far as to argue that 'stemming from their understanding of human nature, and their reading of history, realists hold such a respect for the destructiveness of power and such a fear that it will be misused that they are convinced that it must be *controlled.*' (p.xxi)
[35] Morgenthau, H.J. (2006), *op. cit.*, p.10.
[36] Wohlforth, W.C. (2008), *op. cit.* p.133.
[37] Zakaria, F. (1992), *op. cit.* p.29.
[38] Wohlforth, W.C. (2008), *op. cit.* p.133.

international actors to achieve their purposes and exacerbate[s] group egoism.'[39] According to Joseph M. Grieco realists believe that international anarchy 'fosters competition and conflict among states and inhibits their willingness to cooperate even when they share common interests.'[40] Grieco's argument is further reinforced by Kenneth Waltz, who in his 1959 work *Man, the State, and War,* retells Rousseau's stag parable to illustrate cooperative action, 'when all agree on the goal and have an equal interest in the project, one cannot rely on others'.[41] Likewise, the anarchic structure of international politics provides an environment for states to execute their power to ensure their survival.

When analysing international relations, realists 'look for where the power is, for what the group interests are, and to the role power relationships play in reconciling clashing interests.'[42] For this reason the fourth, and possibly most cited, proposition regarding realism is the notion of power politics.[43] Morgenthau's justification for the utilisation of power as a central signpost for political realism was to define 'the concept of interest in terms or power'.[44] The notion of interest defined as power provides an 'objective category that is universally valid, but…does not endow that concept with a meaning that is fixed and for all'.[45] The intent is that a state's interest is not set in stone: as time progresses there is a need for those responsible for maintaining the state's national power, not only to recognise the movements within the gamut of national interest, but to appreciate the threats towards that interest, and to ensure the preservation of the state's national power.

[39] *Ibid.* [Brackets Added]
[40] Grieco, J. M. (1988) 'Anarchy and the Limits of Cooperation: A Realist Critique of the New Liberal Institutionalism', *International Organization,* (42)3, p.485.
[41] Waltz, K.N. (2001), *op. cit.* p.168. Rousseau's stag parable, as told by Waltz (2001): 'Assume five men who have acquired a rudimentary ability to speak and to understand each other happen to come together at a time when all of them suffer from hunger. The hunger of each will be satisfied by the fifth part of a stag, so they "agree" to cooperate in a project to trap one. But also the hunger of any one of them will be satisfied by a hare, so, as a hare comes within reach, one of them grabs it. The defector obtains the means of satisfying his hunger but in doing so permits the stag to escape. His immediate interest prevails over consideration for his fellows.' (pp.167-168)
[42] Wolhforth, W.C. (2008), *op. cit.* p.134.
[43] *See* Chapter One section 1.1 *Power and Pandemics: Power and International Relations.*
[44] Morgenthau, H.J. (2006), *op. cit.* p.5.
[45] *Ibid.* p.10.

In confirming the prominence of power and politics Morgenthau maintains that 'all political phenomena can be reduced to one of three basic types. A political desire either to keep power, to increase power, or to demonstrate power.'[46] The ability to conceptualise 'interests defined as power' provides a significant advantage to the scholar of international relations. Morgenthau advocates that conceiving of 'interests defined as power imposes intellectual discipline on the observer, infuses rational order into the subject matter of politics, and thus makes the theoretical understanding of politics possible.'[47] By concentrating on power, and the elements constituting that power, realism presents itself as a theory that will enable an assessment of the threat posed to the state by the pandemic actor. As will be shown, during the period of a pandemic, and the aftermath, states act purposely to keep their power and seek increased power against the threat, and throughout, demonstrate their power in all their actions in confronting the contagion threat.

In order to demonstrate these overarching concepts of Realism, it is important to now identify and drill down into the particular elements of national power as identified by Morgenthau. Such attention will facilitate a nuanced understanding of the relationship between the pandemic actor and the components of state power.

2.2 Morgenthau's Elements of National Power

In order to ascertain 'the power of a nation vis-à-vis' other nations, Hans Morgenthau established 'the components of what…[he] called national power'.[48] This thesis focuses on the threat posed by a pandemic towards a state's power. In

[46] Morgenthau, H.J. (2006), *op. cit.* p.50. Zakaria (1998) goes one step further in arguing that it is the 'statesman's responsibility…to maximise his country's security and influence in the world; to allow for the inevitable shifts in international power and prestige; and finally, to preclude or preempt a general war.' (p.29)
[47] Morgenthau, H.J. (2006), *op. cit.* p.5.
[48] Morgenthau, H.J. (2006), *op. cit.* p.122.

order to establish a framework to assess the impact of pandemics on national power the thesis uses Morgenthau's various elements of national power. Such an assessment reveals the vulnerabilities of the nation state. Morgenthau contends the main vulnerability is the breaking point of both individuals, and societies as:

> …[T]here is a point beyond which human endurance does not carry human initiative in the face of such unprecedented massive devastation…under the impact of such devastation, civilization itself will collapse.[49]

In employing Morgenthau's elements of national power this thesis seeks to provide an interpretation of the threat posed by pandemics of infectious disease to a state's national power.

2.2.1 Geography

Morgenthau contends that the element of geography is 'the most stable factor on which the power of a nation depends'.[50] His assertions are founded on the strategic strength of a state that finds itself geographically isolated from the rest of the world.[51] Isolation provides a buffer, protecting the state from an aggressor state considering conflict, allowing the state to foresee the pending conflict and then make adequate preparations for protection from the aggressor. Geographic isolationism provides little solace for the unseen threat such as pandemics, hence Morgenthau's concession that the element of geography is, 'certainly much less important today than it was fifty or a hundred years ago' now appears predictive.[52]

The 'geographic conditions' of a state 'have great influence on international problems';[53] a state's geographic situation should be utilised as a gauge of the

[49] Morgenthau, H. J. (1966) 'The Purpose of Political Science', in Charlesworth, J.C., *A Design for Political Science*, Philadelphia, PA: American Academy of Political Science, pp.66-67. [Brackets Added]
[50] Morgenthau, H.J. (2006), *op. cit.* p.122.
[51] Morgenthau (2006) illustrates his argument by looking towards the 'insular location' (p.123) of Great Britain contending that the physical separation of Great Britain from the rest of Europe 'by a small body of water, the English Channel' (p.122) impeded the conquering forces of Julius Caesar, William the Conqueror, Philip II, Napoleon, and Hitler.
[52] Morgenthau, H.J. (2006), *op. cit.* p.122.
[53] Wilson, C. M. (1950) 'The Geographical Basis of National Power', *Ohio Journal of Science,* 50(1), p.35.; Wilson argues that geographic conditions incorporate aspects such as 'space relations (location, size and shape), land forms, climate, land content (soils and minerals), and native vegetation' all of which 'strengthen[s] some states and weakens others'. (p.35)

impact of any security threat. Morgenthau further maintains that there are two prominent measures within the element of geography: the state's location and the state's size, both of which contribute to the susceptibility of the state, and the ability of the state to respond. Both are critical at a time of a pandemic.

The strength of a state's geographic location is of 'paramount consideration in analyzing a nation's actual and potential power'.[54] Location plays a crucial role in sustaining a population.[55] Geography is constant and it is difficult to modify. Spykman goes so far as to argue that 'geography is the most fundamental factor in the foreign policy of states because it is the most permanent'.[56] Morgenthau illustrates that history has shown that, where states are either isolated by the ocean or provided solace by a rugged mountain range, they have a relative power advantage in the face of a traditional threat, such as an advancing military.[57] Yet technological advances have a negative impact on the value of such security. While Morgenthau argues it to be 'fallacious to assume…that the technical development of transportation, communications and warfare has eliminated altogether the isolating factor of the oceans,'[58] it stands within reason that Morgenthau was unable to fully predict the extraordinary advances in technology of the modern era. However, technological advances, have not challenged the fundamentals of Morgenthau's realism. Technological globalisation, and the speed with which it has become 'part of every society's strategy for survival and progress,'[59] can be perceived as demanding a contemporary interpretation of the traditional protective power of the (physical) geographic element.

[54] *Ibid.* p.37.
[55] The geography of a nation not only has the ability to provide solace to a community from an aggressor, but also incorporates the viability of sustaining the population based on the agricultural possibilities derived from the quality of the soil.
[56] Spykman, N. J. (2007) *America's Strategy in World Politics: The United States and the Balance of Power,* New Jersey: Transaction Publishers, p.41.
[57] Morgenthau, H.J. (2006), *op. cit.* pp.122-124.
[58] *Ibid.* p.122.
[59] Khanna, P. (2008) *The Second World: How Emerging Powers are Redefining Global Competition in the Twenty-First Century,* London: Penguin Books, p.xxi.

In regard to trade, a state's geographic location has become strategically less important, for example, in the 21st century, than it was previously.[60] Curtis Wilson echoes Morgenthau's thesis when he states, 'location…determines their [the states] degree of accessibility, a factor which no state can afford to ignore if expecting to survive in a world harassed by international conflict.'[61] As a result, the notion of protection offered by borders becomes altered, but nonetheless important. Borders foremost act as a barrier to those beyond them and as a boundary marker for the terrain and space for the population within. However their repelling and containment abilities have altered.

The more accessible a state's border the more likely an actor's ability to capitalise on such a weakness. Threats towards a state's territorial border vary significantly, based on the geographic factors of that border. States that share mutual borders, without geographical intimidation, are more prone to mutual intimidation of one another, than states whose geography manages to seclude them from their nearest neighbour. Such seclusion can come in the form of mountain ranges or expansive bodies of water.[62] These geographic attributes were deemed by Morgenthau to be a 'natural frontier' meaning a 'frontier predetermined…by geographical factors.'[63] Therefore, border 'geographical situations [are]…an important element in the political and military considerations' of a state, and must be taken into account when assessing potential threats to the state.[64] Threats such as pandemics do not respect frontier border restrictions.

[60] Particularly in regard to isolated island nations, the decrease in importance of geographic location correlates directly with advances in transportation and communication such advances were derived from the need for states to evolve from the imperial trade routes of the 18th and 19th century, to adapt to more direct trade and shipping (e.g. air freight).
[61] Wilson, C. M. (1950), *op. cit.* p.37. [Brackets Added]
[62] Morgenthau (2006) argues that the separation of the Italian peninsula from the rest of Europe 'by the high mountain massif of the Alps' poses significant challenges to 'invade Central Europe from Italy, while it has made it much less difficult to invade Italy from the north. In consequence, invasions of Italy have been much more frequent than invasions by Italy'. (p.123)
[63] Morgenthau H. J. (2006), *op. cit.* p.124.
[64] *Ibid.* p.123. [Brackets Added]

In regard to the element of geography and the internal accessibility of the state, both the size of the state and any geological impediment must be taken into consideration to adequately determine the impact of a threat. Wilson contends that 'size measurably determines the vulnerability of industrial establishments and transportation-communication nets.'[65] Awareness of internal vulnerabilities is arguably one of the foremost requirements for a state to possess in the face of border security threats.

Morgenthau illustrates the importance of a state's size and geography by highlighting the threat of nuclear war, arguing that

> In order to make a nuclear threat credible, a nation requires a territory large enough to disperse its industrial and population centers as well as its nuclear installations. The conjunction between the large radius of nuclear destruction and the relatively small size of their territories imposes a severe handicap on the ability of the traditional nation-states, such as Great Britain and France, to make a nuclear threat credible.[66]

In this instance, the credibility of the threat corresponds to the likely impact of a first strike, or even a retaliatory attack, on the power of the state and the geographical realities. The greater the impact the more the power of possessing a nuclear weapon diminishes. In the same way pandemics can efficiently decimate a population of a state with a non-resistive geography. The awareness of a state's geographical advantages and disadvantages is vital in any emergency situations, including pandemics.

In utilising Morgenthau's element of geography to gauge the impact of a pandemic a number of insights are developed. First, the state's proximity to a pandemic outbreak, and the likelihood of cross-border contagion propagation are significantly increased through modern day transportation, with the notion of a geographic barrier becoming diminished. Second, a nation's internal geographic make-up has the ability either to impede the diagnosis and suppression of pandemics, or to

[65] Wilson C. M. (1950), *op. cit.* p.37.
[66] Morgenthau H. J. (2006), *op. cit.* p.124.

facilitate the further dissemination of the pandemic. In order to comprehend the behaviour of the pandemic actor, an understanding of the impediments of a state's geography is vital.

2.2.2 Natural Resources

Natural resources, closely linked to the preceding element of geography, are the materials and substances that occur in nature and can be utilised not only for economic gain but also as a foundation of power for the state. The possession, or acquisition, of natural resources allows a state to ensure its survival. Indeed, Wilson goes so far as to argue that 'in order to become a world power, a state must either have essential natural resources within its borders or…the power to guarantee access to foreign supplies at all times'.[67] Without a reliable natural resource supply, the state exposes its vulnerability.

The power generated by a state's natural resources is, derived from the notion of self-sufficiency. According to Morgenthau 'a country that is self-sufficient, or nearly self-sufficient has a great advantage over a nation that is not'.[68] For example, a state that is not rich in natural resources will find itself 'dependent on foreign sources to supply its deficiencies'.[69] Morgenthau divides the element of natural resources into the sub-elements of food and raw materials, with each category providing a unique insight into a state's accumulation of power, while further calling attention to the potential threats to that power.

2.2.2.1 Food

The importance of food to national power seems straightforward as 'the abundance or scarcity of food production, a serious factor in security as well as the foremost requirement for national power, largely determines the economic, political, and

[67] Wilson, C. M. (1950), *op. cit.* p.40.
[68] Morgenthau, H. J. (2006), *op. cit.* p.124.
[69] Wilson, C. M. (1950), *op. cit.* p.40.

cultural development of a people'.[70] A nation that is not self-sufficient in food 'must be able to import the foodstuffs it does not grow, or else starve'.[71] Morgenthau demonstrates such a requirement by utilising the example of Great Britain during the Second World War; a nation whose 'power and…very existence…[had] always been dependent on its ability to keep the sea-lanes open over which the vital food supplies had to be shipped in'.[72] Whenever the state's ability to provide for its citizenry is challenged, the power of that state is also challenged, thereby directly threatening the state's 'survival as a nation'.[73] Conversely, states that find themselves self-sufficient gain an advantage by not having to 'divert [their] national energies', allowing the states 'to pursue much more forceful and single-minded policies,'[74] designed either to advance or preserve the national power.

However, self-sufficiency in food can be difficult to maintain over time, as the demands of a population escalate as a result of 'changes in the consumption of food brought about by changing conceptions of nutrition'.[75] The 'nutrition transition'[76] concedes that 'centuries old diets are being altered comparatively speedily'.[77] Drewnoski and Popkin in their 1997 study argued that the nutrition transition has created 'a major dilemma…[for] the health and nutrition profession in any country'.[78] The transition, when combined with a growing global population gives rise to 'not only greater overall demand for food, but also greater demand for water

[70] *Ibid.*
[71] Morgenthau, H. J. (2006), *op. cit.* p.125.
[72] *Ibid.* [Brackets Added] Carr (2001) affirms Morgenthau's assertions declaring that as early as 1905 a Royal Commission 'discussed, but rejected, plans for the precautionary storage in Great Britain of reserve supplies.' The rejection of such a notion led to 'complete reliance [being] placed on the capacity of the navy to protect the ordinary channels of trade, and thereby make up for the inevitable absence of sufficient supplies at home.' (p.112) Such a contention serves to reinforce the importance of natural resources as a stalwart of a state's power.
[73] Morgenthau, H. J. (2006), *op. cit.* p.125.
[74] *Ibid.* [Brackets Added]
[75] Morgenthau, H. J. (2006), *op. cit.* p.126.
[76] Drewnoski, A. and Popkin, B. (1997) 'The Nutrition Transition: New Trends in the Global Diet', *Nutrition Review*, 55, pp.31-43. Lang, T. (2001) 'Trade, Public Health, and Food' in McKee, M., Garner, P., and Stott, R., eds., *International Co-operation in Health,* Oxford: Oxford University Press, pp. 81-108.
[77] Lang, T. (2001), *op. cit.* p.86.
[78] Drewnoski, A. and Popkin, B. (1997), *op. cit.* p.31. [Brackets Added]

and energy needed to produce and transport that food'.[79] The impact on the power from this particular element stems from both increases in demand as well as changes in agricultural technique, although the benefit of the latter in particular, has been somewhat one sided. Developed countries have been the main beneficiaries of changes in agricultural advances. In developing states, particularly those exposed to the HIV/AIDS pandemic have seen a loss in the accumulated knowledge gained through intergenerational experience. A July 2005 study by Hlanze, Gama, and Mondlane, outlines the impact of the HIV/AIDS pandemic on crop production in Swaziland. The report contends that 'because HIV/AIDS kills certain members of the family who have certain types of knowledge, those who are left behind will not have the knowledge if they have not yet given themselves time to learn'. [80] In this way the impact of a pandemic mimics the effects of Morgenthau's self-sufficiency requirement for this element of national power.

2.2.2.2 Raw Materials

Raw materials are vital to the industrial production of the state and refer to more than just food production. Morgenthau contends that when combined with the 'increasing modernization of warfare…national power has become more and more dependent on the control of raw materials in peace and war'.[81] As with the element of food, a state has two options available in regard to the acquisition of raw materials.

First, the state can acquire these by developing the technical infrastructure in order to extract the materials from within the territory of the state. The industrialisation and protection of the state is paramount to its ability to capitalise on raw materials. Mearsheimer contends that the benefits of industrialisation are two-fold:

[79] World Economic Forum (2010) *Global Risks 2010: A Global Risk Network Report,* Geneva: World Economic Forum, p.19.
[80] Hlanze, Z., Gama, T., and Mondlane, S. (2005) *The Impact of HIV/AIDS and Drought on Local Knowledge Systems for Agrobiodiversity and Food Security*, Rome: Food and Agricultural Organisation, p.17.
[81] Morgenthau, H. J. (2006), *op. cit.* p.125.

> First, highly industrialized states have considerably more surplus wealth to spend on defense than do semi-industrialized states, mainly because much of the physical product of the peasantry is consumed on the spot by the peasants themselves. Second, only states with the most advanced industries are capable of producing the large quantities of sophisticated weaponry that militaries need to survive in combat.[82]

In order for a state to preserve its power it needs to move beyond self-sufficiency to ensure a surplus of material to call on in emergencies, such as pandemics. However, the notion of a state being self-sufficient dissipates as a country's population grows out of proportion to its possession of natural resources. The decline in self-sufficiency forces states to source raw materials externally.

Second, the state has the option of importing raw materials from foreign sources. The reliance on other nations to maintain a state's national supply is decidedly unstable for a nation's power, as there is no guarantee of the longevity of supply. As Spykman illustrates in regard to the USA which as,

> A country richly endowed with natural resources…[is]… perhaps more self-sufficient than any other state in the world. But the requirements of an advanced industrial civilization are so varied and so complex that even the wealth of the North American Continent is inadequate to supply the multitudinous demands of her economy. A vast fleet of steamers from every port in the world must bring its cargo to her warehouses and factories in order that peace time production may continue uninterrupted.[83]

In a world where individual states are reliant on others to satisfy their demands for raw materials, a threat to the national supply of raw materials for one state can transcend national boundaries to threaten the national supply of another.

The power derived from a nation's natural resources for the state is potential at best. The possession of natural resources certainly 'exerts important influence on the power of a nation with respect to other nations,'[84] yet at the same time, without the

[82] Mearsheimer, J. J. (2001), *op. cit.* p.63.
[83] Spykman, N. J. (2007), *op. cit.* p.292. [Brackets Added]Wilson (1950) reinforces Spykman's assertion contending that 'the endeavour of a state to become self-sufficient is a natural outgrowth of the fear that results from numerous disquieting world conditions. A country which attempts to practice such a policy in respect to its total economic needs however, can never find a prominent place among world powers because no single nation…has a complete array of vital resources.' (p.40)
[84] Morgenthau, H. J. (2006), *op. cit.* p.124.

ability for the state to capitalise on these resources, there is little advantage garnered from their possession.

Morgenthau's element of natural resources provides a number of valuable insights into the vulnerabilities of this element when confronted by the pandemic actor. First, the domestic ramifications of a pandemic on a state's food supply must be considered. If the state is unable to satisfy demand for food, as a result of a loss of agricultural or industrial workers due to a pandemic, the state must look towards foreign entities for provision. Second, if the state is dependent on another state for access to raw materials, the industrial capacity of the afflicted state becomes a concern for the dependent state. Furthermore, if a state is reliant on foreign materials for the state to sustain an industrial complex, then this same industrial complex must be capable of preserving the supply of a broad range of resources during a pandemic. Maintaining the industrial complex is closely interwoven with Morgenthau's third element of industrial capacity.

2.2.3 Industrial Capacity

The link between a state's industrial capacity and its natural resources is relatively straightforward, as the 'state's capacity for industrialization…is almost wholly dependent on the availability of natural resources'.[85] The state is reliant on its industrial infrastructure to maximise the utility of the natural resources, whether the natural resources are foreign or domestic. An inability to protect the industrial capacity poses a significant dilemma for states wanting to maintain, their power status, or maximise their power potential. Morgenthau, utilising the threat of traditional warfare reinforces the importance of this element,

> The technology of modern warfare transportation and communications has made the overall development of heavy industries an indispensible element of national power. Since victory in modern war depends on the number and

[85] Wilson, C. M. (1950), *op. cit.* p.40.

> quality of highways, railroads, trucks, ships, airplanes, tanks, and equipment and weapons of all kinds, from mosquito nets and automatic rifles to oxygen masks and guided missiles, the competition among nations for power transforms itself largely into competition for the production of bigger, better, and more implements of war. The quality and productive capacity of the industrial plant, the know-how of the working man, the skill of the engineer, the inventive genius of the scientist, the managerial organization- all these are factors on which the industrial capacity of a nation, and hence, its power depend.[86]

The element of industrial capacity is paramount to the domestic productivity of the state. Without a strong, resolute industrial capacity, the ability of a state to maintain its power status, or overcome any threat toward that status, is impeded. Morgenthau's inclusion of 'the know-how of the working man, the skill of the engineer, the inventive genius of the scientist…'[87] is indicative of the importance of the human resources of a state's industrial capacity. Such a realisation not only widens the scope of the element, it strengthens the argument for protecting a state's industrial capacity, and its people, against both traditional and non-traditional security threats.

Morgenthau contends that a state's infrastructure should be utilised to assure 'modern victory in war', as a state's industrial capacity provides a nation with the domestic infrastructure that enables the state to function on a daily basis. Regardless of whether the state is at war or peace, the power of a state's industrial capacity provides insight into the vulnerability of the state. This need is largely derived from the state's reliance on foreign sources to fulfil their need for natural resources when they are unable to do so themselves. Meaning that if one state is dependent on another to subsidise any disparity in the state's domestic resource supply, the domestic issues of the supplying state, and the vulnerability of their industrial capacity, become a concern for the dependent state. Therefore, the need to protect this element extends to close trading partners.

[86] Morgenthau, H. J. (2006), *op. cit.* p.132.
[87] *Ibid.*

History has shown that infectious disease is often spread along trade routes.[88] The swiftness of this spread has intensified as a result of modern day air travel, further increasing the likelihood of exposure to a pandemic. In order to prevent such exposure, appropriate measures of surveillance are required to monitor, and if need be, contain outbreaks of infectious disease using the trade route itself. Indeed, Michael Osterholm, writing for *Foreign Affairs,* highlights the dangers of a pandemic in modern society, arguing that,

> Given the extent to which modern commerce relies on the precise and readily available international trade of goods and services, a shutdown of the global economic system would dramatically harm the world's ability to meet the surging demand for essential commodities such as food and medicine during a crisis.[89]

By understanding the threat a pandemic poses towards a state's industrial capacity, it becomes possible to provide a greater insight into the economic and political implications of a pandemic. Such insight propels a modern state to formulate comprehensive preparedness plans designed to incorporate political elements beyond the immediate health services to include transportation. The aim is to minimise the economic impact of a pandemic actor.

Furthermore, a state's industrial capacity has the potential to play a key role during various stages of a pandemic. For example, given the very nature of industrial capacity as the delivery of goods, the industrial capacity of a state can be a significant partner in both the prevention (delivering remedies), and proliferation (delivering contagion) of the pandemic. Furthermore, by capitalising on the state's industrial capacity and its system of transportation networks, the state has the ability to utilise this capacity as a remedy to the pandemic. In this way, the industrial complex of the state has the capability to further minimise the economic

[88] *See* Echenberg, M. (2007) *Plague Ports: The Global Urban Impact of Bubonic Plague (1894-1901)*, New York: New York University Press. Crawford, D.H. (2007) *Deadly Companions: How Microbes Shaped Our History,* Oxford, England: Oxford University Press. Marriott, E. (2002) *The Plague Race: A Tale of Fear, Science and Heroism*, London: Picador. Baldwin, P. (2006) *Disease and Democracy: The Industrialized World Faces AIDS*, California: California University Press. Sherman, I.W. (2006) *The Power of Plagues*, Washington: ASM Press.
[89] Osterholm, M. (2005) 'Preparing for the Next Pandemic', *Foreign Affairs*, 84(4), pp. 30-31.

burden of a pandemic, by serving as a conduit for pandemic protection and or treatment.

By strengthening a state's industrial capacity the possibility for appropriate pandemic preparedness is considerably reinforced. The 2008 study entitled *Pandemic Influenza, Worker Absenteeism and Impacts on Freight Transportation,*[90] highlights the potential impact of an outbreak of pandemic influenza on the domestic infrastructure of the USA. The study concludes that 'there is significant likelihood of major breakdowns in the freight transportation sector under the more severe influenza scenarios as a direct result of large-scale worker absenteeism.'[91] Such a breakdown is likely to 'affect distribution and availability of a wide variety of consumer goods as well as availability of raw materials for many other industries.'[92] The Jones *et. al.* study has a narrow focus on the impact of worker absenteeism on the United States, and never purports to provide insight into the wider global ramifications of a pandemic. However, the study does highlight how elements such as industrial capacity are important when considering the potential ramifications of a pandemic actor.

Morgenthau justified the inclusion of the element of a state's industrial capacity, on the grounds that an 'industrial establishment commensurate with the abundance of raw materials' can overcome the 'lag between the potentialities and actualities of power.'[93] In the modern globalised world the role of industrial capacity has grown from being an element aimed at making an effective contribution towards a state's armed forces, towards an element fundamental to a state's economic prosperity. Military preparedness, however, remains pivotal to all states' power attributes.

[90] Jones, D. A., Nozick, L.K., Turnquist, M.A. and Saway, W. J. (2008) 'Pandemic Influenza, Worker Absenteeism and Impacts on Freight Transportation', *Proceedings of the 41st Hawaii International Conference on System Sciences,* Hawaii, January 7th – 10th 2008.
[91] *Ibid.* p.10.
[92] *Ibid.*
[93] Morgenthau, H. J. (2006), *op. cit.* p.131.

2.2.4 Military Preparedness

The importance of a state's military preparedness when dealing with a pandemic revolves around the military's ability to care for its troops, so that they are able to support both the national protection of the state, as well as the state's foreign policy. At the same time the military must adapt and fill the void created within the domestic infrastructure of the state as a result of any disaster, including pandemics. In short, the element of military preparedness undertakes its role to guarantee the survival of the state.

The element of military preparedness and its relationship to a state's power is, as Morgenthau originally articulated, 'too obvious to need much elaboration'.[94] The main determinant of a state's military preparedness, according to Morgenthau, is a 'military establishment capable of supporting the foreign policies pursued'.[95] The ability to achieve such support is derived from the principle factors of 'technology, leadership, and the quantity and quality of the armed forces,'[96] each of which demands greater discussion below.

The central purpose of a state's military is to ensure the survival of the state. A well-prepared military must not only be adequately prepared for a pandemic, but also possess the ability to reinforce the sectors of society that are most severely impacted by a pandemic. Such a task requires an adaptive military. This requirement transforms the role of the military from 'its primary responsibility to prepare for

[94] *Ibid.* p.133.
[95] *Ibid.*
[96] *Ibid.* p.133.

conventional conflicts,'[97] towards a domestic guarantor of justice and order, a role that is magnified during a pandemic attack.

2.2.4.1 Technology

Morgenthau argued that 'the fate of nations and of civilizations has often been determined by a differential in the technology of warfare for which the inferior side was unable to compensate in other ways,'[98] meaning, that if a state were able to develop advanced weaponry, which an enemy state was unable to counter, the stronger state would be at an advantage. Morgenthau's focus on the use of technology for weapon development and the implications for power contributes to any discussion on the combat against non-state actors. By following the notion that technological advancement should be based on the application of scientific knowledge for practical purpose,[99] the actions taken by a state's military when confronting infectious disease are one such practical purpose. More often than not, a state's military has been at the forefront of the state's effort to (medically) protect its constituents.[100]

Historically, the state has utilised the military as the primary guardian of the state. William McNeill asserts the strong interaction between 'Europe's political history

[97] Steele, R.D. (1998-99), 'The Asymmetric Threat: Listening to the Debate', *Joint Force Quarterly,* Autumn/Winter 1998-99, p.79.
[98] Morgenthau, H. J. (2006), *op. cit.* p.133.
[99] *See* Creveld, M.V. (1991), *Technology and War: From 2000 B.C. to the Present,* Oxford: Brassey's; Creveld provides a historical analysis of the role that technology has played 'in the development and transformation of war.' (p.1) Creveld, moves the debate on military and technology away from the focus on 'weapons and weapon systems and their effect on combat' towards one that 'assumes that behind military hardware there is hardware in general, and behind that again is technology as a certain kind of knowhow, as a way of looking at the world and coping with its problems.' (p.1) This thesis embraces such an argument by focusing on the role of military technology when confronting a pandemic.
[100] According to McNeill (1998) it was not until 'entire armies began to be immunized [from smallpox] by command from the top that the practice really penetrated the lower social orders of continental Europe'. [Brackets Added] (p.258) McNeill goes further to contend that 'effective prophylaxis against smallpox was thus a by-product of the Napoleonic wars; and the extraordinary population growth that set the nineteenth century apart from all its predecessors in Europe's history was in substantial part a consequence of the effective containment of this long-standing scourge of civilized human communities.' (p.258)

and the health of professionalized standing armies and navies,'[101] contributed towards the state adopting sanitary regulations:

> The rise of absolutism on the European continent hinged on the availability of well-trained armies to do the sovereign's will; and the preservation of such armies, in turn, rested on the development of rules of sanitation and personal hygiene that reduced losses by epidemic disease to relatively minor proportions, winter and summer, in the field and in cantonments.[102]

The technical contribution of the military establishment towards the prevention of outbreaks of infectious disease among troops has been made with a view to protecting personnel in times of conflict. Eliot Cohen refers to these technological innovations as 'invisible [military] technology,'[103] arguing that,

> Often the most important elements of a military system are not the ones most evident to the casual observer, yet mastery of such technologies may weigh most in battle. American forces in the south-west Pacific in the Second World War struggled not only with the Japanese, but also with disease. The insecticide DDT, as much as any bomber or battleship, won the fight for New Guinea.[104]

The evolution of military technology, in relation to confronting pandemics, is founded on the need to protect military personnel, as it is 'through the debilitation of military personnel, [that a] pandemic can degrade human resources and reduce force strength.'[105] Such a scenario enforces effective management of a state's military preparedness so that it might protect the national power level of the state.

Arguably the technological capabilities of a state's military represent a microcosm of the technological capabilities of the state. Morgenthau's element of military technology provides an avenue to assess a state's military's technological capacity not only to overcome the effects of a pandemic on the military complex, but also to actively contribute to limiting the impacts of a pandemic on a state's national power.

[101] McNeill, W.H. (1998), *op. cit.* p.274.
[102] *Ibid.* pp.274-275.
[103] Cohen, E. (2010) 'Technology and Warfare', in Baylis J., Wirtz, J.J., and Gray, C.S., eds. *Strategy in the Contemporary World,* Oxford: Oxford University Press, p.144. [Brackets Added]
[104] *Ibid.* p.144.
[105] Huang, Y. (2009) 'In-Flew-Enza: Pandemic Influenza and Its Security Implications', in Cooper, A.F., Kirton, J.J., eds., *Innovation in Global Health Governance: Critical Cases*, Surrey: Ashgate Publishing Group, p.143. [Brackets added]

2.2.4.2 Leadership

The effectiveness of a state's military is primarily a reflection of the abilities of the state's military leadership. When assessing a state's military preparedness 'the quality of [a state's] military leadership has always exerted a decisive influence'.[106] Decisive military leadership has the ability to assess and then counter a threat successfully; the contribution of military leadership to the state's national power is significant. For example, Morgenthau describes the inability of the French general staff to foresee the deficiencies of the Maginot Line to counter the 'tendencies of modern technology, especially its trend toward mechanization of transportation and of communications,'[107] as a strong indicator of a deficient military leadership. In a similar fashion, a military that fails to appreciate the power potential of the non-state actor, such as pandemics, risks strategic defeat.

When utilising Morgenthau's sub-element of military leadership to assess a state's military preparedness to counter a pandemic, two prominent capabilities emerge: first, the strategic capabilities of the military to counter a pandemic, pertaining to the training and deployment of personnel to effectively combat the pandemic actor; second, the transparency of the military leadership in regard to the surveillance of the health and well being of its personnel.

2.2.4.3 Quantity and Quality of Armed Forces

While military preparedness is the bedrock of Morgenthau's elements, without the quantity and quality of military personnel to secure the power of this element, the preparedness assessment becomes redundant. As Morgenthau explains,

> A nation may have a good grasp of technological innovations in warfare. Its military leaders may excel in the strategy and tactics appropriate to the new

[106] Morgenthau, H. J. (2006), *op. cit.* p.135. [Brackets Added]
[107] *Ibid.* p.136. Morgenthau contends that the 'Maginot psychology of the French general staff in the period between the two world wars has become a byword for faulty strategic thinking.' (p.135) The failure of the French general staff to appreciate to capabilities of mechanised warfare adopted by the Germans for the Second World War, over the trench warfare of the First World War, was a significant strategic blunder on behalf of the French, which ultimately contributed towards the state's defeat at the hands of 'the onslaught of Hitler's panzers and dive bombers'. (p.136)

> techniques of war. Yet such a nation may be militarily and, in consequence, also politically weak if it does not possess a military establishment that in its overall strength and in the strength of its component parts is neither too large nor too small in view of the tasks it may be called on to perform.[108]

A large and qualified military ensures a diversification of skill and ability. Morgenthau regards reflexive diversification to be a vital element in the power of a nation. More specifically he states, 'the power of a nation in military terms is…dependent on the quantity of men and arms and their distribution among the different branches of the military establishment.'[109] The endurance of the medical corps within the military recognises the importance of maintaining good health to ensure military preparedness.[110]

A 2007 study by Jean-Paul Chretien[111] draws attention to the ability of a state's military, particularly within developing countries, to make a substantial contribution to confronting emerging epidemics. The study highlights the surge in military personnel in developing countries[112] during the 1990s, and contends that military personnel are a vital consideration in both exposure to, and surveillance of, infectious disease pandemics, as they 'extend their public health capabilities to civilian populations not adequately served by civilian public health programmes'.[113] Chretien echoes Morgenthau's awareness of a reflexive military and draws a direct line to the role of the military in confronting the pandemic actor.

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[108] Morgenthau, H. J. (2006), *op. cit.* p.136.
[109] *Ibid.*
[110] McNeill (1998) tells of the role played by the French military establishment in professionalising the medical corps setting up 'military hospitals and training schools' in the 1770s. One of the many benefits in doing so was that when 'young men conscripted from remote farms and from the slums of Paris mingled in the ranks of the new and vastly expanded armies of the French Republic…despite the fact that the recruits brought widely different disease experience and resistances into the army, the medical corps was able to prevent massive epidemic outbreaks, and [take] swift advantage of new discoveries.' (p.275) [Brackets Added]
[111] Chretien, J.P., Blazes, D.L., Coldren, R.L., Lewis, M.D., Gaywee, J., Kana, K., Sirisopana, N., Vallejos, V., Mundaca, C.C., Montano, S., Martin, G.J., and Gaydos, J.C. (2007), 'The Importance of Militaries from Developing Countries in Global Infectious Disease Surveillance', *Bulletin of the World Health Organization*, 85(3), pp.174 – 180.
[112] Chretien, J.P. *et al.* highlight that 'militaries in developing countries currently comprise 17 of the 25 largest active duty forces worldwide, with a combined total of 10.5 million of the 14.3 million personnel in these 25 forces'. (p.174)
[113] Chretien, J.P. *et. al.* (2007), *op. cit.* p.174. For example 'groups experiencing humanitarian emergencies or people in remote areas beyond the reach of ministries of health.' Importantly, 'the mobility that facilitates such operations can also allow military forces to carry infectious agents to susceptible civilian populations.' (p.174.)

An effectively prepared military must possess the ability to reduce the risk posed to personnel who are deployed internationally, presumably furthering the national interest of their homeland.[114] Any deployment of a state's military[115] increases the likelihood of exposure to infectious disease. Exposure may come from the country they are deployed to or, in the circumstance of multinational humanitarian missions, the military personnel from other states with which they are deployed. If a military is capable of protecting its personnel from a pandemic on deployment, it also has the ability to translate this protection to a domestic medical threat by deploying its learned capabilities effectively.

2.2.5 Population

Morgenthau's element of population is the first element to account for 'the purely human factors that determine the power of a nation'.[116] The element of a state's population looks towards a quantitative evaluation of national power 'to be discussed in terms of size of population'.[117] This is because normally a large population projects a state's power,

> Without a large population it is impossible to establish and keep going the industrial plant necessary for the successful conduct of modern war; to put into the field the large number of combat groups to fight on land, on the sea, and in the air; and finally, to fill the cadres of the troops, considerably more numerous than the combat troops, that must supply the latter with food, means of transportation and communication, ammunition, and weapons.[118]

Central to the determination of a state's population's contribution to national power are its demographics. Demographics are incorporated within Morgenthau's sub-

[114] *Ibid.* p.175.
[115] Whether for security or humanitarian reasons.
[116] Morgenthau, H. J. (2006), *op. cit.* p.137.
[117] *Ibid.*
[118] *Ibid.* As much as a large population contributes to the establishment of a states national power, unless the state has the capacities to provide for that population its size may be detrimental to its national power. Indeed, this particular aspect of national power is missing from Morgenthau's analysis, as 'he does not seem to have explicitly considered how the interactions between… population size and natural resources might affect a nation's ability to exercise power.' (Nichiporuk, p.5) For the purpose of analysing the impact of pandemics the interactions between population size and natural resources, becomes important particularly given the high reliance on human resources to maintaining a states industrial capacity.

elements of population 'distribution and trends' and remain relevant here due to the rapid changes in demographics when a pandemic attacks a population.[119]

2.2.5.1 Distribution

Morgenthau provides a limited assessment of the distribution of a state's population, arguing that it pertains to 'the relative size of the population of countries competing for power and, especially, the relative rate of their growth.'[120] He maintains that the relative power of a nation, in regard to the population's distribution, is derived from 'a population sufficiently large to create and apply the material implements of national power'.[121] However, when assessing the implications of a threat, the distribution of a nation's population takes on a significantly wider demographic composition.

The demographic composition of a state's population pertains to the 'characteristics of a given population'[122] and includes 'parameters such as size, age distribution, geographic distribution…and level and distribution of human capital'.[123] The use of a state's population distribution reveals the wider vulnerabilities of that population to the pandemic actor.

Size

States may be impeded by the size of their population as the 'largeness of their population' can become an 'obstacle to…[the] development' of national power.[124] Essentially, states with large populations struggle to capitalise on power potentialities as they 'divert scarce resources from the development of their national power to the feeding and care of their populations'.[125] The link between pandemics and large populations is straightforward - large populations tend to develop higher

[119] Morgenthau, H.J. (2006), *op. cit.* pp.137 – 140.
[120] *Ibid.* p.138.
[121] *Ibid.*
[122] Nichiporuk, B. (2000) *The Security Dynamics of Demographic Factors,* Santa Monica: RAND, p.3.
[123] *Ibid.*
[124] Nichiporuk, B. (2000), *op. cit.* p.3. [Brackets Added]
[125] Morgenthau, H.J. (2006), *op. cit.* p.139.

density living conditions that are conducive to the spread of infectious disease. The difficulty for a state's health authority to adequately monitor the population for outbreaks of infectious disease is dependent on both size, and population density.

Age

Age demographics determine the power of the state when the population is dominant in members that are considered of 'maximum potential usefulness'.[126] The age distribution of a population is vital to any study of an infectious disease pandemic, as the results may allow policy makers the opportunity for more refined planning. For example, if a particular disease is only infecting a single age group within a society, it becomes possible to allocate the appropriate resources primarily to protecting that demographic. Other age segments of society are relegated to a secondary consideration.[127] With pandemics, all ages are typically affected which complicates and stretches state planning to address the pandemic threat further.

Geographic Distribution

The geographic distribution of a population pertains to the spread of the population throughout the geographic territory of the state. The population density of particular areas creates a dichotomy between power and threat. Arguably, the stronger a population is within an urban centre, the stronger its economic functions. Yet, the more condensed a population is, the greater the likelihood of spreading infectious disease. Historically, small communities have countered the geographical distribution conundrum by instigating programs designed to facilitate the protection of their community.[128] However, the greater the geographic spread of

[126] *Ibid.* The issue of age distribution is further elaborated on under Section 2.2.5.2 *Morgenthau's Classical Realism: Population: Trends*).

[127] The older a population tends to be, the higher the demand on the health care infrastructure of the state. If a particular pandemic infects a demographic whose reliance on health care is not the accepted norm the increased strain on the health infrastructure of a state may be detrimental to the national power of that state. The recent outbreak of Influenza A (H1N1) highlighted such a scenario with the increased number of younger people being infected, largely due to the younger generations lacking 'the protective antibodies of previous exposure [which] older people probably [had the] antibodies from exposure to similar viruses in the 1950s and 1960s.' (Carter, 2010) [Brackets Added]

[128] Baldwin (2006) contends that in relation to epidemic disease the United States 'took a quarantinist approach…for a number of reasons. Immigrants, bringing with them diseases from the European and Asian Old Worlds, could be – and were – stopped, inspected, and controlled at nodal points of access. That national topography, with wide spaces separating densely settled regions,

the population, the more difficult it becomes for a state authority to provide comprehensive surveillance and treatment of communicable disease outbreaks.

Level and Distribution of Human Capital

The level and distribution of human capital, being the abilities and skills of a population and their geographic spread, are of great significance in any assessment of a pandemic. If not just because 'any discussion of disease control priorities and of the health system for delivering interventions requires an understanding of the demographic context and how it is changing.'[129] The human resources available to a state, particularly scientists and medical officers, will play a vital role in both controlling and minimising the immediate impact on a state's power, and make a greater contribution to the state's power.[130] The long-term impact of a pandemic is likely to be reflected within any change of the population trend.

2.2.5.2 Trends

When assessing a population's national power, trends, relate to 'trying to assess the future distribution of power'[131] by investigating the population trends of any particular nation. In making his argument Morgenthau asserts,

> All other things being equal, a nation with a relatively large population of maximum potential usefulness for military and productive purposes (roughly between twenty and forty years of age) will have an edge in power over a nation in whose population the older age groups predominate.[132]

These findings hold true for traditional analysis of society trends. However, what was once a society trend strength, becomes a power vulnerability when considering the impact of contagion. The trend of a population's age distribution is extremely

allowed a similar logic to hold true within the nation. The weak governmental machinery, with its federal fragmentation and relatively impotent central administration, meant that if anything were done to arrest the progress of disease it would have to be at the borders, points of ingress, and those other few spots where authority's powers of inspection, isolation, and quarantine could be brought to bear. (pp. 230-231)

[129] Lopez, A.D., Begg, S., and Bos, E., (2006) 'Demographic and Epidemiological Characteristics of Major Regions, 1990-2001', in Lopez, A.D., Mathers, C.D., Ezzati, M., Jamison, D.T., and Murray, C.J.L., eds., *Global Burden of Disease and Risk Factors,* Oxford: Oxford University Press, p.17.

[130] The immediate impact of a pandemic places a strain on the health care systems of the state. A state that maintains an adequate and appropriate health care system is better placed to be able to confront a pandemic, than a state that does not. In this sense the health care systems within a country also become a strategic asset. By ensuring the strategic placement of health care providers throughout the state it becomes possible to allow for greater treatment, surveillance and prevention of the population as a whole.

[131] Morgenthau, H.J. (2006), *op. cit.* p.139.

[132] *Ibid.* p.140.

important when matters of public health are concerned, as 'many aspects of risk behaviour, as well as disease and injury outcomes, are strongly associated with age'.[133] When a pandemic strikes down the productive segment of society which, in line with Morgenthau's findings are those between twenty and forty years of age, the ability for the state's population to recover is impeded. Current population trends provide a powerful insight into the relationship between this element and national power.

The *2009 World Population Ageing Report* by the United Nations examines current and future population trends. The report concludes that 'population ageing is unprecedented, a process without parallel in the history of humanity.'[134] Current predictions allow for 'the number of older persons…to exceed the number of children for the first time in 2045.'[135] Our aging population trend is indicative of a decrease in the segment of a population that provides a state with the 'maximum potential usefulness' as alluded to by Morgenthau. When utilising the population trend to assess the impact of a pandemic, the possibility to foresee issues regarding population recovery, as well as the impact on the state's productive power, is presented. However, such an assessment must account for the migratory patterns that occur both within the state - as a result of changes in the geographic distribution of the population - and external to the state, being the introduction and inclusion of migrants from other states.

The internal migration trend is usually a result of high population growth, particularly in developing countries. Dennis Pirages, writing for the 2005 *State of the World* report contends that the

[133] Lopez, A.D. et al. (2006), *op. cit.* p.19.
[134] Department of Economic and Social Affairs (2009) *World Population Ageing: 2009*, New York: United Nations, p.viii.
[135] *Ibid.*

> Population growth in…[developing] countries is pressing people to settle on previously unoccupied land, often cleared forests. This newly settled land is frequently shared with numerous potentially dangerous pathogens. These microbes have remained in animal hosts in forested areas until people have intruded, thus offering them new pathways out of the forest into larger human populations.[136]

In the same way, people share space with unknown pathogens during times of pandemic. McMichael and McNeill[137] agree on the importance of focusing on a disturbance in the equilibrium between man and microbe for the nation state. By surveilling the population appropriately for infection, the state is able to monitor and address any disturbances of the equilibrium that may transpire. The provision of adequate medical surveillance is a costly exercise that challenges both developed and developing states.

International migration, historically, has facilitated expanding the territory and influence of the state. Migrants were encouraged to seek prosperity outside of the homeland. However, as Macpherson, Gushulak and Macdonald contend 'modern migration is fuelled by pre-existing social, political, and economic considerations, as well as by discrete environmental and political events, including disasters and humanitarian crises'.[138] Migration patterns have altered dramatically during the second half of the 20th century, as states have become more independent after the Second World War and transportation technology has improved to simplify the migration process. Similar to periods in migratory history, new population flows create new pathways for pathogens.

The change in migratory pattern has increased the potential for the exposure of populations to infectious diseases, 'of international importance that are associated

[136] Pirages, D. (2005), *op. cit.* p.45. [Brackets Added]
[137] *See* Chapter One: *Power and Pandemics.*
[138] MacPherson, D.W., Gushulak, B.D. and Macdonald, L., (2007) 'Health and Foreign Policy: Influences of Migration and Population Mobility', *Bulletin of the World Health Organization,* 85(3), p. 201.

with mobile populations, such as SARS and pandemic influenza'.[139] The assessment of the migration patterns of a population, and the contribution of these patterns to the proliferation of a pandemic, allows for the development of effective planning to counter the health consequences associated with international migration. Such planning would involve both domestic measures, such as appropriate health screening at a country's point of entry, and foreign policy measures such as health interventions in states deemed susceptible to viral outbreaks.

Morgenthau's element of population makes an important contribution to an assessment of the pandemic actor. The element expands the traditional focus of population analysis, from size and trends, to incorporate a significantly wider scope of demographics and migratory trends. The study of pandemics on a population is usually relegated towards the medical and the mortality. However, by utilising a more in-depth evaluation of the specific demographics and the probable impact of the pandemic on the trend of the population, it becomes possible to develop an understanding of the wider implications of the pandemic actor for national power. Populations are diverse and will respond to the pandemic threat differently. Often this response is interlinked with Morgenthau's next element, national character.

2.2.6 National Character

Morgenthau's element of national character along with national morale, 'stand out both for their elusiveness from the point of view of rational prognosis and for their permanent and often decisive influence on the weight a nation is able to put into the scales of international politics'.[140] Central to Morgenthau's assessment of a state's national character are the 'certain qualities of intellect and character' that 'occur more frequently and are more highly valued in one nation than in another'.[141] The

[139] *Ibid.*
[140] Morgenthau, H.J. (2006), *op. cit.* pp. 140-141.
[141] *Ibid.* p.141.

national character in the face of a pandemic directly influences the state's ability to maintain its power successfully.

The national character of a state is derived from the population that constitutes the state. The contribution it makes to the national power of the state is unmistakable,

> National character cannot fail to influence national power. For those who act for the nation in peace and war; formulate, execute, and support its policies; elect and are elected; mold public opinion; produce and consume – all bear to a greater or lesser degree the imprint of those intellectual and moral qualities that make up the national character.[142]

The fortitude of a state's national character refers to the cultural traits that have become ingrained in society. When employing a state's national character to assess the threat posed by a pandemic, an immediate consideration becomes the fortitude of a state's authorities to implement adequate preventative measures. The strength to uphold these preventative measures is a determinant of the overall impact of a pandemic on a state's national character.

Professor of History at Loyola University of Chicago, Jo Hays, maintains that during pandemics 'different types of authority have been at stake: political, religious, intellectual, and professional'.[143] When the constituency challenges the authority of the state, the state becomes responsible for ensuring this form of fortitude does not resort to anarchy. If it does so, then efforts to minimise the impact of a pandemic become difficult. Pandemics historically have goaded populations into an anti-authoritarian stance.[144] Such a dilemma poses a significant challenge for more liberal states where the will of the people is revered, in opposition to regimes where national character can be moulded for an appropriate response to the pandemic threat. How the population counteracts the power of this actor, in both prevention

[142] *Ibid.* p.145.
[143] Hays, J.N. (2007) 'Historians and Epidemics: Simple Questions, Complex Answers,' in Little, L.K. *Plagues and the End of Antiquity: The Pandemic of 541-750,* New York: Cambridge University Press, p.39.
[144] For example *See* Chapter Three section 3.3.6 *The Plague Pandemic: National Character* and Chapter Four section 4.3.6 *The AIDS Pandemic: National Character.*

and accepting treatment, will determine both the lethality and the longevity of the pandemic.

The element of national character is perhaps one of the more difficult of Morgenthau's elements to evaluate. Regardless, Morgenthau warns against overlooking national character as a trait of national power, arguing that 'however difficult it may be to assess correctly so elusive and intangible a factor…failure to do so will lead to errors in judgement and policies'.[145] The impact of a population's national character in prevention, treatment, and proliferation therefore remains quintessential to the understanding of the pandemic actor.

2.2.7 National Morale

As a state's national character pertains to the 'intellectual and moral qualities' of a population, the element of national morale pertains to the 'degree of determination with which a nation supports the foreign policies of its government in peace or war'.[146] In defining a state's national morale, Morgenthau concedes that the element is 'more elusive and less stable, but no less important than all other factors in its bearing on national power'.[147] Morgenthau contends that the national morale 'permeates all activities of a nation, its agriculture and industrial production as well as its military establishment and diplomatic service'.[148] Assessing national morale is difficult in times of peace, Morgenthau contends, because,

> Its presence or absence and its qualities reveal themselves particularly in times of national crisis, when either the existence of the nation is at stake or else a decision of fundamental importance must be made on which the survival of the nation might well depend.[149]

During times of a pandemic, the national morale must be maintained within two specific parties and in two different ways: first those that have been infected with

[145] Morgenthau, H.J. (2006), *op. cit.* p.146.
[146] *Ibid.*
[147] Morgenthau, H.J. (2006), *op. cit.* p.147.
[148] *Ibid.*
[149] *Ibid.*

the disease that require medical responses, and second, the state must accommodate the morale of those who have not acquired the pandemic disease.

The importance of this element to assessing the impact of the pandemic actor on state power is derived from the unpredictability of the element. A state's national morale is only ever tested 'at the decisive moment,'[150] meaning that the reaction of the state's population cannot be predetermined.

> For the quality of national morale, the quality of government takes on a special importance. Whereas it [the quality of government] operates on the other elements of national power as one among several influences, all more or less manageable by human action, it [the quality of government] is the only tangible factor among intangibles that accounts for the quality of national morale. Without national morale national power is either nothing but material force or else a potentiality that awaits its realization in vain. Yet the only means of deliberately improving national morale lies in the improvement of the quality of government. All else is a matter of chance.[151]

While Morgenthau claims that all else is a matter of chance, other authors[152] have reviewed pandemics and their influence on national morale, to conclude that a state's response to a pandemic can only be effective if the population supports that response.

According to Hays, during the 17th century plague in Italy, 'urban populations [reacted] to decrees of city boards of health by pelting health officials with stones' as well as creating 'dense networks of popular resistance to rules of quarantine, isolation in pest houses, sanitary cordons, health passes and inspections'.[153] The morale within the state circumvented the actions of the state in attempting to confront the pandemic, ultimately prolonging the impact of the pandemic.

[150] *Ibid.* p.148.
[151] *Ibid.* p.152. [Brackets Added]
[152] *See* Hays, J.N. (2007), *op. cit.* pp.35-56. Abraham T. (2007) *Twenty-First Century Plague: The Story of SARS*, Baltimore: The Johns Hopkins University Press. McNeill W.H. (1998), *op. cit.*
[153] Hays, J.N. (2007), *op. cit.* p.40. [Brackets Added]

The careful management of the national morale during a pandemic is a prerequisite to the recovery of the state. When pandemics strike, society's perception of the disease is largely shaped by history and dark memories of the past.

> Individuals have a deep-seated, visceral fear of infection associated with the invisibility of a disease threat and the notion of horrific symptoms leading to an unpleasant death. In addition societies have a collective fear of contagion informed by dark memories of past pestilences such as smallpox and bubonic plague.[154]

The role of national morale in the manifestation of these fears needs to be carefully managed, to ensure the buoyancy of national soul and to protect this valuable element of national power.

2.2.8 The Quality of Diplomacy

Morgenthau maintains a state's diplomacy to be 'the brain of national power, as national morale is its soul'.[155] A state's diplomatic ability cultivates an effective foreign policy to maximise the leverage of the state's national power. Morgenthau argues that 'by using the power potentialities of a nation to best advantage, a competent diplomacy can increase the power of a nation beyond what one would expect it to be in the view of all other factors combined.'[156] Essentially, the quality of diplomacy refers to the ability of the state's officials to manipulate the other elements of national power in order to maintain the state's relative power.

> Diplomacy of a high quality will bring the ends and means of foreign policy into harmony with the available resources of national power. It will tap the hidden sources of national strength and transform them fully and securely into political realities.[157]

A high quality of diplomacy will place the national interest at the forefront of all of known responsibilities. Matters of health have, in the past, been relegated towards the lower end of foreign policy priorities, considered secondary to the more

[154] Enemark, C. (2006) 'Pandemic Pending', *Australian Journal of International Affairs,* 60(1), p.43.
[155] Morgenthau, H.J. (2006), *op. cit.* p.153.
[156] *Ibid.* p.153.
[157] Morgenthau, H.J. (2006), *op. cit* p.153..

aggressive traditional threats to national security.[158] This applies except when the matter of health evolves to a pandemic.

The increased prominence given to international health diplomacy in the 21st century has seen the audience and role of the diplomat undergo a considerable transformation.

> [Diplomacy] is a world to which outsiders find it difficult to relate, where the art of diplomacy juggles with the science of public health and concrete national interest balances with the abstract collective concern of the larger international community in the face of intensive lobbying and advocacy.[159]

Pandemics are international and to retain power a state will be engaged with a variety of international actors and the diplomat will be at the forefront of these efforts. Continuous representation of the state during a time of crises exemplifies state power.

2.2.9 The Quality of Government

The necessity of good government and its contribution to a state's national power seem relatively straightforward. Without good government 'the best conceived and most expertly executed foreign policy, drawing on an abundance of material and human resources, must come to naught'.[160] Morgenthau contends that when 'viewed as an independent requirement of national power' good government can be perceived as possessing three attributes.

> Balance between…the material and human resources that go into the making of national power and…the foreign policy to be pursued; [the] balance among those resources; and [the] popular support for the foreign policies to be pursued.[161]

In other words, when it comes to confronting pandemics the quality of a state's government is, in large part, based on the capacity of the government to respond to

[158] Feldbaum, H., Michaud, J. (2010) 'Health Dipomacy and the Enduring Relevance of Foreign Policy Interests', *PLoS Medicine* [online], 7(4), pp.1-6, available: http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000226 [accessed 24 May, 2010].
[159] Kickbusch, I., Silberschmidt, G., & Buss, P. (2007) 'Global Health Diplomacy: The Need for New Perspectives, Strategic Approaches and Skills in Global Health', *Bulletin of the World Health Organization*, 85(3), p.230. [Brackets Added]
[160] Morgenthau, H. J. (2006), *op. cit.* p.156.
[161] Morgenthau, H.J. (2006), *op. cit.* p.156. [Brackets Added]

the pandemic in a way that maintains such a balance. Any government response to a pandemic that is able to maintain the delicate balance of the aforementioned pre-requisites would enjoy the popular support.

Balance between Resources and Policy

When 'the very existence of the nation is at stake,'[162] the government 'must choose the objectives and methods of its foreign policy in view of the power available to support them with a maximum chance of success.'[163] During times of emergency Morgenthau maintains that it becomes acceptable to 'override…the rational considerations or national power.'[164] Pandemics are such an emergency.

The focus on a government's ability to balance the resources it maintains and the policy it enacts, particularly in the face of a pandemic, provides a strong indication of the strength or quality of the government. In order to defeat a pandemic there is an inherent need for international cooperation.

Balance among Resources

The second dilemma for governments is the maintenance of a balance amongst its resources. Morgenthau argues that in order for a nation to maintain its national power at the maximum attainable level, the nation must have 'at its disposal a sufficient quantity and quality…of those resources that will allow it to pursue a given foreign policy with a maximum chance of success';[165] for example, the industrial and military establishments and the impact that giving these elements a priority may have on other elements of national power 'such as national morale and the physical resilience of the population'.[166] A similar concern exists for the government when confronting a pandemic. Governments must manage the balance between normal health care procedures and the extraordinary strain placed on health care infrastructure for the duration of a pandemic.

[162] *Ibid.* p.157.
[163] *Ibid.* p.156.
[164] *Ibid.*
[165] Morgenthau, H.J. (2006), *op. cit.* p.156..
[166] *Ibid.* p.157.

Popular Support

Popular support is a serious issue for 'contemporary governments…subject to democratic control,'[167] as Morgenthau's concluding remarks note in regard to the quality of government. The task for a government, 'perhaps the most difficult of all' is to 'secure the approval its own people for its foreign policies and domestic ones designed to mobilize the elements of national power'.[168] The maintenance of popular support during a pandemic places governments in a predicament. On one hand, the population will demand the government take aggressive action to prevent the spread of a pandemic. On the other hand, the population will likely demand that the action taken by the government maintains their established way of life.

Such a quandary places governments in a precarious position. Simply put, the higher the quality of government, the higher the quality and management of a pandemic response will be. Such an analysis provides insight into the ability of various forms of government and their ability to respond to traditional threats.[169] Pandemics to date, and as the case studies show, are either thwarted or assisted depending on the popular support for government(s) and their policies designed to mitigate the threat.

2.3 Conclusion

Traditionally, the realist looks towards the power of the state and the maintenance of that power with the aid of hard power, being a state's military ability. The provision of guaranteeing security for that power is the responsibility of the state, and while the state may utilise particular alliances to help assure this security, the

[167] *Ibid.* p.158.
[168] *Ibid.*
[169] The authority possessed by the government will dictate their ability to enforce preventative measures without major ramifications to the approach of government. For example, totalitarian societies with a dispossessed population will have greater ease in strictly enforcing health policy, as opposed to a liberal democracy's population who would be likely to express dissatisfaction with any enforcement of quarantine for a lengthy period of time.

anarchic form of the international system provides little assurance to the strength of alliances when a state is under threat – including the threat of a pandemic.

Indeed, 'given the global spread of infection, and the global nature of response,'[170] IR theory has the ability to provide a much needed investigation of the political nature of the pandemic actor. Fidler singles out the lack of crossover between international health activity and international relations to be a primary contributor to 'health as foreign policy…not [being] an important diplomatic activity.'[171] The 21st century has seen health issues take on a greater role within international affairs with,

> The protection of health…no longer seen as primarily a humanitarian and technical issue relegated to a specialized UN agency, but more fully considered in relation to the economic, political and security consequences of the post-Cold War system of interdependence. This has led to new policy and funding initiatives at many levels of governance and a new political space within which global health action is conducted.[172]

The need to place a greater focus on the impact of pandemics on the security infrastructure of the state has come about in part due to the increased attention being paid to health related foreign policy concerns. These concerns now necessitate a greater focus on the impact of pandemics on the national power of the state.

While Morgenthau provides the framework to assess a state's national power via his elements of national power, the adaptability of this framework to assessing threats to national power remains untested. The task of this thesis now turns to adopting Morgenthau's elements as a tool to assess the implications for a state's national power when confronted by a pandemic. In order to ascertain the versatility of the

[170] Lee, K., and Zwi, A. (2003) 'A Global Political Economy Approach to AIDS: Ideology, Interests and Implications', in Lee, K., ed., *Health Impacts of Globalization: Towards Global Governance,* Basingstoke: Palgrave, pp.13.
[171] Fidler, D.P. (2005), *op. cit.* p.180. Fidler, D.P. (2004a) 'Germs, Norms and Power: Global Health's Political Revolution', *Law, Social Justice & Global Development*, (1), available: http://www2.warwick.ac.uk/fac/soc/law/elj/lgd/2004_1/fidler/Fidler.rtf [accessed 28 May 2010]. [Brackets Added]
[172] Kickbusch, I. (2003), *op. cit.* pp. 192-193.

framework an analysis of three distinct pandemics is presented over the following chapters.

Chapter Three: The Plague Pandemic

3.0 Introduction

Plague, caused by infection with the microorganism *Yersinia pestis* (Y. Pestis), is 'the deadliest of all diseases, one that was responsible for perhaps the most lethal pandemic in all of history'.[1] Plague presents a strong case study to provide an introduction to the threat posed by pandemics to a state's national power. Plague, as a pandemic, has recurred multiple times in history. The persistent return of plague pandemics alludes to the resilience of this non-state actor. As Sherman contends 'during the last 2,000 years, three great bubonic plague pandemics have resulted in social and economic upheavals that are unmatched by those caused by any armed conflict or any other infectious disease.'[2] Indeed the ramifications of plague pandemics are synonymous with traditional security threats such as war. In highlighting such similarities James W. Thompson noted the comparable impact of the Black Death and the Great War (World War I) on Europe:

> The turmoil of the world today serves to visualize for us what the state of Europe was in the middle of the fourteenth century far more distinctly than ever was perceived before. It is surprising to see how similar are the complaints then and now: economic chaos, social unrest, high prices, profiteering, depravation of morals, lack of production, industrial indolence, frenetic gaiety, wild expenditure, luxury, debauchery, social and religious hysteria, greed, avarice, maladministration, decay of manners.[3]

Analysing the effects of plague on national power through Morgenthau's framework, reveals similarities between the impact of pandemics and the impact of warfare.

[1] Aberth, J. (2011), *op. cit.* p.19. Furthermore, there are three variants of plague, bubonic, pneumonic, and septicaemic. Bubonic plague is considered the most common and least lethal of the strains, the various epidemiological features of the three strains is further explored in section 3.1 *The Plague Pandemic: Background.*

[2] Sherman, I. W. (2006), *op. cit.* p.67. The three plagues pandemics are commonly referred to as: The Justinian Plague (541-750); the Black Death (1347-1351); and the Third Pandemic (1894-1901).

[3] Thompson, J.W. (1921) 'The Aftermath of the Black Death and the Aftermath of the Great War', *The American Journal of Sociology*, 26(5), p.565.

The use of plague as the opening case provides a foundation to show the utility of international relations theory in assessing a pandemic threat. Plague altered fundamentally the behaviour of states on all three pandemic occasions, and, tested the state's ability to adapt and react to a non-state actor. This chapter provides an overview of a long-running conflict between two actors: the state, and plague. To analyse the conflict, the case is presented in three parts.

First, a background of the disease plague, along with the three resultant pandemics. This broad overview offers an insight into how plague was able to continually reappear to threaten the society forced to confront pandemic plague. By developing an appreciation of the epidemiological features of the disease, a foundation for a stronger analysis of the plague pandemic actor through the use of Baldwin's dimensions of power is established.

Baldwin's dimensions of power facilitate the bedrock analysis of the plague pandemic actor. By assessing plague over four dimensions: scope, domain, weight and cost, the relationship between the two actors in conflict becomes simplified. The use of Baldwin's dimensions establishes the power of the plague pandemic actor. In essence, the dimensions provide the clarity and validation required prior to assessing the impact of the plague pandemic on the state's national power.

In order to assess the impact of the plague pandemic on the national power of the state, the chapter utilises Morgenthau's elements of national power framework. The use of Morgenthau's framework to assess the impact of the plague actor highlights both the versatility and the utility of Morgenthau's framework. The bulk of the plague pandemic assessment is restricted to assessing the impact of the Black Death pandemic. Such a restriction provides the opportunity to assess not only a widespread, high-mortality outbreak, but also an actor that assaulted the world

prior to the establishment of the Westphalian state system. By doing so an understanding is obtained of how a far more simple, and limited, form of government confronted this ferocious pandemic actor.

3.1 Background

Plague is a zoonosis whose path of transmission from vector to host has been well established; the growing consensus contends that plague is 'transmitted between rodents and to other animals via wild rodent fleas, cannibalism or (possibly) contaminated soil'.[4] Furthermore, plague exists in three forms, bubonic, pneumonic, and septicaemic.[5] According to Gottfried, Bubonic plague, considered to be the most common strain of plague, has an incubation period from 'the time of infection to the appearance of the first symptoms…[of] generally about six days'.[6] While Bubonic Plague 'is the least toxic of all plague types…it is still highly lethal, killing 50% to 60%' of its victims that remain untreated.[7] Bubonic plague is considered to be 'the classic disease in humans' and is usually the result of 'a flea bite or direct contamination of an open skin lesion by plague-infected material'.[8] Bubonic plague cannot be transmitted from human-to-human, which is markedly different to the second variation of plague.

The second variation, Pneumonic plague, is highly contagious, and is the one form of plague that 'can be transmitted directly from person to person'.[9] Aberth highlights the ease with which Pneumonic Plague can spread with,

[4] Tikhomirov, E. (1999) 'Epidemiology and Distribution of Plague', in World Health Organization (1999) *Plague Manual: Epidemiology, Distribution, Surveillance and Control,* Geneva: World Health Organization, p.11. (Brackets in original)
[5] Aberth, J. (2011), *op. cit.* p.19.
[6] Gottfried, R.S. (1983), *op. cit.* p.8. [Brackets added]
[7] *Ibid.*
[8] Poland, J.D., and Dennis, D.T. (1999) 'Diagnosis and Clinical Manifestations', in World Health Organization (1999) *Plague Manual: Epidemiology, Distribution, Surveillance and Control,* Geneva: World Health Organization, p.43.
[9] Gottfried, R.S. (1983), *op. cit.* p.8. Aberth, J. (2011), *op. cit.* p.20.

> Direct human-to-human contagion [being] the norm in pneumonic plague, where no other animal intermediary is necessary, even though a pneumonic plague outbreak seems to start out as a secondary symptom of the bubonic form and tends to be localized, owing to the narrow window of time in which this form of disease can be spread by the symptom of an infective cough. However, since the patient is usually well enough to travel during the incubation period, which in pneumonic plague can last up to three or four days (but in bubonic plague can last up to a week), it is possible that an outbreak of the disease in one locality then gives rise to another at a considerable distance away.[10]

The final variation of plague is Septicaemic plague, which, according to Aberth, 'has almost no distinguishing symptoms beyond those characterizing the general onset of the disease, since it usually kills the patient too quickly-sometimes in twenty-four hours or less-to allow' for more symptoms to present.[11]

While the plague disease has managed to proliferate many times throughout history, three significant plague pandemics are commonly recognised as the most severe outbreaks. Furthermore, as Aberth contends, the persistent theme 'running through all three pandemics is that plague inspired some dramatic responses among the populations affected that had enduring consequences for cultural identity and survival.'[12] Cultural identity and survival are central themes in national security, thereby allowing the use of Morgenthau's framework to assess the impact of the plague pandemics on national power.

The first recognised[13] pandemic of plague that appeared 'in full view of literate observers' began in 541 and is widely referred to as Justinian's Plague.[14] While the initial outbreak of plague was limited to three years, plague would sporadically

[10] Aberth, J. (2011), *op. cit.* p.20. [Brackets Added]
[11] *Ibid.* p.22.
[12] *Ibid.* p.23.
[13] Herlihy (1997) maintains that historical accounts offered of plague may have been 'filtered through the reports of witnesses, who might have been unperceptive, uninformed, gullible, panicked, or eager to prove that they had read earlier accounts of dramatic mortalities. For example, medical writers of late antiquity and the early Middle Ages recognized only one type of epidemic disease marked by only one kind of symptom, inflammations, boils, or buboes in the area of the groin.' (p.19)
[14] Little, L. K. (2007) 'Life and Afterlife of the First Plague Pandemic', in Little, L.K., ed. (2007) *Plague and the End of Antiquity: The Pandemic of 541-750*, New York, N.Y.: Cambridge University Press, p.4. Little contends that 'as this debut took place during the reign of the Emperor Justinian, Byzantinists especially refer to this outbreak as the "Plague of Justinian" or the "Justinianic Plague".' (p.4)

'recur in 10-to-24-year cycles for the next 200 years'.[15] However, the death toll of these outbreaks would pale in comparison with the initial outbreak. Justinian's plague is reported to have spread throughout Asia, Africa and Europe and claimed nearly one hundred million victims.[16]

The second pandemic of plague commenced in the fourteenth century and 'is well known to all readers of history as the Black Death'.[17] The Black Death was to last for 20 years taking with it 'between 35% and 40% of the overall population' of Europe.[18] As this chapter will explore, the ramifications of the Black Death for European society were diverse. While the assault on human capital was significant, this assault transpired at a time when the human population was seemingly out of balance with its natural resources. For this reason the Black Death plays a prominent role in assessing the security implications of the plague pandemic. Furthermore, as Hirshleifer affirms, the subsequent pandemics of plague that followed the Black Death in 1361, 1369 and 1374, increased the longevity of the impact of the Black Death,[19] proving an even stronger validation of the impact of plague pandemics on national power.

The third pandemic of plague transpired during the 'second half of the nineteenth century'.[20] Eventually this third pandemic would claim at least fifteen million lives.[21] The third pandemic seemingly ignored the majority of Europe, but built on the geographic spread of its pandemic predecessors by capitalising on the technological advances of the time, namely: the invention of the steamship, to 'cross

[15] Gottfried, R.S. (1983), *op. cit.* p.11.
[16] Tikhomirov, E. (1999), *op. cit.* p.12.
[17] Little, L.K. (2007), *op. cit.* p.5.
[18] Gottfried, R.S. (1983), *op. cit.* p.53.
[19] Hirshleifer, J. (1966) *Disaster and Recovery: The Black Death in Western Europe*, Santa Monica: RAND, pp.19-20. Hirshleifer (1966) offers an indication of the mortality rate of these various plague outbreaks in England. The Black Death of 1348-50 had the highest mortality rate (16.6%). The outbreaks of plague that immediately followed were less deadly than the initial outbreak. The *Pesitis Secunda* of 1360-61 had a mortality rate of 12.7%. *Pestis Tertia* struck in 1369 with a mortality rate of 10%, and a fourth outbreak in 1374 had a mortality of 8.6%. (p.7)
[20] Little, L.K. (2007), *op. cit.* p.5.
[21] Echenberg, M. (2007), op. cit. p.xi.

the Pacific to Honolulu and from there to San Francisco in 1899'.[22] Indeed, the ability for this third, nameless pandemic, to cover the world offers the first insight into the implications of modernising transportation and the relationship to the transmission of infectious disease.

The third pandemic also allowed for the identification of the pathogen that caused plague, a feat widely recognised as being carried out by Alexandre Yersin.[23] Although Yersin's discovery of the pathogen was instrumental in developing a greater understanding of the disease, his discovery did little to assist in understanding the mode of transmission of plague. During the same third pandemic, Paul-Louis Simond, 'was sent by Pasteur to Vietnam and India to follow up on Yersin's observations'.[24] By 1898 he 'found that the chief vector of *Yersinia* to be a flea…whose preferred hosts in turn were rats, either…the common stay-at-home black rat, or… the sea-going brown wharf rat'.[25] These developments have made a considerable contribution in the way state authorities confront plague. It is important to note for the historical record here that, plague remains problematic in particular geographic regions,[26] though not on the scale of the three main pandemics.

The ability of plague to spread around the world has seen the resilient disease firmly implant itself as an actor in the human health arena. Indeed, plague is one of three

[22] Little, L.K. (2007), *op. cit.* p.5. Echenberg, M. (2007), *op. cit.* p.17.
[23] Little contends that 'when word of the outbreak of plague in 1894 at Hong Kong spread, Sibabasaburo Kitasato of Tokyo, a student of [Robert] Koch, rushed to the scene as did Alexandre Yersin, a [Louis] Pasteur student who was then working in French Indochina. An intensely competitive race ensued. Although Kitasato was the first to claim victory, the scientific community eventually awarded that claim to Yersin. The bacillus he isolated and described was duly named *Yersinia pestis*.' (p.5)
[24] Sherman, I.W. (2006), *op. cit.* p.83.
[25] Little, L.K. (2007), *op. cit.* p.6. Little further contends that 'contrary to the long-held assumption that plague is a contagious disease, it is most commonly by the bite of a rat flea that the highly toxic substance gets injected into a human being and drains into a lymph node. Multiplying rapidly, it there forms the painful swelling known as a bubo. Once fatal to slightly more than half the people who contracted it, plague in recent decades has become routinely curable, if timely diagnosis and medical supplies permit…' (p.6)
[26] Plague still maintains a presence within most WHO Regions, however, the ability for the state to control the disease, on diagnosis, has significantly reduced the burden of the disease.

diseases permanently ingrained within the International Health Regulations (1969) further reinforcing the notoriety of this formidable non-state actor.[27] The prominence of the plague disease demands a closer examination of the dimensions that contributed to the power wielded by this actor and the relationship between the plague pandemic actor, and the state.

3.2 Plague: The Pandemic Actor

The plague brings with it a reputation that overwhelms that of any other microorganism. In large part, this reputation is derived from the immense impact the disease bore on medieval society during the Black Death. The disease overwhelmed medieval society to the point where the only path for states to recover their national power was to look toward significant socio-economic reforms. In order to develop a stronger appreciation of the plague pandemic actor, an account of the power possessed by this actor is required. Baldwin's dimension of scope, domain, weight and cost provide an overview of the power relationship between the disease and the countries it infects.

3.2.1 Scope

Baldwin's dimension of scope looks to comprehend the behavioural effect of the pandemic actor on the state actor. Overwhelmingly, the scope of plague has been both immediate and tempestuous. The rapid speed with which plague is able to overwhelm its victims plays a significant role in affecting the behaviour of the state. The effect of plague on the state provides an understanding of what states will experience during high-mortality events. Indeed, American economist Jack Hirshleifer, models the 'potential catastrophe of a large-scale nuclear war', on the

[27] Tikhomorov, E. (1999), *op. cit.* p.11. World Health Organization (1983) *International Health Regulations (1969)*, Geneva: World Health Organization. The most recent incarnation of the IHR has seen the removal of the three named diseases which have been replaced with a clause mandating states to inform WHO of 'receipt of evidence of a *public health risk* identified outside their territory that may cause international disease spread.' (Emphasis Added) *See* World Health Assembly (2005), *op. cit.* p.12.

ramifications of the second plague pandemic, The Black Death.[28] Hirshleifer contends that such a comparison is derived from plague's 'geographical extent, abruptness of onset, and scale of causalities' and unlike traditional warfare the Black Death involved, 'no direct destruction of material property'.[29] Regardless of the size of the pandemic, or when the plague pandemic erupted, the consequences of a plague outbreak for a state follow similar patterns to other outbreaks of infectious disease with both a primary and secondary effect.

Primarily the effect of plague, particularly during the earlier plague pandemics, is magnified by its indiscriminate assault on humanity, which when coupled with the limited understanding of the disease, provided for a significantly one-sided relationship of power: the disease held all the power. Cunha and Cunha highlight the disastrous effect of the Justinian plague on the Roman Empire contending that 'more than a third of the Roman Empire's population was eliminated by this plague'.[30] Such an impact 'so weakened the Roman Empire that not long after the plague had passed, Roman borders were overrun by Huns, Goths, Moors and other "barbarians".'[31] The ability of the plague pandemic actor to overwhelm the Roman Empire illustrates the potential effect of the actor on the national power of the state. While the plague was not directly responsible for the fall of the Empire, the pandemic expedited the opportunity for the Empire's opponents.

With plague having the upper hand in the power relationship, divisions among the infected and noninfected members of the population quickly come to light. Historian John Kelly illustrates such a happening during the Black Death within Messina, Italy:

[28] Hirshleifer, J. (1966), *op. cit.* p.iii.
[29] *Ibid.*
[30] Cunha, C.B. and Cunha, B.A. (2006) 'Impact of Plague on Human History', *Infectious Disease Clinics of North America*, 20, p.266.
[31] *Ibid.* p.267.

> As the mortality deepened, churches and shops fell silent, beaches emptied, fishing boats lay idle, streets became deserted. Soon Messina, like Constantinople, became two cities, the city of the infected-a municipality of pain and despair-and the city of the uninfected, where fear and hate ruled.[32]

The establishment of such a division highlights the psychosocial implications of the plague pandemic. The infected were abandoned and expected to look after themselves, while the uninfected sought to protect themselves.[33] Such segregation magnifies the intensity of the fear of the contagion, further intensifying the power of the pandemic.

The primary effect of the plague is similar to the effect of any event that results in the deaths of large proportions of the general population. The high mortality rate of plague during the first two pandemics bore a significant impact on both the population number and growth-rate for decades after the initial impact. In addressing the impact of the Black Death on the state's population, Hirshleifer contends that:

> The sudden population decline due to the arrival of the plague, with material property left essentially unaffected, raised overall per capita wealth in the short-term while drastically shifting relative returns and incomes in favor of the labouring and against the property owning classes.[34]

This surprising outcome indicates the fundamental shift in the economic welfare of society as a result of a pandemic that is high in mortality and prevalence. However, the long-term sustainability of such economic benefits is questionable.[35]

Secondary impacts relate to aspects of the pandemics scope, which inadvertently impede the ability of the state to recover from the initial impact of the pandemic. In the case of plague pandemics, the main secondary impact is the associated fear of the disease. The significant mortality rate of plague pandemics past seems to validate such fears, particularly when very little was known about the disease. The scope of

[32] Kelly, J. (2005) *The Great Mortality: An Intimate History of the Black Death*, London: Harpers Collins, p.85.
[33] Kelly (2005) reinforces this notion with the words of Franciscan friar Michele da Pizza who contends 'that if a son fell ill…his father flatly refused to stay with him'. (p.85)
[34] Hirshleifer, J. (1966), *op. cit.* p.22. The effect of the Black Death on population demographics and trends is further analysis in Section *3.3.5 The Plague Pandemic: Population.*
[35] *See* section 3.2.4 *The Plague Pandemic: Cost*

the domestic impact of plague has continued to be in line with Kelly's descriptions regarding Messina, being the adoption of quarantine measures to protect the population. The adoption of quarantine to indemnify the state from infection of plague is still utilised both in a domestic and international sense, despite the ability of modern medicine to treat plague victims via antibiotics.

The psychological impact of plague has a significantly stronger, and potentially long-term, effect than the initial mortality on the state. This fear was still reproduced during a more recent outbreak of plague in Surat India in 1994, where, 'when word got out that an airborne disease was loose in the city, some 500,000 residents of Surat boarded trains and within 48 hours dispersed to every corner of the subcontinent'.[36] The outcome for India's national power was damaging. During the 1994 outbreak many other states recognised the enhanced threat of the outbreak given the increase in and the ease of global travel. Clem and Galwankar contend that 'in response to this threat, several countries closed their borders to travellers and cargo from India and stopped all air flights to and from India'.[37] Such a secondary effect widens the scope of the pandemic considerably, allowing its initial impact to fester and corrode power as the state attempts some modicum of recovery of society normalcy and state power. The scale of the behavioural change caused by plague pandemics is determined by the ability of the pandemic to establish its domain.

[36] Garrett, L (1996) 'The Return of Infectious Disease', *Foreign Affairs*, 75(1), p.73. In this instance the potential ramifications of the secondary impact were mitigated by the 'bacterial strain that caused the outbreak [being] unusually weak', although the example does validate the significant amount of power that plague continues to wield over an uninfected population. (Garrett, 1996 p.73) [Bracket Added]

[37] Clem, A., and Galwankar, S. (2005) 'Plague: A Decade Since the 1994 Outbreaks in India', *Journal of the Association of Physicians of India,* 53, p.458.

3.2.2 Domain

Baldwin's dimension of domain seeks to establish the 'number of other actors subject to' the influence of the pandemic.[38] In analysing the domain of the various plague pandemics the microorganism's worldwide dissemination over the three pandemics is clearly illustrated. In order to provide such an illustration the use of WHO's regional approach to defining a pandemic is adopted, and can be seen in *Table 3.1: Global Summary of Previous Plague Pandemics and Modern Domain*, below.

Table 3.1: Global Summary of Previous Plague Pandemics and Modern Domain[39]

WHO Region	Plague Presence			
	Justinian	*The Black Death*	*The Third Pandemic*	*Modern Domain*
African				
European				
Eastern Mediterranean				
The Americas				
South-East Asia				
Western Pacific				

The above table charts the progressive movement of the plague bacteria, from being endemic within two regions during the Justinian plague, to a truly global presence during the third. To develop a greater understanding of the domain of each of the plague pandemics a brief overview of how the contagion spread during the three pandemic outbreaks is provided.

[38] Baldwin, D.A. (2002), *op. cit.* p.178.
[39] Shaded area indicates a presence of the Plague pandemic within the region.

In accounting for the domain of the Justinian Plague, Lester K. Little illustrates the ease with which plague was able to move out from the Egyptian port city of Pelusium.

> It [plague] quickly spread eastward along to coast to Gaza and westward to Alexandria. By the following spring it had found its way to Constantinople, capital of the Roman Empire. Syria, Anatolia, Greece, Italy, Gaul, Iberia, and North Africa: none of the lands bordering the Mediterranean escaped it. Here and there, it followed river valleys or overland routes and thus penetrated far into the interior, reaching, for example, as far east as Persia or as far north, after another sea-crossing, as the British Isles.[40]

Little establishes a fundamental attribute of the plague's pattern of dissemination, being the microorganism's tendency to follow the trade routes both by land and sea. The use of WHO's regional modelling establishes the domain, being the regions that endured the pandemic, and reveals a limited regional presence of the Justinian Plague to Europe and the Eastern Mediterranean regions. Such containment does not impinge on the Justinian Plague's status of a pandemic; although its domain is somewhat restricted in comparison to the two following plague pandemics.

The second plague pandemic, the Black Death, is widely believed to have initially erupted in China in 1331, and then slowly moved westward.[41] The genesis of the European phase of the pandemic commenced when the 'disease broke out in 1346 among the armies of the Mongol prince who laid siege to the trading city of Caffa in Crimea'.[42] The dissemination of plague from Caffa was assisted by 'Caffa's large rat population…as they were carried on ships bound for major European ports such as Pera, a suburb of Constantinople, and Messina, in Sicily. By 1348 plague had entered Great Britain at Weymouth.'[43] Eventually the Black Death 'spread more widely and moved further inland than it had eight hundred years before, for

[40] Little, L.K. (2007), *op. cit.* p.3. [Brackets added]
[41] McNeill, W.H. (1998), *op. cit.* p.175; Gottfried, R.S. (1983), *op. cit.* p.35.
[42] McNeill, W.H. *op. cit.* p.177. Gottfried (1983) explains that while the Chinese records are vague, 'the first unimpeachable references appear in 1353, when chroniclers claim that two-thirds of China's population had died since 1331. Whatever the precise dates and circumstances, by the mid-fourteenth century, the Black Death had struck China and, by 1393, after successive cycles of plague epidemics, the Chinese population had dropped to about 90 million from a thirteenth-century high of over 125 million'. (p.35)
[43] Worsham, P.L., McGovern, T.W., Vietri, N.J. and Friedlander, A.M. (2007) 'Plague', in Dembek, Z.F., ed., (2007) *Medical Aspects of Biological Warfare*, Washington D.C.: Office of the Surgeon General, p.93.

example, by reaching Scandinavia and also far into the Arabian peninsula for the first time.'[44] Taking into consideration the initial outbreak of plague within China, this particular episode of the plague pandemic expanded its regional domain to be more international and include not only the European and Eastern Mediterranean Region, but the Western-Pacific Region as well.[45]

The third pandemic saw the plague actor utilise the transportation technology of the time to increase its domain significantly. The third pandemic originated in China 'beginning in the remote Chinese province of Yunnan'.[46] Whereas the previous pandemic has spread westward, this plague pandemic would take an easterly direction seemingly taking advantage of the 'faster steamships' to 'dramatically accelerate plague's spread'.[47] On arrival in Canton and Hong Kong in 1894, plague used these significant seaports to spread 'to ports on every continent over the next seven years.'[48] In accordance with the WHO's pandemic definition, not only was the third episode of plague a pandemic, but the disease was one of a global scale.[49] The third pandemic of plague exposed all WHO regions to the microorganism. While there has been some modicum of success in mitigating the health impact of plague, the disease still maintains a presence in almost all WHO regions.[50]

Advances in the understanding of plague that transpired during the third pandemic enabled the medical establishment to treat the majority of plague cases, if symptoms

[44] Little, L.K. (2007), *op. cit.* p.5.
[45] The inclusion of the Western-Pacific region into the domain of the Black Death serves to further illustrate the rashness of basing the definition of a pandemic purely on the geographical regions it infects.
[46] Echenberg, M. (2007), *op. cit.* p.16.
[47] *Ibid.* p.17.
[48] *Ibid.*
[49] Echenberg (2007) highlights the spread of the third pandemic: starting in Hong Kong (1894) plague spread to Bombay (1896), Taiwan (1896), Kobe, Japan (1898), Alexandria (1899), Porto (1899), Honolulu (1899/1900), Manilla (1900), Buenos Aires (1900), Rio de Janeiro (1900), Sydney (1900), San Francisco (1900/01), Glasgow (1900/01), Cape Town (1901), Mazatlán, Mexico (1902), Lima (1903), Accra, Ghana (1908), Shanghai (1908), Paris (1917), and Los Angeles (1924). (pp.xi-xii)
[50] The modern domain of plague sees two continents, Europe and Australia being the only continents known to be plague free.

are detected early enough and access to treatment is available. Modern outbreaks of plague have been somewhat limited, with the states affected being able to deploy control measure designed to mitigate the spread of plague.[51]

The dimension of domain provides an appreciation of just how widespread the scope of the actor in question is, or can be. In relation to the plague actor the domain of the disease expanded over time by virtue the three main pandemics. While the international community has achieved some success in reducing the domain of this significant actor, plague still maintains a presence in five of the six WHO regions. The complete eradication of the actor is yet to occur. Having established both the scope of the plague actor, as well as the domain in which the scope transpires, confirmation that plague was the actor responsible for the scope of change experience is required. Baldwin's fourth dimension of weight provides such confirmation.

3.2.3 Weight

The dimension of weight seeks to verify the probability that the plague actor was responsible for the scope of change experienced by the state actor. In instances of pandemics the overwhelming driver of the scope of change within the state is the mortality associated with the infectious disease. Therefore, the determination of a pandemic's weight is derived from assessing the mortality of that pandemic actor. Indeed, the Centers for Disease Control (CDC) in America, perceive the mortality rate, following infection with a microorganism, to be a central determinant of that pandemic's severity.[52] While the exact figures of the severity of the plague actor

[51] There are some concerns within the international scientific community as to the emergence of some strains of plague that appear to be antibiotic resistant. *See* Welch, T.J., Fricke, W.F., McDermott, P.F., White, D.G., Rosso, M.L., Rasko, D.A., Mammel, M.K., Eppinger, M., Rosovitz, M.J., Wagner, D., Rahalison, L., LeClerc, J.E., Hinshaw, J.M., Lindler, L.E., Cebula, T.A., Carniel, E., Ravel, J., (2007) 'Multiple Antimicrobial Resistance in Plague: An Emerging Public Health Risk', *PloS One* [online], 2(3), e309, available: http://www.plosone.org/article/info%3Adoi%2F10.1371%2fjournal.pone.0000309 [accessed 9 Feb 2011]

[52] *See* Centers for Disease Control (2007), *op. cit.*

throughout the three main pandemics are not readily available, a consensus among researchers[53] provides some indication as to the severity of the plague actor over the three instances. The consensus puts the mortality of plague very high, dependent on access to medication the mortality rate of plague can be anywhere between 25% and 90%.

Clem and Galwankar contend that 'by the conclusion of the [Justinian] pandemic 50 to 60% of the population' of affected areas had been decimated by the outbreak;[54] such figures provide an understanding regarding the psychosocial implications partnered with the plague's scope. In assessing the Black Death, Cunha and Cunha argue that the plague pandemic reduced the population of Europe by one third to one half, with the 'mortality varied by location from 25-70%'.[55]Overwhelmingly the high mortality associated with these earlier pandemics serves as the impetus for the fear that surrounds subsequent outbreaks of plague. The availability of data for the Third Pandemic of plague does allow for a stronger understanding of the severity and weight of the plague pandemic actor.

The PSI for the Third Pandemic establishes the distortion between the pandemics prevalence among the population, and the severity of the pandemic; both these figures are provided in *Table 3.2: Pandemic Severity Index for the Third Plague Pandemic*.[56] While the data presented within the table 3.2 (below) is limited to the urban impact of the Third Pandemic, these figures are widely representative of the

[53] *See* Aberth, J. (2011), *op cit.* Gottfried, R.S. (1983), *op. cit.* World Health Organization (1999) *Plague Manual: Epidemiology, Distribution, Surveillance and Control,* Geneva: World Health Organization. Kelly, J. (2005), *op. cit.* Little, L.K. (2007), *op. cit.* Echenberg, M. (2007), *op. cit.* Clem, A., and Galwankar, S. (2005), *op. cit.* Echenberg, M. (2002), 'Pestis Redux: The Initial Years of the Third Bubonic Plague Pandemic: 1894-1901', *Journal of World History*, 13(2), pp.429-449.
[54] Clem A., and Galwankar, S. (2005), *op. cit.* p.457. [Brackets Added]
[55] Cunha, C.B. and Cunha, B.A. (2006), *op. cit.* p.268.
[56] Echenberg (2007, p.314) provides a comparative table of the cities that were exposed to the third pandemic. In order to calculate the PSI the following cities were deemed to be representative of the various regions for this assessment: Cape Town (African); Porto (European); Alexandria (Eastern Mediterranean); San Francisco, Rio de Janeiro, Buenos Aires (The Americas); Bombay (South East Asia); Sydney, Honolulu, Hong Kong (Western Pacific). The PSI was calculated using the following formula: if n= people exposed to the plague and m=persons dying from plague; PSI=n/m x 100.

pandemic as a whole. For example, Clem and Galwankar estimate that the Third Pandemic 'caused an estimated 26 million plagues cases worldwide and killed more than 12 million in China and India'.[57] Such numbers would suggest a wider mortality rate of approximately 46% based on the fatalities in China and India.

Furthermore, the PSI for the Third Plague Pandemic (Table 2.3 below) indicates the high disparity between the prevalence of the third plague outbreak within specific regions, and the severity of that outbreak. Such an imbalance supports the assertion that the severity of the pandemic provides a clearer indication than the prevalence of the potential scope of the pandemic. The higher the severity of the pandemic actor the greater will be the psychosocial ramifications.

Table 3.2: Pandemic Severity Index for the Third Plague Pandemic

WHO Region	Prevalence[58] (%)	PSI (%)
African	1.12	48.2
European	0.05	35.7
Eastern Mediterranean	0.28	47.9
The Americas	0.04	53.5
South East Asia	1.61	83.1
Western Pacific	0.58	88.9

The figures used within the above table are somewhat restricted to 'those persons treated in hospital or in their home by licensed physicians.'[59] Such a caveat alludes to the actual prevalence and PSI being higher than is represented in Table 3.2.

[57] Clem, A., and Galwankar, S. (2005), *op. cit.* pp.457-458.
[58] The prevalence figure is restricted to the prevalence within those cities whose outbreaks where detailed by Echenberg (2007, p.314) and are listed above n.56.
[59] Echenberg, M. (2007), *op. cit.* p.313.

The fear associated with the plague contagion is a strong contributor towards the divergence associated with the cost of the plague pandemic. While the severity of the pandemic provides an indication of the probability that plague was responsible for the scope of the impact, it also allows for further discussion relating to the secondary impact of a pandemic actor. Secondary impacts of pandemics mainly refer to the (at least initially) non-lethal effect of the pandemic being the economic impact. Baldwin's fourth dimension of cost provides the foundation necessary to assess the cost of the pandemic to both the plague and the state actor.

3.2.4 Cost

Baldwin's dimension of cost requires an assessment of the cost of the pandemic to the actors involved, in the case of pandemic, an assessment of the cost of the pandemic to the state relative to the cost for the pandemic actor. In this assessment, the cost to the pandemic actor is rapidly understood. The cost extolled on the plague actor can be seen in the reduction of the plague's mortality rate. Such a reduction has taken place courtesy of the scientific advances that have led to greater knowledge of the plague actor and the development of treatment in the form of antibiotics.[60] The assessment of the cost to the state actor from a plague pandemic is still far more complex. Two important factors need to be considered when looking at the cost of the plague pandemic to the state: first, the impact the plague has had on the facilitation of international trade for the duration of the pandemic; second, the post-pandemic cost to the state as it looks to make a strong recovery.

A recent example of the cost of the plague pandemic is the outbreak of plague in 1994 in India. As Laurie Garrett informs, 'the epidemic sparked a global panic that cost the Indian economy a minimum of $2 billion in lost sales and losses on the Bombay stock market, predominantly the result of international boycotts of Indian

[60] Aberth, J. (2011), *op. cit.* pp.21-22.

goods and travellers.'[61] The high financial cost of the Indian outbreak of plague transpired regardless of the efforts taken by Indian authorities to mitigate the pandemic. Echenberg contends that 'locally based pharmaceutical labs produced over a million doses of the broadbased antibiotic tetracycline, and the drug was distributed free of charge as a preventive to all Surat residents who were potential incubators'.[62] While these measures are seen as a direct contributor to reducing the spread of the pandemic, they did little to assure either the domestic or international community of the potential threat, and cost, of a plague pandemic.

The high cost to the Indian economy was the likely motivator for certain 'cover-up' and political misdirection campaigns that transpired. As Garret notes 'as the number of countries banning trade with India mounted…the Hindi-language press insisted that there was no plague, accusing Pakistan of a smear campaign aimed at bringing India's economy to its knees'.[63] Such foreign policy directed accusations highlight the ability of the plague pandemic actor to become a political actor, with the ability to influence the relationship between two states. More importantly, apportioning of blame to a rival state did little to reduce the economic burden of the outbreak on India. However, had Pakistan taken serious affront at the comments, a further cost would have eventuated for India in either finding ways to placate Pakistan, or, in combating a new but more traditional security threat/incursion.

Economic recovery from a plague outbreak further contributes to the cost apportioned to the state actor. The Black Death offers an insight into the recovery of the state from a high mortality pandemic. Hirshleifer contends that given the high mortality of the Black Death, its economic impact must be assessed in both the short and long term. In the short-term, economic recovery from the Black Death was

[61] Garrett, L. (1996), *op. cit.* p.74.
[62] Echenberg, M. (2002), *op. cit.* p.449.
[63] Garrett, L. (1996), *op. cit.* p.74.

'rapid' with 'a rapid rise in wages and per capita incomes of the laboring classes, and downward pressure on rents and the incomes of the propertied classes'.[64] Both outcomes were an immediate result of the high mortality rate; a shortage of workers in the workplace and in the home rental market.

The long-term economic recovery was substantially different with 'the century following the Black Death…usually considered…to be a period of depression'.[65] The link between the depression and the Black Death is somewhat tenuous, although Hirshleifer concludes that the 'stagnation of this century appears to have been mainly due to the continuing recurrences of plague, secondarily to the effects of [the hundred years] war'.[66] The ability of the state's economy to recover is directly influenced by the actions taken by the governing authorities.

The role of state authorities in enabling economic recovery from a plague outbreak is at the heart of both Baldwin and Morgenthau and should not be overlooked. Aberth offers a striking comparison between the abilities of England and Egypt to recover from the Black Death pandemic during the early sixteenth century:

> …In England, the long-term economic impact of the massive depopulation caused by successive waves of the plague led to growing prosperity in the population at large (with the significant exception of the landholding class), since, in general, wages of laborers rose, prices of agricultural necessities fell, and rents declined, all tending to raise peasant incomes and spelling the end of the oppressive manorial system; however, in Egypt, the reverse was true, with wages falling, grain prices rising, and rents increasing, all leading to the collapse of the economy based on *fellahin* labor. A simple comparison of the agrarian GDP (gross domestic product) in the two countries…dramatically illustrates the disparity: Egypt's fell by nearly 60 percent…while England's recovered and actually increased by 7 percent, so that England's GDP was by this time double that of Egypt's.[67]

The ability of the government to respond to the depopulation of the state played a direct role in the economic recovery of the state. The role of the government in

[64] Hirshleifer, J. (1966), *op. cit.* p.27.
[65] *Ibid.*
[66] *Ibid.* p.28. [Brackets Added]
[67] Aberth, J. (2011), *op. cit.* p.59. The role of the British and Egyptian authorities in facilitating the disparity in response is further explored in section 3.3.9 *The Plague Pandemic: Quality of Government.*

minimising the cost generated by the pandemic is vital to the preservation of that state's national power. However, even when the state addresses the outbreak, such as the case of India outlined above, the psychosocial ramifications of a plague outbreak may be too great to assuage the economic cost of the outbreak to the state.

The dimension of cost reveals some important considerations in assessing the relationship between the plague pandemic actor and the state actor. The continued eruption of plague outbreaks has come at a physical cost for the pandemic actor. However, despite the ability of states to treat plague victims, and adopt preventative measures, an outbreak of plague still carries a considerable economic cost for the state actor.

Baldwin's dimensions of power serve to illustrate the relationship of power between two actors. In assessing the relationship between the plague and the state, the dominance of the plague actor becomes obvious. The high rate of mortality associated with the plague provides the foundation for an assessment of the impact of a high mortality pandemic on the power of the state. While Baldwin's dimensions have proven that a relationship between the plague pandemic and the state exists, a broader assessment must be adopted in order to consider the national power implications of the plague pandemic actor. Morgenthau's elements of national power provide the framework for such an analysis to take place.

3.3 Plague Pandemic Assessment

The plague actor is positioned as a highly virulent contagion that places an extraordinary strain on the resources of any state tasked with confronting it. While the potency of plague pandemics has diminished over time, largely due to advances made in developed countries' health infrastructure, historical plague pandemics

provide the opportunity to gauge the impact of pandemics with a high virulence and high mortality on the national power of the state. The central premise of Morgenthau's elements of national power is to illustrate the core attributes that a state must seek to maintain an ability to both preserve and protect its national power. While the bulk of the following pandemic assessment concentrates on the Black Death, the occasional use of evidence from both the Justinian Plague, and the Third Pandemic, is included to insure clarity in regard to the effect of the plague pandemic actor on the state's national power.

3.3.1 Geography

Morgenthau contends that a state's geography is the 'most stable factor upon which the power of a state depends'.[68] Such stability is derived from the permanency of the geographic features of the state, inclusive of its terrain and borders. While a state may be able to protect its borders from the visible threat, such as an advancing military, it is substantially more difficult to insulate the state from the invisible threat posed by microorganisms. Plague is one such microorganism. The chief vector of plague, the common flea, combined with its host of the black rat, made the dissemination of the disease across, and within, borders remarkably simple. Indeed the plague pandemic provides an ideal introduction to the ability of diseases to mitigate the geographic advantage so often touted by Morgenthau as vital to national power.

When assessing the impact of plague on the element of geography the primary issue becomes the plague's ability to proliferate via its hosts, meaning, that the ability of plague to infect humans, rats and fleas, allowed for the infecting pathogen to be proliferated through multiple vectors ensuring the greatest scope of infection possible. Such an ability follows the 'principle pattern of epidemic spread in the

[68] Morgenthau, H.J. (2006), *op. cit.* p.122.

Middle Ages,'[69] which historian Ole Benedictow, surmised in describing the pattern of spread for the Black Death.

> …In medieval times, ship transport was by far the most efficient and rapid way of transporting goods and disseminating disease at a distance. Epidemic disease, consequently, first invaded seaports, cities and commercial hubs along the coasts of the Mediterranean and the western coasts of Europe or situated on large navigable rivers…Next, epidemics would radiate from them to local towns in the region, and from them further into the countryside by horse and carriage or by pack horses along secondary and tertiary lines of local communication. In this way a highly contagious disease would in the end tend to blanket entire areas and regions…Seaports would also serve as points of departure for other ships, which would take disease as well as cargo on board and carry it to other destinations and commercial centres that would serve as new epicentres for the spread of disease in their regions and so on…[70]

The ability of plague to utilise human activity to aid its spread diminished the potential power of geographic location for the state. Seaports played an increasingly prominent role in the dissemination of plague in all three pandemics.[71] Just as the use of ships had 'greatly hastened the Black Death's conquest of Europe,'[72] the invention of the steamship served to further increase the pace with which plague was able to spread during the third pandemic. Once plague had entered the harbour it would spread by land 'at a pace that was only a tiny fraction of the pace by ship'.[73]

The increased speed of dissemination via ship posed significant difficulties for authorities tasked with protecting the geographic border of the state. According to Benedictow,

> …The Black Death moved with such pace and in such an apparently fortuitous manner in the eyes of contemporaries that the weak and rudimentary medieval administrations of countries, city states or municipal authorities had no chance to organize effective countermeasures, such as blocking harbours to ships coming from abroad.[74]

However, such countermeasures would only have been effective if the visible signs of plague were present among the crew of the ship. Even the quarantining of a crew

[69] Benedictow, O.J. (2004) *The Black Death 1346-1353: The Complete History*, Woodbridge: The Boydell Press, p.227.
[70] *Ibid.*
[71] *See* Gottfried, R.S. (1983), *op. cit.* Little, L.K. (2007), *op. cit.* Echenberg, M. (2007), *op. cit.* Benedictow, O.J. (2004), *op. cit.* Aberth, J. (2005) *The Black Death: The Great Mortality of 1348-1350 A Brief History with Documents*, New York: Palgrave Macmillan.
[72] Benedictow, O.J. (2004), *op. cit.* p.229.
[73] *Ibid.* p.231.
[74] *Ibid.* p.229.

showing signs of plague may not have prevented the introduction and spread of plague, given the vector of rats.

However, some states were able to diminish the pace of the third pandemic's spread on its arrival on the mainland. Actions deployed by administrations during the third pandemic in large part built upon those established in the wake of the Black Death. The traditional notions of quarantine and cordoning of areas, contributed to the diminishing of the attrition rate throughout the third pandemic. However, Echenberg highlights the considerable role that the geographic attributes of specific areas played in decreasing the impact of the pandemic. For example, 'Porto proved to be an unattractive beachhead for *Y.pestis*. The steep escarpments of the Douro River valley and its remoteness helped thwart the spread of bubonic plague to the interior, let alone cross the mountains into France or Spain.'[75] In short, unaccommodating terrain reduced the spread of disease, particularly when the state was able to prepare adequately for an oncoming pandemic, thereby holding as true Morgenthau's assertions in regard to geography.

The ability to circumvent geographical terrain to ensure the safe and rapid trade of goods provides for a strong, if not interdependent, economic foundation. Historical examples give an understanding of the potential benefits geography brings to a state in the period of plague pandemics and the utilised trade routes (both sea and land). However, as Gottfried contends, the role of trade routes in the introduction of the contagion during the Black Death exposes a higher cost of maintaining an interdependent economy. While primary responsibility for infection can be assigned to rodents, the 'work of man-the elaborate East-West trading system established in the twelfth and thirteenth centuries' was just as responsible.[76] Gottfried argues that

[75] Echenberg, M. (2007), *op. cit.* p.127. Furthermore, the absence of 'high-ways or easy rail linkages tie[ing] Porto to similarly crowded and unsanitary urban slums farther to the north and east,' contributed to mitigating the pandemic. (p.127) [Brackets Added]
[76] Gottfried, R.S. (1983), *op. cit.* p.35.

the westward movement of plague was mainly facilitated by the 'overland trade route through central Asia' and assisted via the 'sea-based routes'.[77] Ironically, the actions of humankind in establishing trade routes, arguably to ensure their prosperity, also facilitated a reduction in the potential benefits of the geographic element to the national power of the state.

Echenberg contends that, 'it had taken the return of an old pestilence to the very doors of Europe for governments to appreciate what infectious disease could now do so easily: cross boundaries of nations, states, and oceans.'[78] Humankind played a significant role in facilitating the ease with which plague was able to make such a crossing. Plague's persistent use of humanity's technological advancements to ensure its further spread highlights the tenacity of this pandemic actor. Morgenthau's element of geography underlines how susceptible to human and microbe development this "most stable" element of national power is to the plague pandemic actor.

3.3.2 Natural Resources

The foundation of Morgenthau's element of natural resources is the ability of the state to provide for its constituents. An abundance of natural resources, namely food and raw material, reinforces the national power of the state by providing the base for other elements to fortify their strength.

The Black Death struck Europe at a time when 'the continent was caught in a Malthusian deadlock'.[79] John Kelly contends that 'after two and a half centuries of rapid demographic growth, the balance between people and resources had become

[77] Gottfried, R.S. (1983), *op. cit.* p.36.
[78] Echenberg, M. (2007), *op. cit.* p.307.
[79] Kelly, J. (2005), *op. cit.* p.293.

very tight.'[80] The Black Death facilitated a significant reduction of the European population, which allowed for a greater sharing of the resources for the survivors. The effect is almost paradoxical to the expected: the abrupt reduction in population, had a positive effect on strained natural resources. The deaths caused by the Black Death eased the burden on the state's natural resources, a burden derived from overpopulation of Europe. Kelly further contends that the 'high mortalities of the Black Death…helped to end the paralysis and allow the continent to recapture the momentum' required to attain a balance between natural resources and the population.[81]

Morgenthau's sub-elements of food and raw materials build on the preceding element of national power by allowing a realisation of the basis for society. While the geographic element offers some assurance of national power for the state, the possession of natural resources builds on that assurance, establishing the viability of a state's national power through its possession of food to support its population.

3.3.2.1 Food

The provision of food to a population is vital to the state's accumulation of national power. While the effect of the Black Death on this provision was to reduce the amount of suppliers, being the agricultural workers who succumbed to the outbreak, so high were the levels of mortality that an oversupply of food was created.

The large population prior to the commencement of the Black Death was already placing a significant strain on food resources for a number of countries. The initial medieval population 'boom' that transpired during the twelfth and thirteenth

[80] Kelly, J. (2005), *op. cit.* p.293.
[81] *Ibid.*

centuries seemed to come to an abrupt end. As Kelly maintains, the strain the Black Death placed on the medieval economy bought the economy to 'nearing collapse';

> In Europe, it was the implosion of the vastly larger domestic economy, particularly the agricultural economy, that people felt most keenly. The implosion was continent wide, but in England, a nation of meticulous record keepers, it was documented with great diligence. Around 1300 the acreage under plow decreased, while the land still in use either declined in productivity or stagnated. After centuries of heady advancement, the medieval peasant's mistakes had caught up with him. Some of the good land brought into service during the Great Clearances of the twelfth century had been over-farmed, and some of the more marginal land, which never should have been cleared in the first place, was giving out entirely.[82]

The Black Death enabled the creation of agricultural techniques that would have a profound impact on future food supplies within the European region. As Kelly observes a 'smaller population meant a larger share of resources for survivors-and, often as well, a wiser use of resources'.[83] In large part, this impact was derived not just from the severity of the pandemic and the extensive decimation of the population, but the fundamental restructuring of agricultural practice, which took place in the aftermath of the pandemic.

The Black Death simultaneously decreased the demand for food, while increasing the supply of better quality product. Thompson provides an account of the sudden food oversupply and its effect on the medieval economy in that,

> The immediate effect of the Black Death was to lower prices and to glut the market with commodities…The mortality due to the Black Death was very high...The consequence was that when the plague had spent its force the surviving population found itself in possession of these accumulated stores, produce, goods, in addition to movable and real property which had once belonged to those now dead.[84]

As Thompson alludes, too, the reduction in the population allowed survivors to take advantage of newly vacated allotments of land that could produce a greater yield. Yeloff and Van Geel's 2007 study contends, 'the reduction of manpower available for farming meant that, in many cases, it would only have been feasible to farm the

[82] Kelly, J. (2005), *op. cit.* p.56.
[83] *Ibid.* p.293. The adoption of sustainable agricultural techniques is further addressed in section 3.3.3 *The Plague Pandemic: Industrial Capacity*
[84] Thompson, J.W. (1921), *op. cit.* p.566.

better quality soils'.[85] Such an assertion is supported by Kelly who maintains that 'in the half century after the Black Death, crop yields rose, not because agriculture improved but because now only the best land was being farmed'.[86] In the case of the Black Death, the national power aspect of food supply was enhanced with an increase in the nutritional produce available to the population as a whole. Moreover, a stronger community, derived from the more nutritional produce, allows for greater positive contributions to national power.

The increased surplus of specific types of food provided the opportunity for farmers with access to large parcels of land to focus less on the provision of grain and wheat, and more towards animal husbandry.[87] This shift in agricultural focus, combined with the excess supply of the nutritional staples of wheat and grain, contributed toward a change in the diet of the general population. Gottfried documents the nutrition transition that took place within the Middle East during the post-plague era:

> There is good evidence for this increased demand for mutton and other meats in the Middle East. In the early fourteenth century, before the Black Death, an average individual in Syria had consumed a daily diet of about 1154 calories, including 45.6 grams of protein, 196 grams of carbohydrates, and 20 grams of fat. By the mid-fifteenth century, this had risen to 1930 calories, including 82 grams of protein, 294 grams of carbohydrates, and over 45 grams of fat. Before the Black Death, a monthly mutton ration for a family of four had been about 12 kilograms; after the Black Death, it rose to 30 kg.[88]

Such a transition in food supply enhances the health and well being of the population, allowing them to make a greater contribution to the national power of the state. The importance of maintaining a nutritional food supply for both military and domestic means cannot be overlooked in any calculation of national power. As Morgenthau contends, 'self-sufficiency in food has always been a source of great

[85] Yeloff, D. and van Geel, B. (2007) 'Abandonment of Farmland and Vegetation Succession Following the Eurasian Plague Pandemic of AD 1347-52', *Journal of Biogeography,* 34, p.578.
[86] Kelly, J. (2005), *op. cit.* p.285.
[87] Gottfried, R.S. (1983), *op. cit.* p.138.
[88] *Ibid.* The provision of food was not the sole benefit of going into animal husbandry, as Gottfried maintains, 'animals provided other sources of riches besides their meat. Cattle hides could be made into leather and sheep fleece into wool'. (p.138)

strength' and that a 'permanent scarcity of food is a source of permanent weakness' reinforces this notion.[89]

3.3.2.2 Raw Materials

As much as the Black Death was able to replenish the food available to a nation, so too was the ability of the pandemic to restore a modicum of balance between the population's demand for raw materials and the availability of those materials. The high rates of mortality had a significant impact on the state's ability to utilise the population to extract existing raw materials. However, a number of studies[90] indicate that natural resources within the European continent were being over consumed to the point that the replenishment of renewable resources was increasingly strained. Indeed, David Herlihy contends that 'nearly all available resources were committed to the effort of producing the food, clothing, and shelter needed to support the packed communities' prior to the outbreak of the Black Death.[91] Herlihy lends support to the importance of the possession of raw materials to ensure not only just the security of the population, but also the national power of the state.

The outbreak of the Black Death provided the depopulation required for a resurgence of raw materials. As Gottfried argues, the plague ensured a return to a productive balance between humankind and natural resources;

> By 1200, virtually all of the Mediterranean Basin and most of the north German plain had been deforested and cultivated. Indigenous flora and fauna were replaced by domestic grasses and animals, and invaluable woodlands were lost. With depopulation this process was reversed. Much of the primeval vegetation returned, and abandoned fields and pastures were reforested. Given the importance of wood as a building material and fuel, this alone guaranteed a rise in standard of living.[92]

[89] Morgenthau, H.J. (2006), *op. cit.* p.125.
[90] *See* Gottfried, R.S. (1983), *op. cit.* Kelly, J. (2005), *op. cit.* Benedictow, O.J. (2003), *op. cit.* Aberth, J. (2005), *op. cit.* McNeill, W.H. (1998), *op. cit.*
[91] Herlihy, D. (1997) *The Black Death and the Transformation of the West*, Cambridge Massachusetts: Harvard University Press, p.39.
[92] Gottfried, R.S. (1983), *op. cit.* p.136.

The rejuvenation of these resources provided the foundation for a rise in the standard of living within states to enhance their national power as their population regained numbers and strength. The ability for a state to do so is dependent on its ability to enhance its industrial capacity to the point that the technique utilised by the state's industrial complex minimises the impact on the state's natural resources, thereby seeking to maintain a balance between the two.

The mortality of the Black Death served to strengthen the potential national power garnered from the possession of natural resources. However, the recovery of natural resources following the Black Death is largely a long-term consequence. In the short-term the rapid depopulation afforded those tasked with capitalising on the state's natural resources the opportunity to adjust their technique to a more sustainable method. Sustainable methods are also inherent in Morgenthau's third element of national power, industrial capacity, which allows for an assessment of the impact of the plague pandemics on the industrial complex of the state.

3.3.3 Industrial Capacity

Morgenthau refers to a state's industrial capacity as the possession of the 'industrial plants that can transform' the state's natural resources, 'into industrial products'.[93] The severity of the Black Death provided the impetus to adopt alternative methods within the medieval industrial complex. The initial impact of the pandemic, being a reduction in the institutional knowledge, was countered by a number of "mini-revolutions" within the industrial complex of the time. A staple of these "mini-revolutions" was the enhanced contribution they made to the national power of the state.

The high mortality of the Black Death was responsible for generating a substantial shock to the European community. Historian David Herlihy maintains that this

[93] Morgenthau, H.J. (2006), *op. cit.* p.131

shock 'in turn broke the continuities of economic life and disrupted established routines of work and service…the high mortalities left numerous posts in society unfilled and services unperformed.'[94] The dearth of services posed significant problems to the industrial capacity of the region to overcome, as Thompson further explains,

> Those who survived found themselves personally richer than before; but Europe was immeasurably poorer, for production absolutely ceased for months, even a whole year, and when it was renewed the productive capacity of Europe was found to be much impaired, while the waste had been terrific. When all the accumulated surplus had been consumed or wasted, prices soared and the cost of living, both of commodities and of service, rose enormously. Farm laborers, guild workmen, domestic servants, clerks, even priests, struck for high wages.[95]

The Black Death contributed to a shortage of specific service providers. This shortage was often filled by inexperienced or unqualified persons, as the population attempted to readjust. One such example is the role of gravediggers.

The Black Death provided a number of opportunities for those in need of gainful employment. In exploring the increased demand placed on gravediggers, Herlihy highlights how 'Gravediggers gained a special prominence at a time when people died each day by the hundreds. The task of burying the dead apparently gave employment to marginal social groups, poor rustics, beggars, and the urban jobless.'[96] Indeed there appears to be some indication that 'gravediggers who worked for pay were unknown…prior to the Black Death'.[97] The increase in demand for previously marginal services challenged prevailing professional frameworks to promote new areas of economic activity.

As with all grand reactions to the economy, the dramatic change in population encouraged individuals to exploit the conditions to their advantage. The high demand for particular goods and services and the reduction in the supply of these

[94] Herlihy, D. (1997), *op. cit.* p.40.
[95] Thompson, J. W. (1921), *op. cit.* p.567.
[96] Herlihy, D. (1997), *op. cit.* p. 41.
[97] *Ibid.*

goods and services, allowed individuals to capitalise on the unique situation and demand whatever price or wage they deemed fit. The ramifications of the high wage demands significantly impeded the recovery of the state. In an effort to curb the high rates of profiteering in the wake of the Black Death, Thompson contends that 'governments had to resort to maximum laws both for commodities and wages'.[98] The statute of labourers within England went so far as to imprison workers 'who were idle and were not willing to take employment after the pestilence unless for outrageous wages.'[99] Furthermore, the statute determined that both 'men and women, should be obliged to take employment for the salary and wages accustomed to be paid in the place where they were working in the 20th year of the king's reign [1346], or five to six years earlier'.[100] The intervention of the government tells us the relationship between the plague pandemics and governance and the importance placed on a viable industrial complex in order to maintain the state's national power.

Interestingly, Kelly contributes to this idea contending that 'depopulation…had an important effect on technological innovation', and that 'the sharp decline in the workforce was an impetus for the development of labor-saving devices in many fields'.[101] Three fields where such advancements took place were fishing, book making, and mining. The "mini-revolutions" that transpired within these fields provide an indication of the ingenuity experienced within the post-Black Death industrial complex, designed to counter the loss of the working population.

Gottfried illustrates the innovative means introduced to the fishing industry:

> Fishing was big business in the Late Middle Ages, as fish was an important source of protein in most people's diets, especially during Lent. Before the Black

[98] Thompson, J.W. (1921), *op. cit.* p. 568. France passed a statute of Laborers in 1350, England a similar law in 1351.
[99] Luders, A., Tomlins, T. E., France, J., Tauton, W.E., and Raithby J. (1810-28) 'Statutes of the Realm 1101-1713' in Horrox, R. (1994) *The Black Death*, Manchester: Manchester University Press, p.312.
[100] *Ibid.* [Brackets Added]
[101] Kelly, J. (2005), *op. cit.* p.288.

> Death, fisherman had to come ashore to salt (i.e., preserve) their catch. But around 1380, Dutch fishermen perfected a method of salting, drying, and storing their catch aboard ship. This allowed them to stay at sea longer, sail farther from shore, and bring home more fish.[102]

Salting fish at sea expanded the function of the industry, expanded the domestic food supply, and strengthened the national industrial capacity. The advancements within the fishing industry translated to a 'revolution in maritime transport,' with the production of 'bigger ships with smaller crews'.[103] The benefit provided to the state by such advancements was the ability to project national power over greater distances and the waves.

Of significant concern to the nascent book industry of the time was the rapid loss of labour and expertise. As Kelly explains, 'during the thirteenth and fourteenth centuries, the demand for books increased steadily, propelled by a growing class of merchants, university-trained professionals, and craftsmen'.[104] In the post-Black Death era, even though the demand for books had arguably decreased, the 'labor-intensive' process of book production became unaffordable in the 'high-wage postplague era.'[105] In short, the Black Death resulted in a more expensive book industry. In order to counter this increased expense 'Johann Gutenberg, an ambitious young engraver from Mainz, Germany... In 1453, and the near-centenary of the mortality…introduced his printing press to the world.'[106] While a considerable amount of time had passed since the Black Death and the creation of Gutenberg's printing press, such innovation is 'a salient example of factor substitution which was transforming the late medieval economy'.[107] In this particular instance, the human factor in book production was being substituted with the printing press, similar outcomes also transpired within the mining industry.

[102] Gottfried, R. S. (1983), *op. cit.* p.142.
[103] Herlihy, D. (1997), *op. cit.* p.50.
[104] Kelly, J. (2005), *op. cit.* p.288.
[105] *Ibid.*
[106] *Ibid.*
[107] Herlihy, D. (1997), *op. cit.* p.50.

After the Black Death, the development of society contributed towards a 'general expansion in mining and metallurgy'.[108] This expansion was related to 'an increasing demand for bullion and metals for guns,' and proved a substantial test for the burgeoning mining industry.[109] As Gottfried explains,

> The number of miners, never large before the plague, suffered from the same extent of depletion as did the ranks of masons and carpenters. In essence, the mining industry faced disaster at a time of optimum demand. But, in the fifteenth century, there were new developments in water pumps, which allowed mines to be dug deeper, and new techniques in shaft shoring, which enabled miners to go into deeper holes and do so more safely than ever before.[110]

Advances in technique that were adopted by the mining sector made a significant contribution to the industrial capacity of the state. Arguably, such advances may have transpired without the Black Death taking place. However the mass-reduction in personnel during the pandemic would have increased the demand and accelerated the need for these technical advances.

The effect of the Black Death on the industrial capacity of the state has two phases. Phase one was the immediate impact of shock and devastation that comes with such large losses of human life. However, as opposed to crippling society to the point where it can no longer function, the Black Death served as a turning point for the industrial capacity of the region affected, as Herlihy infers, 'after it recovered from the plague's initial shock and learned to cope with the problems raised by diminished numbers'.[111] Phase two was society's ability to recover and innovate to advance its interest. The transformative effects of the Black Death on the medieval industrial complex translated to a similar transformation in the military forces of the time.

[108] Gottfried, R.S. (1983), *op. cit.* p.142.
[109] *Ibid.*
[110] *Ibid.* p.142.
[111] Herlihy, D. (1997), *op. cit.* p.51.

3.3.4 Military Preparedness

The military during the Black Death was profoundly different to the military to which Morgenthau referred, given that throughout the Middle Ages 'medieval wars had been fought not by "armies" in any recognizable, modern sense but by loose collections of men, often under little or no central command'.[112] Military personnel were drawn from the healthier members of the population in times of war. While specific data detailing the impact of the Black Death on military forces is lacking, the data available from all three pandemics of plague does provide a synthesised indication as to the threat generated by a pandemic to a state's military preparedness.

The Black Death provided an impetus for change within the military establishment, in particular it was the 'nature of warfare' which needed change spurred on, in part, by 'labor shortages and high wages'.[113] The military leadership were expected to maintain the effectiveness of the military force with a significantly diminished population from which to draw. As with industrial capacity the use of technology was pivotal in the state's ability to maintain or promote its national power.

3.3.4.1 Technology

Technical innovation plays an important part in the maintenance of a state's national power. In the medieval era, innovation in military technique enhanced the ability of a state's military to protect its national power. One such early medieval innovation was the creation of the infantry. Morgenthau contends that the creation of the infantry, 'spelled a momentous shift in the distribution of power in favor of those who used those weapons before their enemies did'.[114] In order to reinforce his argument Morgenthau cites the battles of Morgarten (1315) and Laupen (1339), in

[112] Ehrenreich, B. (1997) *Blood Rites: Origins and History of the Passions of War,* London: Virago Press, p. 179.
[113] Kelly, J. (2005), *op. cit.* p.288.
[114] Morgenthau, H.J. (2006), *op. cit.* p.133.

which, 'armies composed of Swiss infantry inflicted disastrous defeats on feudal cavalry, demonstrating the food [sic] soldiers recruited from the common people were superior to an aristocratic and expensive army of equestrians'.[115] While the use of foot soldiers or 'peasant infantry'[116] provided some advantage in the technique of war, the need for a large number of armed forces to sustain such an advantage posed further difficulties for the state, particularly during the Black Death. Faced with a decrease in potential recruits, commanders were forced to adopt more experimental techniques in warfare.

One such technique was the use of the pathogen itself as a way to defeat the enemy. Indeed, the first recorded incident of biological warfare took place just prior to the commencement of the Black Death and was a likely contributor to the plague's dissemination. The trading centre of Kaffa on the Crimean coast came under siege by the Tartars in 1346, 'after a three year siege, plague broke out in the Tartar camp…Kaffa fell after the Tartars catapulted their plagued dead over the city walls'.[117] Whether the use of the corpses led to the infection of those within the centre's walls is a point of contention.[118] However, the tactic did lead to success for the Tartars, with refugees fleeing Kaffa by ship.[119] The technique of using plague as a biological weapon established at Kaffa was 'continued in innumerable siege situations well after the Black Death'.[120] The Tartars used biological agents with crudity – however, later armies have used military technology effectively to

[115] Morgenthau, H.J. (2006), *op. cit.* 134. [Brackets Added]
[116] Kelly, J. (2005), *op. cit.* p.74.
[117] Kirby, R. (2005) 'Using the Flea as a Weapon', *Army Chemical Review,* July-December 2005, p.31.
[118] Gottfried (1983) points to 'plagues complex etiology and the necessity of insect and rodent hosts or live human victims with pneumonic plague cast[ing] doubt on the role of the catapulted bodies, however numerous they might have been' in the spread of plague. He argues that 'it is more likely that the urban Caffan rodent population was infected by its rural counterpart' instead. (p.37)[Brackets Added]
[119] Kirby, R. (2005), *op. cit.* p.31. Kirby contends that the flight of refugees 'may have initiated the second plague pandemic that seeded throughout Europe from seaport to seaport'. (*ibid.*)
[120] *Ibid.* Specifically, Kirby (2005) contends that 'in 1422, infected cadavers were catapulted into the city during the siege of Carolstein' and 'Russian troops attempted to spread plague among Swedish forces using bodies of plague victims.' Evidence also suggests pronounced use of plague fleas as a biological weapon during World War II by Japan, the United States and Canada.

disseminate biological agents. One such recent example includes the use of plague by the Japanese during World War II. Cunha and Cunha contend that the Japanese, 'used aircraft to drop rice contaminated with infected fleas on several Chinese cities' infecting thousands and causing 'approximately 700 plague-related deaths'.[121]

While not considered a direct result of the Black Death, the standardisation of firearms as a staple of military weaponry seems to have derived from the reduction in manpower, as a result of the Black Death. The reduction of the population meant an increase in demand for capable soldiers. Consequently, soldiers were able to demand higher pay, and 'as the salaries of soldiers increased, war became more expensive'.[122] Higher expenses contributed towards higher expectations and arguably, 'soldiers with firearms could fight more effectively than those without'.[123] In short, 'the development of guns…was accelerated by the postplague lack of manpower'.[124]

3.3.4.2 Leadership

Military leaders were not immune from the plague. Cunha and Cunha refer to the effect of plague on the outcome of the Peloponnesian war, arguing that 'the plague killed Pericles, leaving Athens without one of its greatest statesmen'.[125] The loss of military leadership, combined with Athens' adversaries, the Spartans, being 'comparably untouched by the disease' contributed towards Athens' ultimate defeat.[126] There are some indications as to the lack of leadership displayed during the Black Death and the need to improve on this vital component of military preparedness. While the leadership within the military was just as susceptible as the common soldier or citizen to plague, the actions of the leadership, particularly during the Black Death, highlight the rather large disconnect between the two.

[121] Cunha, C.B. and Cunha, B.A. (2006), *op. cit.* pp. 269-271.
[122] Kelly, J. (2005), *op. cit.* p.288.
[123] Herlihy, D. (1997), *op. cit.* p.50.
[124] Gottfried, R.S. (1983), *op. cit.* p.141.
[125] Cunha, C.B. and Cunha, B.A. (2006), *op. cit.* p.260.
[126] *Ibid.*

The actions taken by the Royal government of England during the Black Death show the stark disconnect. Horrox contends that 'the royal government expected business as usual during the plague, and accordingly fined Aymer fitz Waryn, the Sheriff of Devon, £20 for failing to come to Westminster to render his account in summer 1349'.[127] The sheriff justified his absence by maintaining that,

> Richard de Greencome, who was his under-sheriff and sub-escheator and responsible for receiving the issues of the county, along with his other ministers and officials…who had the keeping of the writs, rolls and memoranda which he needed to make up his account, had died suddenly…of the pestilence then raging in the country.[128]

Record keeping of such a seemingly minor transgression and debilitation make it logical to assume that similar instances transpired within military forces. All instances accumulate to threaten the national power of Britain. The assault of the Black Death on the military preparedness of Britain can also be witnessed in the actions taken by military leaders during the post-Black Death era.

Fifteenth century changes to the British military complex, under the leadership of King Henry V, indicate an awareness of the need to strengthen the defence of the state's national power in the wake of the Black Death. According to Bradbury, 'the royal fleet had virtually disappeared in the fourteenth century, and at Henry's accession consisted still of a mere handful of ships. Within a few years Henry built a fleet of some strength.'[129] In realising the need to project the national power through a naval capacity, King Henry commenced a programme aimed at restoring the national power of the state. Similar actions carried out by Henry such as the mass production and banning of the exportation of bows and arrows[130] facilitated

[127] Horrox, R. (1994) *The Black Death*, Manchester: Manchester University Press, p.275.
[128] *Ibid.* Horrox maintains that on receiving 'the sheriff's excuse, which was subsequently endorsed by a local jury…the penalty was later waived by the king'. (p.275)
[129] Bradbury, J. (1985) *The Medieval Archer*, Suffolk: The Boydell Press, p.117. The British Military took a substantial toll during the Black Death, according to Rogers (2005), 'the population of England had declined by nearly fifty percent…mainly due to the Black Death'. (p.403) The decline in population not only impeded the recruitment of personnel but arguably the maintenance of the British fleet as well.
[130] *Ibid.* p.118.

an enhancement of the state's military preparedness. The production of bows and arrows, as well as a reconstitution of naval force, should be construed as a desire to project power, without committing the manpower to more traditional infantry battalions. Whether or not the Black Death played a part in the decisions of King Henry remains unknown, however the loss of manpower from the Black Death would have demanded a re-evaluation of military practices.

For Morgenthau, military leadership 'has always exerted a decisive influence upon national power'.[131] The plague pandemics have had a significant impact on this important sub-element. The domestic situation largely determines the ability of the military leader to effectively carry out his duty of preserving the national power of the state. Furthermore, as can be seen in the aftermath of the Black Death, military leadership must be willing to adapt to the new environment with which they have been presented. Such adaptation incorporates an appreciation of the impact of the pandemic on both the quality and the quantity of their armed forces.

3.3.4.3 Quality and Quantity of Armed Forces

Assessing the quality and quantity of armed forces is fitting when describing the impact of plague on the state's military preparedness. Prior to the Black Death, the Justinian Plague illustrated the potential effect a pandemic could have on a state's military. Simply put, a loss of life within the general population forced the military leadership to look to other means to fill the vacancies. Little contends that a heavy reliance on peasants to fill the Byzantine army contributed to severe manpower shortages during the Justinian plague.[132] The impact of the plague on the general population required 'searches beyond the usual sources for fresh recruits,' which led to 'the ever-greater induction of barbarians' into the armed forces.[133]

[131] Morgenthau, H.J. (2006), *op. cit.* p.135.
[132] Little, L.K. (2007), *op. cit.* p.24.
[133] *Ibid.*

The use of mercenaries to fill the role of a professional military was a common, yet expensive, way to ensure the quantity of forces. Furthermore, the extra support required for medieval warfare required large numbers of individuals. Ehrenreich contends that 'long campaigns required retinues of craftsmen and laborers-blacksmiths, for example, and miners to dig under the walls of besieged cities. In addition, there were large numbers of peasant foot soldiers: archers, pikemen, and lightly armed men.'[134] While the ability to draw such a large and diverse quantity of forces during and after the Black Death would have been difficult, the ability to ensure the quality of health for recruits and forces alike was just as complicated.

The maintenance of a large military during the medieval era was complicated by the nature of the job. The violence of medieval warfare likely played a role in the susceptibility of armed forces to infection of plague. Kelly illustrates such a point in arguing that,

> Since stress, including combat stress, weakens immune system function, arguably one consequence of bigger more violent wars was a larger pool of disease-vulnerable people. Less arguably, larger armies produced larger contributions of dirty men and debris, which attracted larger concentrations of rats and fleas.[135]

The creation of conditions conducive to the spread of plague served to empower the pandemic further in its attack on the national power of the state. The responsibility for ensuring the quantity and the appropriate quality to ensure such an undertaking fell to the leadership and served as the impetus for changing the nature of the medieval military establishment.

When assessing the national power of the state, the preparedness of the military to protect and recover power is the key desired attribute. Throughout history, the plague pandemic actor has maintained a decisive influence on a state's military preparedness, be it the death of a leader, or the microorganism's use as a weapon.

[134] Ehrenreich, B. (1997), *op. cit.* p.169.
[135] Kelly, J. (2005), *op. cit.* p.74.

The Black Death required an innovative approach to technique in order for the state to recover. However, the success of adopting innovative approaches to military preparedness can only be viable if the state is able to recruit from a healthy population.

3.3.5 Population

The element of population serves as Morgenthau's first 'purely human' factor that 'determines the power of a nation'.[136] Within the element of population, this assessment turns to a purely quantitative agenda. The primary effect of a pandemic on a population is the reduction in size through death. However, the plague's high mortality rate, and the ease with which it conquered the European continent, allowed the pandemic to cause significant upheaval within the demography of Europe. Indeed, William McNeill contends that 'overall, the best estimate of plague-provoked mortality, 1346-50, in Europe as a whole is that about one third of the total population died'.[137] Such a high rate of mortality has significant consequences for both the distribution of the population, as well as the trends of the population.

3.3.5.1 Distribution

The distribution of a state's population dictates the ability of the population to contribute towards the national power of the state. Ideally, the size of a state's population is maintained at a level that sustains the other elements of national power such as industrial capacity and military preparedness. The Black Death, combined with successive outbreaks of plague, imposed a significant burden on the distribution of the medieval population.

[136] Morgenthau, H.J. (2006), *op. cit.* p.137.
[137] McNeill, W.H. (1998) *op. cit.* p.179. McNeill (1998) bases his projection 'on the whole Continent of probable mortality rates in the British Isles, where the industry of two generations of scholars has narrowed the range of uncertainty to a decrease in population during the plague's initial onset of something between 20 and 45 per cent. Transferring British statistics to the Continent as a whole at best defines an approximate magnitude for guess-estimation. In northern Italy and French Mediterranean coastlands, population losses were probably higher; in Bohemia and Poland much less; and for Russia and the Balkans no estimates have even been attempted.' (p.179.)

Size

Prior to the Black Death, the European continent had been experiencing high levels of population growth. Gottfried contends this was a result of Europe's disease pool reaching 'an equilibrium of sorts,'

> The High Middle Ages was remarkably disease-free. The result was an increase in population from about 25 million in 950 to about 75 million in 1250. In some regions, the rate of increase was even greater.[138]

This population boom contributed towards what Herlihy has described as a 'Malthusian deadlock,' meaning that 'the community was maintaining at stable levels very large numbers over a lengthy period'.[139] The outbreak of the Black Death in 1348 halted the nature of this growth.

Over the three years of the Black Death, the population size decreased considerably with regional and seasonal variations.[140] In 1351, at the end of the Black Death's three year run, 'agents for Pope Clement VI calculated the number of dead in Christian Europe at 23,840,000. With a pre-plague population of about 75 million, Clement's figure accounts for a mortality of 31%.'[141] Such a mortality rate is widely considered to be the midpoint of probable rates of mortality, with some areas, such as Normandy, experiencing plague mortality 'between 40% and 50%'.[142] Based on these figures, it is possible to presume that in the three years of the Black Death more than 23,000 persons per day died across Europe.

Age

For Morgenthau, the age of a population relates to the productive young and their inputs to the development of the state's national power. With the Black Death, age relates to the groups that died and the withdrawal of their labour capacity. Despite

[138] Gottfried, R.S. (1983), *op. cit.* pp.16-17.
[139] Herlihy, D. (1997), *op. cit.* p.34. For example, 'In Tuscany, under these crowded conditions, many lived in misery, but somehow they coped.' (*ibid.*)
[140] Gottfried, R.S. (1983), *op. cit.* p.54-76.
[141] *Ibid.* p.77.
[142] *Ibid.* p.55. According to Gottfried (1983) other recorded rates indicate '50% mortality estimated for East Anglia, Tuscany, and parts of Scandinavia, and the less-than-15% morbidity for Bohemia and Galicia.' (p.77)

the difficulty in ascertaining age specifics during the Black Death, Herlihy contends that historic records indicate that, 'the plague preyed on the young rather than the mature…If a person survived one major epidemic, the chances improved that he or she would survive the next'.[143] Herlihy bases his assumption on the *Castato*, being a survey of the Florentine population from 1427 to 1430, which revealed that 'old persons age 60 or above…constitute[d] nearly 15 percent of the community'.[144] Hirshleifer supports Herlihy's findings, insinuating that the recurrent exposure to plague pandemics, 'reduced the incentives to bear children and raise families'.[145]

Herlihy offers further assistance in establishing the size of the population segment of "maximum potential usefulness," which enhances the national power of the state. Herlihy contends that within, the *Castato*, 'the adult and productive members of society, those between 20 and 59, were…a minority of about 41 percent'.[146] While this figure represents the age distribution after the Black Death, it is logical to assume that, given the significant shortages evident within the industrial capacity and the military preparedness elements, the Black Death had a catastrophic effect on the productive population demographic. The Black Death pandemic was the start of a cycle of pandemics, which saw the Plague return to the European continent a number of times to varying degrees. According to Gottfried *Pestis Secunda* commenced in the spring of 1361 and lasted for approximately one full year, with an average mortality rate of 20%, 'many observers…believed it was especially deadly for select groups, including the young-those born after the Black Death-and the landed upper class' further diminishing the power potential of the population element.[147]

[143] Herlihy, D. (1997), *op. cit.* p.43.
[144] *Ibid.* [Brackets Added] Herlihy further contends that such a figure is representative of 'the proportion one would expect to find in a modern Western population with a low birth rate'. (p.43)
[145] Hirshleifer, J. (1966), *op. cit.* p.22.
[146] Herlihy, D. (1997), *op. cit.* p.43.
[147] Gottfried, R.S. (1983), *op. cit.* p.130.

Geographic Distribution

The Black Death fundamentally altered the geographic distribution of the European population in two distinct ways: first, the migration of populations to areas that were seemingly not at threat from the plague and second, the migration of rural populations to recently depopulated urban centres. Thompson contends that the popular response to the plague was similar to an invasion in that 'it either killed or drove out the population'.[148] The movement of the population is best evidenced, according to Thompson as 'new place-names, new faces, even unfamiliar speech in various regions, attest it…One finds evidence of Italian colonies in south German and south French cities; French and Germans in north Italy; Flemings in Normandy; Normans in Picardy, etc.'.[149] Similar patterns of redistribution occurred domestically as well. Gottfried documents the migration of peasants from the countryside to more urban areas:

> Peasants fled from the countryside to, which was beset by a drop in food prices, a temporary breakdown of local authority, and omnipresent criminal bands and mercenaries, for the economic opportunity and comparative stability of large urban centers such as Florence and Siena.[150]

This redistribution, in part, assisted in the regeneration of the natural resources that were being heavily harvested prior to the Black Death.[151] Furthermore, the effect of the Black Death on geographic distribution reinforces the psychosocial aspects related to the disease. Thus, while the fear of contagion prompted the desertion of specific locales, the need for survival allowed certain populations to overcome that fear.

Level and Distribution of Human Capital

The impact of the Black Death drastically affected the human capital of a population despite attempts 'to keep its occupational cadres constant in size, even though the

[148] Thompson, J.W. (1921), *op. cit.* p. 568.
[149] *Ibid.*
[150] Gottfried, R.S. (1983), *op. cit.* p.90.
[151] *See* section 3.3.2.2 *The Plague Pandemic: Natural Resources: Raw Materials*

total community and the pool of possible members was shrinking'.[152] Evidence that guilds sought to establish an equilibrium of sorts between membership losses and new enrolments seem to suggest a recognition of the potential impact on member numbers resulting from the Black Death. Herlihy provides evidence of the matriculation lists of the guild of Por Santa Maria in Florence, which illustrate that,

> In the 20 years immediately preceding the Black Death, from 1328 to 1347, the guild matriculated 730 new members. In the 20 following years, from 1348 to 1367, it brought in almost as many, 672, although the population was down by about one-third. In the early fifteenth century, from 1408 to 1427, it admitted 784, more than in the pre-plague period, although the city's population had fallen by two-thirds.[153]

In order to maintain a steady rate of enrolment 'the guild had to spread its net broadly and bring in new apprentices with no previous family connection with the trade'.[154] The efforts of the guild to counter a decrease in memberships indicate not only a loss in human capital, but also the willingness for the guild to enrol less qualified individuals, to indemnify the guild from a loss of members. Herlihy maintains that a similar experience was likely to have transpired across all professions, which would have contributed to some loss of institutional memory.[155]

Evidence of the impact of the Black Death on the population distribution is somewhat sparse. However, available data do provide an appreciation of the potential effects of the pandemic on the medieval population. The distribution of the population establishes the immediate implications for that population of a pandemic. In order to comprehend fully the impact of the Black Death on the Morgenthau's element of population, an appreciation of the effect of the pandemic on the trend of the population is required.

[152] Herlihy, D. (1997), *op. cit.* p.45.
[153] *Ibid.* pp.44-45.
[154] *Ibid.* p.45.
[155] The loss of institutional memory refers to the demise of masters of the field. Furthermore, the need for quicker deployment of newly trained individuals may have had an effect on the quality of training carried out.

3.3.5.2 Trends

The trend of a population 'plays an important role' in assessing the 'future distribution of power' for a state.[156] Gottfried illustrates the weighty effect that 'several attacks of plague in a single generation' had on the demographic growth within Europe:[157]

> Europe's population in 1430 was 50% to 75% lower than it had been in 1290. In some places it began to rise in the 1450s, in others in the 1480s, and in others still not until early in the sixteenth century. Most observers agree that it was not until the mid-sixteenth century that Europe regained its thirteenth-century population levels.[158]

Importantly, a reduction in the population trend served to benefit the European continent, preventing it from experiencing the effects of the over-populated pre-Black Death times. While it is possible to presume that a slow population recovery would usually be to the detriment of the state's national power, the reduced population's quality of life was significantly enhanced. A greater quality of life arguably provides a greater contribution to national power than less. The element of national character does provide some indication as to whether the population's experience both during and after the Black Death was capable of making any contribution to the national power of the state.

3.3.6 National Character

The element of national character plays a distinct role in the state's ability to recover from the impact of a pandemic. A stronger national character's contribution to recovery, while difficult to gauge effectively, cannot be ignored when assessing the impact of a pandemic on national power. The Black Death's assault on the national character of the state was coupled with a lack of knowledge about the contagion, the influence of religious authorities and a disconnect between the political leadership and its constituency. The severity of the Black Death contributed towards

[156] Morgenthau, H.J. (2006), *op. cit.* p.139.
[157] Gottfried, R.S. (1983), *op. cit.* pp.134.
[158] *Ibid.* pp.134-135.

a 'tremendous…manifestation of mob psychology,' which Europe had not witnessed since the Crusades.[159] Thompson contends that this manifestation was a result of the 'lapse of all the accustomed inhibitions of church, of state, of society,' which led to 'the thought and conduct of men on eccentric tangents'.[160] The Black Death effectively removed any pre-existing national character within the European continent, to replace it with a national character of chaos; one where the ability of the individual to survive was considerably diminished and threatened. The scar that the Black Death would leave on the national character of the European region would last for centuries.

In assessing the changes in attitude experienced within the general population following the Black Death, Gottfried contends that 'life took on more violent and emotional overtones'.[161] Gottfried explains that 'much of the cruelty and violence, as well as the piety and joy, of the late fourteenth and fifteenth centuries can be understood only by keeping in mind the new omnipresence of plague the possibility of sudden, painful death.'[162] McNeill lends support to this point saying that 'when an outbreak of plague implanted fear of imminent death in an entire community, ordinary routines and customary restraints regularly broke down'.[163] The changes effected by the Black Death on the national character can be illustrated through the political and religious characteristics of the population.

The Black Death had significant ramifications for the political authorities' ability to exert influence over the population's character. The feudal system, where 'both the court and police systems in most of fourteenth century Europe were operated by local landholders,' contributed to the chaotic nature of the national character.[164]

[159] Thompson, J.W. (1921), *op. cit.* p. 570.
[160] *Ibid.* p.571.
[161] Gottfried, R.S. (1983), *op. cit.* p.88.
[162] *Ibid.* p.89.
[163] McNeill, W.H. (1998), *op. cit.* p.192.
[164] *Ibid.* p.96.

Gottfried contends that in stark contrast to the feudal system, 'plague did not honor social class, and mortality among the nobility approximated that of the general population'.[165] The loss of the "noble class" as well as 'the economic and military power and social prestige of the landholders declined, their ability to uphold the law also diminished'.[166] The inability to maintain law and order contributed to the deterioration of the fabric and structure of society as 'people resorted increasingly to violence to settle their differences.[167]

The decline of political authority was not replicated everywhere. In exploring aspects of human behaviour within medieval England, John Kelly contends that the broken window theory[168] of human behaviour 'may speak to the relatively low-level of upheaval in Black Death England'.[169] Specifically, Kelly singles out those who,

> Stepped forward-to harvest the crops, maintain the land and buildings, keep the records, man the courts-to convey that the country was not slipping into anarchy, that authority was being maintained. Their steady leadership may have helped sustain order, self-discipline, and lawfulness at a very difficult moment.[170]

The Black Death provided a significant test for the ability of individuals to adapt and cultivate the national character. While some within the aristocracy were unable to provide the inspiration required to foster growth of the national character, or at least the defence of it, there is evidence that others could do so.[171]

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[165] McNeill, W.H. (1998), *op. cit.* p.96.
[166] *Ibid.*
[167] Gottfried, R.S. (1983), *op. cit.* pp.97-98.
[168] Kelly (2005) maintains that 'the Theory, which informs much modern police work, holds that the physical environment buttresses the psychological environment the way a beam buttresses a roof. Why? Broken windows, dirty streets, abandoned cars, boarded-up storefronts, empty grass-and refuse-covered lots send the message: "No one is in charge here." And when authority and leadership break down, people become more prone to lawlessness, violence, and despair, in the same way that a defeated army becomes more prone to panic if the officers fail to provide resolute leadership.' (p.206)
[169] Kelly, J. (2005), *op. cit.* p.206.
[170] *Ibid.* pp.206-207.
[171] Kelly (2005) provides the example of John Ronewyk a manager of the Hundred of Farnham, who 'in the midst of one of the bleakest years in all of English history, he organized a small army of tillers, masons, plumbers, carpenters, sawyers, and quarrymen' to ensure that the Black Death did not impede to production of the farm he was tasked with managing. (pp. 203-205)

Religious authority suffered greatly from the Black Death while 'many priests had died…many fled the contagion,'[172] abandoning their congregation to ensure their own health and wellbeing. These actions led 'many people' to believe, 'often unjustly, that the clergy were greedy, self-centered, and filled with a sense of their own importance'.[173] However, with a population forced to confront its own mortality, religious conviction surged, even as criticism of the Church peaked. Perhaps the most scathing critique of the church came from the pen of Pope Clement VI who in 1351 'as the first wave of plague was lifting' was unrelenting in his indictment of the clergy, questioning:[174]

> "About what can you preach to the people?" he asked. "If on humility, you yourselves are the proudest of the world, arrogant and given to pomp. If on poverty, you are the most grasping and covetous,… if on chastity-but we will be silent on that." [175]

While the church's ability to influence the national character of the population waned after the Black Death, God was still considered to play a fundamental role in the daily lives of man. Benedictow contends that 'in the intense religious mind of medieval man, it was generally thought that epidemic disease was God's way of punishing people for their moral depravity and grave sins'.[176]

The loss of faith in the organisation was so great that 'several new heretical movements became active in the post-Black Death era', further diminishing the contribution of the Church to the national character of the state.[177] One form of religious fanaticism could be seen in the flagellant movement. Flagellants, believing that the Black Death was God's punishment, consisted of 'large groups…wander[ing] from town to town scourging themselves in order to save their souls and alleviate the Lord's wrath, believing in the mortification of the flesh

[172] Herlihy, D. (1997), *op. cit.* p.41.
[173] Gottfried, R.S., (1983), *op. cit.* p.87.
[174] Kelly, J. (2005), *op. cit.* p.290.
[175] *Ibid.* pp.290-291.
[176] Benidictow, O.J. (2004), *op. cit.* p.393.
[177] Kelly, J. (2005), *op. cit.* p.291.

as suitable penance for man's sins.'[178] The ability for the Flagellant movement to gain popularity[179] is a likely indication as to the vulnerability of the post-Black Death national character. However, the popularity of violent movements can also be seen with the accusations of Jewish involvement in the dissemination of the plague.

The labelling of the Jews as being responsible for the Black Death had colossal ramifications for the Jewish population of Europe. Central to the accusations against the Jews was the notion that 'the great mortality was caused by Jews and other "enemies of Christendom" that poisoned their wells and other sources of drinking water'.[180] The argument gained traction, according to Benedictow, 'because the Jews in many places functioned as pawnbrokers and moneylenders, activities that were prohibited for Christians by the Catholic Church, persecution, exiling and murdering Jews could also serve personal economic motives'.[181] Efforts of religious authorities to prevent the murder of Jews had little effect on the situation, in large part because of the loss of faith in the authority of the Church.[182] The loss of faith combined with the exposure to high rates of mortality contributed towards a cultural obsession with death, fundamentally altering the national character of the population.[183]

[178] Benidictow, O.J. (2004), *op. cit.* p.392. [Brackets added]
[179] Aberth, J. (2011), *op. cit.* p.52. Aberth (2011) remains perplexed as to the Flagellant movement gaining popularity contending that 'atonement itself does not satisfactorily explain why' they where performing their whipping ceremonies, nor why they 'were so popular among their supporters'. (p.52.)
[180] Benedictow, O.J. (2004), *op. cit.* p.393.
[181] *Ibid.* p.393.
[182]Efforts were taken by Pope Clement VI to end the persecution of the Jews, issuing two bulls against it and eventually condemning it in 1349. Regardless, as Benedictow (2004) contends, 'the Black Death had two main functions in this context: tragically it transformed the process of increasing exiling and eviction of Jews from countries in Western Europe into a sort of medieval holocaust with extensive and indiscriminate murder of Jews; and it hastened the movement of Jews into Eastern Europe where their descendants were, to a large extent, annihilated in a new and even far more violent holocaust 600 years later.' (p.393)
[183] *See* Kelly, J. (2005), *op. cit.* Benedictow, O.J. (2004), *op. cit.* Gottfried, R.S. (1983), *op. cit.*

3.3.7 National Morale

The national morale of a population is vital to the stability of a state's national power. Morgenthau contends that central to the notion of national morale is the 'degree of determination with which a nation supports the foreign policies of its government in times of peace or war'.[184] In order to gauge the impact of the Black Death on national morale, there is a need to take into consideration the quality of the society and government which are the decisive factors in the accumulation of national morale. Indeed, while the Black Death took place at a time when the style of government was remarkably different from that used by Morgenthau to illustrate the importance of national morale, the relevance of this component of national power is no less significant in analysing the impact of the Black Death on medieval society.

Morgenthau's assessment of national morale pays particular attention to segmented society's role in cultivating this important element of national power. Specifically, he argues that 'any country with deep and unbridgeable class division will find its national morale in a precarious state.'[185] Morgenthau alludes to the importance of participation for all segments of society as being vital to the maintenance of national morale. This importance is derived from the notion that;

> Whenever deep dissensions tear a people apart, the popular support that can be mustered for a foreign policy will always be precarious and will be actually small if the success or failure of the foreign policy has a direct bearing on the issue of the domestic struggle.[186]

This assessment highlights the morale of the English, French and Florentine populations, allowing for an indication of the national morale created by the policies enacted by the authorities within these states. There is no stronger example of a state's inability to foster the national morale within the post-Black Death era than that offered by the reaction of the population to the various statutes of

[184] Morgenthau, H.J. (2006), *op. cit.* p.147.
[185] *Ibid.* p.150.
[186] *Ibid.* pp.149-150.

labourers that were introduced by England and France as well as the economic regulation employed by various guilds in Florence. Specifically, the revolts that transpired against this legislation illustrate the potential ramifications for a state that fails to take this vital element of national power into account, when enacting policy designed to recover the state's national power.

Recovery of national power from the Black Death required the support of the population in order to be successful. Pre-Black Death support for political authority existed with 'comparatively few' revolts that were 'generally of religious inspiration.'[187] In the wake of the depopulation of Europe after the Black Death revolts took on 'political overtones' and became 'increasingly socioeconomic in nature'.[188] In short, the post-Black Death society offered the perfect opportunity for survivors to pursue aggressively objectives designed to improve their quality of life.[189]

While the dramatic depopulation of Europe ushered in an era of prosperity for the survivors, the aristocracy of the time perceived this prosperity as a threat to their own status. The consequence of this was to pressure authorities into taking action to ensure that the working class would not be able to prosper financially in the post-plague world. For example, Edward III 'in 1349 and again in 1351, froze wages at preplague levels'.[190] When combined with 'new laws [that] made it illegal to refuse employment or to break a labor contract' the banning of luxury goods such as silk and fur-lined cots for peasants' the morale of the English population sank to a considerable low.[191] The low national morale reached its nadir when 'in the late 1370s the poll tax was extended to previously exempt groups like unskilled laborers

[187] Gottfried, R.S. (1983), *op. cit.* p.97.
[188] *Ibid.*
[189] Gottfried (1983) contends that the revolts after the Black Death 'had several characteristics. First, they took place during a general breakdown in law and order…a heightened sense of class identity… [and a] new relationship between wages and prices'. (pp. 97-98) [Brackets Added]
[190] Kelly, J. (2005), *op. cit.* p.287.
[191] *Ibid.* [Brackets Added]

and servants'.[192] The result of Edward's tax was the Peasant's Revolt of 1381. While the English Peasants' Revolt may be the best-known post-plague revolution, the revolt was replicating two other revolts that had transpired on the European continent, the *Jacquerie* (1358) in France, and the *Ciompi* (1378) in Florence.

In 1358 the *Jacquerie* revolt was to last only a few weeks yet 'it was one of the bitterest and bloodiest in French history'.[193] Central to the cause of the revolt was the lack of political determination felt by the peasants and bourgeoisie. Gottfried contends that 'the soldiers of the uprising were mainly peasants, but many of the leaders including the spokesman…were bourgeois. The bourgeoisie wanted political power commensurate with their economic gains'.[194] The *Jacquerie* was centred on the population revolting against government policy.

The *Ciompi* (1378) emerged when 'workers saw their standards of living crumble'.[195] The policies enacted by the various guilds within Florence, especially pertaining to valuation of currency, bought about mass violence and urban disorder.[196] Gottfried contends that 'during the most violent spell, in late July, the palaces and townhouses of the rich were looted, gutted, and burned'.[197] The outcome of the *Ciompi* was only moderately beneficial, 'for almost five years, the workers were able to share in the government of the city. They demanded the right to form guilds of their own, tax reform, the abolition of financial privileges, and a moratorium on debts'.[198] The success for the *Ciompi* revolt was, in the end, purely economic. By 1383 the 'merchant elite managed to regain power, and the *Ciompi* were disenfranchised yet again…their wages would remain relatively stable into the

[192] Kelly, J. (2005), *op. cit.* p. 287.
[193] Gottfried, R.S. (1983), *op. cit.* p.100
[194] *Ibid.* p.99.
[195] *Ibid.* p.101.
[196] *Ibid.*
[197] *Ibid.*
[198] *Ibid.* p.101.

fifteenth century'.[199] While the conditions all three revolts sought to address existed prior to the Black Death, the 'plague accelerated the changes and general social tensions', further exacerbating the disparity between the workers and their superiors.[200] The Black Death served to intensify strong division within a segmented society, which negatively impacted the national morale of a population.

The importance of fostering national morale by the state cannot be overlooked when developing plans that affect the whole of society. Not only is the cooperation of the population central to any containment plan, it is vital for governing authorities to look towards the recovery of its national power. Indeed, the notion of cooperation is central to the following element of national power, the quality of diplomacy.

3.3.8 Quality of Diplomacy

The element of diplomacy is reliant on the government's ability to harness its national power, in a way to provide the maximum leverage possible to achieve its national interest and foreign policy. Morgenthau assesses the quality of a nation's diplomacy on the ability to combine 'those different factors into an integrated whole, gives them direction and weight, and awakens their slumbering potentialities by giving them the breath of actual power'.[201] Given the backdrop of the Hundred Years War between England and France, the Black Death demanded an astute realisation of the impact of the pandemic on the state's national power in order for either state to sustain the battle.

Such a realisation is apparent following England's defeat of France at the Battle of Crecy (1346), merely two years prior to the outbreak of the Black Death. The defeat would eventually give way to a truce, which would last until 1354, four years after

[199] Gottfried, R.S. (1983), *op. cit.* p.101.
[200] *Ibid.*
[201] Morgenthau, H.J. (2006), *op. cit.* p.152.

the initial wave of the plague pandemic.[202] Cutino contends that the Black Death served to exacerbate an already difficult time as 'neither England nor France-nor any other medieval state…could sustain a large army in the field for an extended period…large enough credit facilities simply did not exist, and there had already been a series of financial crises in England'.[203] While the Black Death did not force the authorities of France and England to engage in diplomatic activities, the increased strain placed on already depleted resources demanded such engagement.

When assessing the impact of the Black Death on the level of diplomatic interaction at the time, there is some indication that the reprieve in war did enhance diplomatic activity. For example, during the 'ten years following Crecy…there are records of fifty-nine English embassies that went abroad,'[204] so the Black Death did provide a small window of opportunity to exercise some international diplomacy. However, the dearth of diplomatic activity by states during the Black Death, aiming to mitigate the pandemic's assault on the population, likely played a role in magnifying the power of the plague witnessed during the Black Death.

Centuries after the Black Death, as the world was on the cusp of experiencing the Third Pandemic, an increase in diplomatic activity between affected states sought to ensure the reduction in the power of plague. The International Sanitary Conference of Venice (1897) was called to deal solely with the question of plague and its resurgence in Hong Kong and India.[205] Twenty sovereign states attended the conference where 'all participating countries except Denmark, Sweden/Norway, and the United States signed a convention on bubonic plague, making it an

[202] Cuttino, G.P. (1985) *English Medieval Diplomacy*, Bloomington Indiana: Indiana University Press, p.88.
[203] *Ibid.*
[204] *Ibid.* p.88.
[205] 'The Report of the International Sanitary Conference of Venice' (1897), *The British Medical Journal,* 1(1895), pp.1059-1060.

internationally notifiable disease.'[206] The conference also provided the opportunity for the sharing of scientific information, albeit somewhat misguided, regarding the spread of plague.

Central to the Venice conference's understanding of plague's aetiology was the role of the victim in the dissemination of the bacteria.[207] The findings of the conference provided the impetus for the instigation of international quarantine measures to be applied. Echenberg contends the conference, 'erected quarantine and inspection barriers on the Suez Canal…to guard Europe against plague, and they also agreed to establish specific quarantine measures applicable to passengers and the crews of ships sailing from infected ports'.[208] The international efforts deployed to mitigate the spread of plague struggled in taking hold, as 'political authorities' reluctance to declare a port infected until the last moment rendered moot any maritime control of vessels'.[209] Echenberg argues that central to the failure of these measures was that, 'national governments, whether powerful or modest, [were not] prepared to surrender to any international body even one iota of their sovereign control over health policies in the territories under their jurisdictions.' [210] Regardless of the success of the measures, the actions adopted through the consensus of the Venice conference provide a clear indication as to the willingness of states to engage in diplomatic efforts in order to mitigate a potential threat to their national power.

The impact of plague in improving the quality of international health diplomacy continued to grow after the Venice conference. Echenberg argues that:

> Bubonic plague led to a watershed at Paris in 1903, the agreement to create a permanent body, the International Office of Public Hygiene, a forerunner of

[206] Echenberg, M. (2007), *op. cit.* p.80.
[207] According to *The British Medical Journal*, the conference concluded that the 'microbe exists in the diverse morbific secretions, especially in the pus of buboes, in the intestinal discharges, the sputa, and blood' *The Report on the International Sanitary Conference of Venice* offers no evidence of contemplation to the vector of the plague to be an insect. (p.1059)
[208] *Ibid.* p.80.
[209] *Ibid.*
[210] *Ibid.* [Brackets added]

> the World Health Organization, to promote effective international cooperation in infectious disease control.[211]

As was addressed in Chapter One, WHO has been at the forefront in combating the pandemic actor. The prominence of the plague pandemic actor was evident during the formation of the World Health Regulations (1969). Indeed plague is one of only three diseases subject to regulation and notification of WHO within twenty-four hours.[212]

Central to Morgenthau's concept of a state's quality of diplomacy is the ability of the state to appreciate the attributes of its national power in order to maximise their utility. Such an ability is further required when dealing with a pandemic that is assailing those very attributes. The Black Death's assault on the population of England and France arguably forced the two states to a truce, as they sought to realign their foreign policy with their respective national power. Similarly, the ferocity of the Black Death has been central to the increased international health diplomacy that is still ongoing. Indeed, the international response to counter plague provides even more evidence as to the weight of this significant international actor.

3.3.9 Quality of Government

Morgenthau's final element of quality of government provides the framework to analyse the effectiveness of the governments that confronted the Black Death. The element looks towards the maintenance of balance between the resources that are available to the state and the foreign policy being pursued, and perhaps most tellingly, the popularity of that policy. In order to assess the effect of a pandemic as severe as the Black Death on the quality of government, priority must be placed on

[211] Echenberg, M. (2007), *op. cit.* p.307.
[212] World Health Organization (1983), *op. cit.* p.10. The two other diseases subject to regulations are cholera and yellow fever. The 2005 *Revision of the International Health Regulations* (2005) replace the requirement of notification of these diseases to WHO, mandating that member states inform WHO 'within 24 hours of assessment of public health information, of all public health emergency of international health concern within its territory'. (p.11)

how the disease impeded the ability of the government to maintain those vital components outlined by Morgenthau.

At face value the efforts taken by governments immediately after the Black Death seemed to have been designed to repair the damage caused by the pandemic to national power. Herlihy illustrates that

> Governments tried to cap the swell in wages and to shore up shrinking rents. They sought to hold prices and wages to previous levels and insisted that workers accept the employment offered them. But they succeeded only in sowing discontent and in provoking social uprisings in city and countryside.[213]

While such an arrangement may have been designed to rebalance the equation between resources and policy, the discontent and social uprisings were largely results of the governing authorities failing to maintain the popular support of the general population, all of which, according to Morgenthau, are the vital components of a state's quality of government.

Balance Between Resources and Policy

Prior to the Black Death, the governments were highly ineffective at managing the balance between the natural resources they possessed and the human resources the material provided for. Arguably the lack of a policy pertaining to this balance was a significant contributor to the latter's mismanagement. The immediate impact of the Black Death was to substantially reduce the level of human resources. This dramatic reduction would usually pose a significant challenge for any government to effectively establish a balance between resources and policy. However, the strain on resources, established by the pre-plague population, diminished any potential imbalance during the post-plague period. Inadvertently, the Black Death provided the opportunity for governments to improve their governance by reducing the strain on resources.

[213] Herlihy, D. (1997), *op. cit.* p.49.

The reality of the Black Death's impact on the state was sparsely understood. Throughout the European continent there was no 'real or rational understanding of the effects on the economic system of a huge diminution of the population'.[214] Indeed, Benedictow contends that the population related to the aftermath of the Black Death in a traditionalistic manner with,

> Everybody expecting that everything would shortly revert to its pre-plague status, and life would soon be what it was assumed always to have been. At first, new tenants and labourers alike accepted customary contracts or wages according to pre-plague standard. Only slowly did it dawn on them that the economic and social scene had changed profoundly.[215]

The lack of government leadership in the post-Black Death period contributed towards a confused population.[216] The lack of policy designed to rebalance the economic system of the time, and ensure the quality of life of the populace, contributed towards the growing unrest within the peasantry.[217]

Some city-states were able to enact policy that served to protect the population from the Black Death. Specifically, 'one early innovation in the field was the municipal health board, such as those of Florence and Venice established in 1348 to oversee sanitation and the burial of the dead'.[218] In this instance the creation of the health boards should be seen as a policy designed to prevent the further loss of human resources to the pandemic, and a way to provide a modicum of balance between the resources of the state and the policy being pursued.

While attempts were made by governments to counter the effects of the Black Death, their success was varied. This variance is derived from the structure of society at the time and the lack of understanding regarding the behaviour of the pandemic. While some governments concentrated on maintaining the economic resources of the state, others sought to stymie the impact of the plague on the

[214] Benedictow, O.J. (2004), *op. cit.* p.390.
[215] *Ibid.* pp.390-391.
[216] As illustrated in section 3.3.7 *The Plague Pandemic: National Morale*.
[217] And was a central contributor towards the outbreak of the peasant revolts addressed in *Section 3.3.7 The Plague Pandemic: National Morale*.
[218] Kelly, J. (2005), *op. cit.* p.289.

population.[219] The more successful approach was reliant on the successful balance among resources.

Balance Among Resources

Morgenthau contends that on establishing a balance between the policy being pursued and the resources possessed by the state, the ability for the government to manage its resources in a way that provides a balance among one another is vital for good government. The balance among resources pertains to the mobilisation of the full resources of the state in order to counter the threat posed by the opposing actor. Initially, the ability of a government to maintain a balance among its resources was tested during the Black Death, as members of a government were not immune to the pandemic. Gottfried succinctly illustrates that 'the Black Death killed indiscriminately, and probably afflicted as many lay as ecclesiastical bureaucrats. It took a long time to train new officials, and growth at all levels of government was slowed for at least a generation'.[220] The successful management of state resources throughout the Black Death, and for a significant time afterwards, would have been severely impaired by the loss of knowledge regarding the possession of resources.

However, Hirshliefer indicates that despite some instances of 'organisational breakdowns in cities' during the height of the Black Death, 'the mechanisms of government did not collapse'.[221] Furthermore, any Government that was able to prevail and was 'quick to recover had the opportunity to extend its power into new areas...quick recovery, in turn, was predicated on the resources a government had

[219] In contrast to the actions of the city states of Florence and Venice, according to Gottfried (1983), France in 1348 'assessed one of the highest, most comprehensive [tax] rates in French history' (p.149) the assessment was to no avail though as the tax base diminished during the Black Death, a result of both the population and those in charge of collecting the taxes succumbing to plague. The reduction in tax income would eventually led to a spate of revolutions as the townspeople utilised their newfound wealth, derived from no longer paying taxes, to overthrow those that 'had controlled just about every aspect of [their] political and economic life.' (p.151) [Brackets Added]
[220] Gottfried, R.S. (1983), *op. cit.* p.145.
[221] Hirshleifer, J. (1966), *op. cit.* p.27.

and could mobilize, particularly its tax base and means of collection'.[222] The ability for a state to successfully 'extend its power' was heavily reliant on its ability to maintain the balance among its resources.

Within the post-plague period there was an ability for states to seek to establish a balance among the resources they possessed. The capacity was, in part, created by the economic and social consequence of the Black Death. Benedictow contends that the Black Death's depopulation contributed to 'the pace and dynamics of societal change and transformation' increasing.[223] In a similar fashion, and 'for the same basic reasons, the kings, princes, city states and urban governments improved and professionalized their administrations, seeking to cut costs, increase the efficiency of taxation and improve the provision of public services'.[224] The ability for governments to recognise the need to provide a balance among resources provided the foundation for the enhancement of the state's national power. When coupled with the final component of the quality of government, popular support, the ability for the government to foster a national power that furthers the interest of the state becomes significantly less complicated.

Popular Support

Morgenthau contends that the component of popular support is especially important for 'a contemporary government, especially one of democratic control.'[225] However, the notion of popular support was just as important during the Middle Ages, for without it the aristocracy might have been subject to revolt. By accounting for popular support within the policies issued by a government, the ability to

[222] Gottfried, R.S. (1983), *op. cit.* p.146.
[223] Benedictow, O.J. (2004), *op. cit.* p.391.
[224] *Ibid.*
[225] Morgenthau, H.J. (2006), *op. cit.* p.158.

develop a policy of recovery that capitalises on this support, as opposed to ignoring or diminishing it, becomes more achievable and has a greater likelihood of success.

John Aberth illustrates the possible advantages of maintaining the popular support by assessing the recovery of the Egyptian economy. Within Egypt, 'the Mamluk military elite that ruled the country from Cairo owned the…landholdings in the countryside…on a nonhereditary, unstable basis and administered them through an elaborate bureaucracy that discouraged personal supervision and control.'[226] The actions taken on by the Mamluk elite not only failed to account for any need for a balance among resources, but also did not seek to foster the popular support required for a rapid recovery.

Conversely, the approach adopted by governments in England and Europe differed greatly to the policies that unfolded in Egypt. The feudal system, which 'ensured a decentralized, local control over landholdings', empowered the peasant communities who were the 'ones who were able to bargain more effectively as a collective unit by taking advantage of landholders' rivalry and economic competition with each other'.[227] The empowered peasantry were then able to make a stronger contribution to establishing the balance among the state's resources, thereby reinforcing the quality of the government. In this way popular support increases the effectiveness of government policy. England's ability to foster the popular support for its policies, despite the occasional diversion, allowed the state to recover at a much greater pace than that of militaristic Egypt.

The Black Death provides an understanding of the importance of the quality of a government during and following a large-scale pandemic. The importance of

[226] Aberth, J. (2011), *op. cit.* p.60. Furthermore, 'the Mamluk caste of soldiery was able to respond to the disruptions caused by the plague as a cohesive, unified body…that successfully suppressed any attempts by the *fellahin* to take advantage of greater demands for their labor that was now much more scarce in the aftermath of the Black Death.' (*Ibid.*)
[227] *Ibid.*

maintaining a balance among policy and resources highlights the connection between the government and its responsibility to its constituency. In order to protect its constituency, the maintenance of a balance among the resources possessed by the nation is paramount to maintaining, if not increasing the power of the nation. Finally, the quality of a government is overwhelmingly determined by the support that government receives from the population. Above all Morgenthau's element of the quality of government looks to the ability of a government to protect all the elements of a state's national power.

3.4 Conclusion

The plague as an actor is unique in that its continued exposure to the human population has exacted a toll on its own strength. While initially plague was able to claim large numbers of victims, and avoid mitigation attempts to increase its domain, innovations, such as quarantine measures and antibiotics, have achieved some success in reducing the power of this actor. While the morbidity of plague may have diminished over the years, the ability of the disease to inflict change on the society it infects has not. In the modern era, the scope of behavioural change in response to a pandemic is more prominent than it was in the past. The ramifications of a recent outbreak of plague in India serve as a validation of plague's reputation, in that even a small outbreak has detrimental effects on the state's power.

The ease with which plague is spread is another point of concern for authorities. The domain that plague has developed over time has expanded along with the expansion of civilisation and the increased levels of trade between different cultures. Furthermore, given that the vector of the disease can be as miniscule as a flea the ability to stop the disease at the border requires a significant mobilisation of resources. This has become easier for states over time with the Third Plague pandemic being somewhat limited in its spread once the pandemic had entered a

territory. When combining the ease of spread with the high rate of mortality, perhaps the strongest validation of plague's reputation is the ease with which it kills its victims. Without aggressive intervention of health authorities, the varying forms of plague can claim victims anywhere between twenty-four hours and a week. Such a high rate of attrition poses a significant challenge for health authorities if a large-scale outbreak was to occur.

When assessing the impact of the plague, particularly the Black Death pandemic, on the national power of the state, an indication of the threats posed by a large scale, high mortality pandemic is created. The Black Death appeared at a time when the European population was placing an enormous strain on its resources. The overpopulation of the continent prevented effective utilisation of natural resources leading to a Malthusian stalemate. The Black Death had the effect of reversing this trend where it ultimately and surprisingly benefitted the strength of the state's national power. Such a reversal enabled governing authorities to respond by pursuing policy that was designed to protect and promote the national power of the state. These actions serve to reinforce the central argument of this thesis: that when confronting the pandemic threat states will place a priority on the protection of their national power.

The utilisation of Morgenthau's elements of national power provide the theoretical framework necessary to assess comprehensively the effect of a large scale pandemic on the national power of the state. The Black Death has served as an example of such a pandemic. Given the Black Death is commonly utilised to serve as the model for the impact of the HIV/AIDS pandemic, the thesis now turns to assess the utility of Morgenthau's framework to assess the various political implications of the AIDS pandemic as provided in the following chapter.

Chapter Four: The AIDS Pandemic

4.0 Introduction

Since its discovery in 1981 the HIV/AIDS pandemic has evolved to test two pivotal aspects of modern society. First, the longevity of the pandemic has seen HIV/AIDS transform into an atypical pandemic where international security is threatened, as Dupont asserts:

> AIDS epitomises the transnational challenge to international security. It is a global non-military phenomenon that strikes indiscriminately at its human victims, weakening the socio-economic foundations of states and corroding government institutions.[1]

Second, disease reveals the ability of society to deal with a pandemic whose nature of transmission has historically been considered somewhat unsavoury by certain elements of society. International relations theory is illuminating in regard to political responses to a global and deadly pandemic, such as HIV/AIDS, in the modern era. An assessment of the political implications of the HIV/AIDS pandemic reveals the ramifications for a state's national power when the state authorities fail to address a burgeoning pandemic threat.

This chapter provides a comprehensive account of the power and impact of the HIV/AIDS pandemic on modern government systems. For the majority of times covered in the previous chapter with the account of the Black Death, the state system was largely embryonic. The HIV/AIDS pandemic offers an opportunity to assess the experience of a pandemic in the modern era where the state system is firmly established. By using Baldwin's dimensions of power, the chapter provides an understanding of the power of this pandemic actor, as well as the relationship of power between the state and the AIDS pandemic. The chapter will then utilise Morgenthau's elements of national power approach to analyse the threat posed by

[1] Dupont, A. (2001) *East Asia Imperilled: Transnational Challenges to Security,* Cambridge: Cambridge University Press, p.212.

the AIDS pandemic towards a state's national power. By applying both Baldwin's and Morgenthau's frameworks to assess the HIV/AIDS pandemic, the chapter amalgamates the diverse assumptions relating to the HIV/AIDS pandemic to provide an emphatic understanding of the HIV/AIDS political actor. Prior to such an assessment taking place it is important to address the (social) history of the disease, which has both tainted the response of states to this pandemic, while at the same time magnifying the pandemic impact, since the discovery of the virus.

4.1 Background

The scale of the HIV/AIDS pandemic's impact on the state derives, in part, from the reluctant acknowledgement by the international community of the contagion at the time of the disease's discovery. Laurie Garrett of the *Council on Foreign Relations* speculates that the slow recognition of the threat posed by the HIV pandemic may be a result of a somewhat distracted international community.

> HIV has emerged in a historic period that is marked by the fall of the Soviet Union and the end of the Cold War; widening gaps in wealth distribution, both globally and within states; a decline in traditional or conventional warfare; and a rise in threats to states posed by asymmetric, terrorist, and ethnically or religiously rationalized violence. In other words, the globalization of HIV has come against a backdrop of radically shifting transnational threats to states, rich and poor alike.[2]

These initial distractions, combined with the perception that those susceptible to HIV infection were restricted towards a high-risk segment of society, contributed to a lack-lustre response to the pandemic from the domestic and international community.[3] Sherman maintains that within the USA those associated with HIV/AIDS were 'typically those held in low esteem and discriminated against in housing, jobs, and everyday social contacts; i.e., those of different sexual persuasion, promiscuous individuals, drug addicts, and prostitutes'.[4] Durack, in his 1981 *New England Journal of Medicine* article assessing the outbreak of what was to become

[2] Garrett, L. (2005a) *HIV and National Security: Where are the Links?,* New York: Council on Foreign Relations, p.14.
[3] Lee, K. and Zwi, A. (2003), *op. cit.* p.23.
[4] Sherman, I. W. (2006), *op. cit.* p.113.

HIV, goes as far as to warn the international community that 'Students of public-health issues will want to put this outbreak into a social perspective,' in contrast to a public health concern.[5] Durack's perception has proven accurate with the stigmatisation of the disease, which is still prevalent throughout the world.

HIV first captured the attention of the scientific community in 1981 after a number of young homosexual men in New York City, San Francisco, and Los Angeles were diagnosed with 'a rare cancer of the skin, called Kaposi's Sarcoma'.[6] Writing in the *New England Journal of Medicine*, David T. Durack argued that 'three salient features' had emerged:

> The patients are typically homosexual men, most of whom live in large cities and many of whom use drugs; the infectious agents are low-grade pathogens that often cause opportunistic infections in compromised hosts; and the death rate is fearfully high.[7]

The perception of the disease as predominantly affecting homosexual men (and the underclass) led to the disease 'originally been designated in both health and media circles as Gay-Related Immunodeficiency Disease, or GRID.'[8] Such a perception would continue to taint the identity of the disease, even after confirmation that the disease was not indigenous to homosexuals.

The assumption that the virus was limited to homosexuals would lead to a stigmatisation of the disease that would last for decades. This stigmatisation was not helped by health officials at the time, who continually made unfounded assumptions

[5] Durack, D. T. (1981) 'Opportunistic Infections and Kaposi's Sarcoma in Homosexual Men', *The New England Journal of Medicine,* 305(24), p.1465.
[6] Sherman, I.W. (2006), *op. cit.* p.90.
[7] Durack, D. T. (1981), *op. cit.* p.1465.
[8] Behrman, G. (2004) *The Invisible People: How the U.S. Has Slept Through the Global AIDS Pandemic, the Greatest Humanitarian Catastrophe of Our Time,* New York: Free Press, p.6. The use of the GRID moniker lasted approximately a year until, as Behrman (2004) contends, 'the CDC, in August 1982, quietly dropped the "GRID" designation, replacing it with "AIDS." The move was a response to the 'Dozens of cases [that sprang] up in New York and Miami,' specifically, 'among men and women of Haitian descent, all of whom seemed heterosexual and non-intravenous drug users.' (Behrman, p.6) [Brackets Added]

such as there being 'no apparent danger to non homosexuals of contagion'.[9] Rosenberg illustrates the socially constructed response to the HIV/AIDS pandemic:

> If diseases can be seen as occupying points along a spectrum, ranging from those most firmly based in a verifiably pathological mechanism to those, like hysteria or alcoholism, with no well-understood mechanism, but with a highly charged social profile-then AIDS occupies a place at both ends of that spectrum.[10]

The social tainting of AIDS deterred the political response to the nascent pandemic. However, over the first two years of the HIV/AIDS pandemic, the social construction of the virus would change as women and children started falling prey to the disease. With increasing recognition that the virus was not necessarily transmitted sexually, the stigmatisation progressed from one of a strictly communal disease towards HIV/AIDS being equal to death.

The implications of the diseases identity led to a prolonged debate as to the international implications of the pandemic, with very few researchers looking towards the ramifications of the disease on international security. This, however, has changed significantly in the 21st century.[11] Almost two decades after the discovery of the virus, in July of 2000, the United Nations Security Council (UNSC) affirmed the threat to international peace and security posed by the pandemic. Specifically, the Security Council recognised that 'the spread of HIV/AIDS can have a uniquely devastating impact on all sectors and levels of society,' and that the pandemic 'if unchecked, may pose a risk to stability and security'.[12] Yet, even with UNSC intervention, the pandemic continues to proliferate throughout the world and contributes to a growing internal instability for a number of countries. The

[9] Altman, L.K. (1981) 'Rare Cancer Seen in 41 Homosexuals', *The New York Times* [online], 3 July, available: http://www.nytimes.com/1981/07/03/us/rare-cancer-seen-in-41-homosexuals.html [accessed 30 Jan 2011].
[10] Rosenberg, C.E. (1986) 'Disease and Social Order in America: Perceptions and Expectations', *The Milbank Quarterly*, Vol.64 (Supp. 1), p.51.
[11] *See* Garrett, L. (2005a), *op. cit.* Garret, L. (1994) *The Coming Plague: Newly Emerging Diseases in a World Out of Balance*, London: Penguin Books. Altman, D. (2003) 'Understanding HIV/AIDS as a Global Security Issue', in Lee, K., ed., *Health Impacts of Globalization: towards Global Governance*, Hampshire: Palgrave Macmillan, pp.33-46. McInnes, C. (2007) 'HIV/AIDS and National Security', in Poku, N.K., Whiteside, A., and Sandkjaer, B., eds., *AIDS and Governance*, Hampshire: Ashgate, pp.93-111. Baldwin, P. (2006), *op. cit.*
[12] United Nations Security Council (2000) *S/RES/1308*, New York: Geneva.

intervention of the UNSC served to move the political debate on the pandemic from one of mere health concerns, towards one focused on the security implications of the disease. The primary concern of the UNSC related to the 'possible growing impact on social instability and emergency situations' of the AIDS pandemic.[13] Colin McInnes, the founder and Director of the Centre for Health and International Relations at Aberystwyth University, contends that the 'intervention of the Security Council in 2000 was a critical move not simply in raising AIDS awareness but in constructing HIV/AIDS as a national security problem which demanded international attention and action.'[14] McInnes argues that the 'claims made by the Security Council in 2000 have set the agenda for the subsequent debate on HIV/AIDS as a national security issue'.[15] The elevation of the AIDS pandemic to a security threat affirms the central theme of this thesis, being that a pandemic constitutes an actor in a relationship of power with the state. Treating the AIDS pandemic as a security threat demands a structured assessment in order to avoid falling into the same initial traps of diagnosis and social blame. Establishing the HIV/AIDS pandemic actor provides the basis for such an assessment.

4.2 HIV/AIDS: The Pandemic Actor

Baldwin's dimensions of power provide the framework to assessing the relationship of power between the HIV/AIDS pandemic, and the state. The four dimensions of scope, domain, weight and cost, illustrate the power the pandemic actor has over a state. The scale of the HIV/AIDS pandemic has strengthened the power wielded by this particular actor. The inability, or unwillingness, of states to adequately confront the pandemic in its nascent years has allowed the pandemic to firmly embed itself in the international arena. While the scope of the HIV/AIDS pandemic is no longer universally experienced, with most developed states being able to minimise the

[13] United Nations Security Council (2000), *op. cit.*
[14] McInnes, C. (2007), *op. cit.* pp. 93 – 94.
[15] *Ibid.* p.94.

effect of the pandemic within their own borders, the ramifications for the national power of less-developed states still exists.

4.2.1 Scope

When investigating the scope of the HIV/AIDS pandemic the first consideration must go towards the pandemic being considered by researchers[16] to be a "long-wave event". Essentially, a long-wave event is one 'where troubling and large-scale effects emerge gradually over decades,'[17] as opposed to short-term pandemics that may flare and expire within a much shorter amount of time. The distinction of HIV/AIDS being a long-wave event is also a by-product of the virus's incubation period and rate of mortality.[18] Tony Barnett and Gwyn Prins, of the Mackinder Centre for the Study of Long Wave Events, note the various features that distinguish a long-wave event, such as the HIV/AIDS pandemic:

- Observers are usually aware of their [the pandemics] starting point;
- By the time observers become aware of its [the pandemics] presence and effects it takes a long time to slow down the process or to stop it;
- It [the pandemic] demands visionary thinking to engage with its implications and long term ramifications;
- A central reason these events are difficult to halt is that it is enormously hard to get people to recognise them for what they are and to take appropriate action;
- Managing the consequences of long wave events makes novel demands and our existing experience is not necessarily a good guide to how we should respond;
- Most political and administrative capacities are not established to deal with such events – that is why they confront us with particularly testing challenges;
- When 'discovered', they [long wave events] are thought of and reacted to as 'emergencies', creating a high chance that actions taken for good in the short term will make a situation worse in the long term.[19]

[16] *See* Barnett, T. (2007) 'HIV/AIDS a Long Wave Event: Sundering the Intergenerational Bond', in Poku, N.K., Whiteside, A., and Sandkjaer, B., eds., *AIDS and Governance*, Hampshire: Ashgate, pp.29-47. Barnett, T. and Whiteside, A. (2002), *AIDS in the Twenty-First Century: Disease and Globalization*, Hampshire: Palgrave MacMillan. Garrett, L. (2005a), *op. cit.* Barnett, T. and Prins, G. (2005) *HIV/AIDS and Security: Fact, Fiction, Evidence,* London: London School of Economics.
[17] *Ibid.* p..34.
[18] Discussed further in section 4.2.3 *The AIDS Pandemic: Weight.*
[19] Barnett, T. (2007) *op. cit.* pp.34-35. Barnett, T. and Prins, G. (2006), *op. cit.* p.11. [Brackets Added]

As this chapter will show, the AIDS pandemic fulfils each of these long-wave event criteria. Moreover, the long-term scope of AIDS has significant ramifications for the national power of the state due to the pandemic's ability to affect generations of victims for years to come.

McInnes further confirms that the scope of the instability caused by the HIV/AIDS pandemic covers two areas: 'the potential economic impact of the disease; and its social and political effects'.[20] In regard to the potential economic impact of the disease, McInnes highlights the broad range of issues that can erupt as a by-product of the pandemic which include:

> Lost productivity due to worker illness, absenteeism and low morale; the loss of skilled labour, with their replacements perhaps less well educated and poorly trained and motivated; reduced business investment as revenues shrink or are diverted into AIDS-related healthcare schemes; reduced external investment as health costs increase and productivity falls; the flight of capital outside AIDS-afflicted countries into more productive regions; and reduced savings as money is spent on healthcare.[21]

McInnes means for us to grasp the broad scope of the disease here, and to consider the everyday, economic impact. In addition, the socio-political impact of the HIV/AIDS pandemic widens the scope of the pandemic's power as its impact moves beyond its initial assault on the human population, to firmly implant the pandemic in conflict with the state's national power.

The socio-political ramifications of the pandemic pertain to issues that are the 'very fibre of what constitutes a nation'.[22] The impact of the virus on the skilled professional demographic is particularly troublesome. Specifically, 'concerns are growing about the long-term effects on the continuity and quality of public services and governance',[23] the variety of ways by which 'the epidemic is undermining

[20] McInnes, C. (2007), *op. cit.* p.94.
[21] *Ibid.* pp.94-95.
[22] International Crisis Group (2001) *HIV/AIDS as a Security Issue*, International Crisis Group: Brussels, p.1.
[23] UNAIDS (2006a), *op. cit.* pp.93-94.

health services',[24] and the impact of the pandemic on 'the quality of education offered to children'.[25] Piot, Bartos, Ghys, Walker and Schwartländer contend that the future impact of the HIV/AIDS pandemic will test 'the capacity of societies to sustain the dignity and security of human life'.[26] Such a test will take place because 'AIDS magnifies its impact into the future because it erodes social capital'.[27] As McInnes has pointed out, 'the full social and economic impact of the disease may be seen in decades, not months or years.'[28] The nature of the pandemic, in its long-wave form, makes it 'extremely difficult to comprehend how HIV is affecting societies, economies, cultures and political realities'.[29] The HIV/AIDS pandemic has a pervasive scope and poses greater challenges to governments than purely public health, on both the domestic and international front. The HIV/AIDS pandemic is not contained merely to domestic health concerns; it is an ongoing concern, with the full scope of the pandemic yet to be realised.

4.2.2 Domain

The domain of the HIV/AIDS pandemic is global. The pandemic is well established in each of the WHO regions, albeit to a varying degree of prevalence. The prominence of its domain is detailed courtesy of the Joint United Nations Programme on HIV/AIDS (UNAIDS), who have subdivided WHO regions into smaller regional groupings.[30] Variation in prevalence does exist throughout different regions of the world – this is shown in the following table (4.1), where the diversity in the total persons infected is related to the various stage of economic development within those specific regions. For example, the less economically

[24] *Ibid.* P.95-96.
[25] *Ibid.* p.97.
[26] Piot, P., Bartos, M., Ghys, P.D., Walker, N. and Schwartländer, B. (2001) 'The Global Impact of HIV/AIDS', *Nature*, 410, p.970.
[27] *Ibid.*
[28] McInnes, C. (2007), *op. cit.* p.96.
[29] Garrett, L. (2005a), *op. cit.* p.21.
[30] Table 4.1 contains both the UNAIDS regions as well as WHO regions to provide evidence in line with WHO's definition of a pandemic outlined in Section1.3.2 *Power and Pandemics: Domain.* Differences between the WHO regions and UNAIDS regions in membership is outlined in footnotes 32, 33 and 34.

developed African region accounts for approximately 67% of global infection of HIV. The UNAIDS regional breakdown provides a more refined assessment of the pandemic spread within WHO regions, allowing for a stronger infection of the disparity of infection within WHO region.

Table 4.1 Global Summary of HIV/AIDS Epidemic, 2009

WHO Region	UNAIDS Region	Adults and Children Living with HIV	Adults and Children Newly[31] Infected with HIV	% Adult Prevalence (15-49 years)	AIDS-related Deaths among Adults and Children
African	Sub-Saharan Africa	22.5 million [20.9-24.2 million]	1.8 million [1.6-2.8 million]	5.0 [4.7-5.2]	1.3 million [1.1-1.5 million]
Eastern Mediterranean	Middle East and North Africa[32]	460 000 [400 000-530 000]	75 000 [61 000-92 000]	0.2 [0.2-0.3]	24 000 [20 000-27 000]
South East Asia	South and South-East Asia[33]	4.1 million [3.7-4.7 million]	270 000 [240 000-320 000]	0.3 [0.3-0.3]	260 000 [230 000-300 000]
Western Pacific	East Asia[34]	770 000 [560 000-1.0 million]	82 000 [48 000-140 000]	0.1 [0.1-0.1]	36 000 [25 000-50 000]
	Oceania	57 000 [50 000-64 000]	4500 [3400-6000]	0.3 [0.2-0.3]	1400 [<1000-2400]
Americas	Central and South America	1.4 million [1.2-1.6 million]	92 000 [70 000-120 000]	0.5 [0.4-0.6]	58 000 [43 000-70 000]
	Caribbean	240 000 [220 000-270 000	17 000 [13 000-21 000]	1.0 [0.9-1.1]	12 000 [8500-15 000]
	North America	1.5 million [1.2-2.0 million]	70 000 [44 000-130 000]	0.5 [0.4-0.7]	26 000 [22 000-44 000]
European	Eastern Europe and Central Asia	1.4 million [1.3-1.6 million]	130 000 [110 000-160 000]	0.8 [0.7-0.9]	76 000 [60 000-95 000]
	Western and Central Europe	820 000 [720 000-910 000]	31 000 [23 000-40 000]	0.2 [0.2-0.2]	8500 [6800-19 000]
	Global Total	33.3 million	2.6 million	0.8	1.8 million

Source: UNAIDS (2010a) *Global Report: UNAIDS Report on the Global AIDS Epidemic 2010,* Geneva: UNAIDS, pp.20-21.

Arguably, the prevalence of the pandemic, estimated on the percentage of the population aged 15-49 years old who are HIV positive, offers the most accurate reflection of the diversity between the regions. Within WHO's European region, there is a significant difference in all four measures (see table 4.1), between the

[31] Newly infected refers to those adults and children who contracted HIV during 2009.
[32] Includes Algeria, which is considered by WHO to be within the African region.
[33] Includes Cambodia, Lao People's Democratic Republic, Malaysia, Philippines, Singapore and Viet Nam, which is considered by WHO to be within the Western Pacific region. Also includes Pakistan, which is considered by WHO to be within the Eastern Mediterranean region.
[34] Includes the Democratic People's Republic of Korea, which is considered by WHO to be within the South-East Asia region.

Eastern Europe and Central Asia UNAIDS region, and the Western and Central Europe UNAIDS region. Such a difference illustrates the link between economic development and the prevalence of HIV, with Western and Central Europe being better developed than Eastern Europe and Central Asia, and arguably better-equipped to mitigate the proliferation of the virus. However, the differences between East Asia and Oceania, the sub-regions of WHO's Western Pacific Region, are worthy of closer attention given the disparity in the population of the regions. Specifically, the larger figures for the East Asia region, while a concern within that region, are not reflected in the prevalence of the virus among the population. However, within Oceania, the higher prevalence of 0.3%, commensurate with the prevalence throughout South and South East Asia, would indicate a regional population with an increased likelihood of exposure to the HIV. Indeed, within Oceania the 'number of people living with HIV in the region has nearly doubled between 2001 and 2009'.[35] Furthermore, the 'largest and the only generalized epidemic' in the region is in Papua New Guinea.[36] While the HIV/AIDS pandemic is truly global in domain, the varied prevalence between and within regions provides evidence as to the difficulties states have had in mitigating the spread of the virus.

While taking the prevalence rate into consideration, there is a need to further consider the effect that treatment has had on the mortality rate of the disease. Essentially, by gaining access to treatment, higher numbers of persons are able to live reasonably normal lives, while being HIV positive, in all regions. According to UNAIDS, 'the annual number of new HIV infections has been steadily declining since the late 1990s, this decrease is offset by the reduction in AIDS-related deaths due to the significant scale up of antiretroviral therapy over the past few years.'[37] Arguably, the scope of the AIDS pandemic's impact could be mitigated with greater

[35] UNAIDS (2010a) *Global Report: UNAIDS Report on the Global AIDS Epidemic 2010,* Geneva: UNAIDS, p.60
[36] *Ibid.*
[37] UNAIDS (2010a), *op. cit.* p.23.

access to treatment. However, even with the scale up of treatment, diversity in the severity, or weight, of the pandemic, indicates the likelihood that the scope of the pandemic is just as varied throughout WHO regions.

4.2.3 Weight

Applying the CDC's PSI modelling to the AIDS pandemic established the weight of the pandemic. The PSI establishes the likelihood of a HIV positive person's death being caused from an AIDS related illness in 2009. The PSI provides and indication of the region's experiencing difficulty in providing treatment for HIV, as they are unable to reduce their respective AIDS related mortality rate. In the following table (4.2) both the prevalence of HIV in adults aged 15-49, as well as the PSI are provided as confirmation of the scope of the AIDS pandemic's impact.

Table 4.2 Prevalence and Pandemic Severity Index for the HIV/AIDS Pandemic, 2009

Region	Prevalence[38] (%)	PSI[39] (%)
Sub-Saharan Africa	5.0	5.7
Middle East and North Africa	0.2	5.2
South and South-East Asia	0.3	6.3
East Asia	0.1	4.6
Oceania	0.3	2.4
Central and South America	0.5	4.1
Caribbean	1.0	5
Eastern Europe and Central Asia	0.8	5.4
Western and Central Europe	0.2	1.0
North America	0.5	1.7
Total	0.8	5.4

Source: Global Report: UNAIDS Report on the Global AIDS Epidemic 2010, Geneva: UNAIDS, pp.20-21

The PSI presented above provides a valuable insight into the weight of the pandemic. The high PSI within the South and South-East Asia region suggests a lack of success by governments, as well as international organisations, to reduce the

[38] UNAIDS (2010a), *op. cit.* p.20-21.
[39] The PSI is based upon the figures provided by the 2010 UNAIDS Report (UNAIDS (2010a), *op. cit*). The PSI is calculated as the mortality rate of the AIDS pandemic through the following formula: If n= People living with HIV and m= death from AIDS related illness; PSI = n/m x 100.

severity of the AIDS pandemic within that region. Such a reduction can only transpire by increasing the access to HIV medication within the regions where the severity is high. While looking at the prevalence rate clearly illustrates the spread of a pandemic, by using the PSI, and redirecting the focus towards severity, the disparity in access to treatment is clear. The disparity in global access to treatment may impede a proper assessment of the severity of the HIV pandemic. Yet at the same time, it provides an avenue of assessment for the weight of the AIDS pandemic.

While the PSI is an accurate depiction relating to the severity of the AIDS pandemic, it must be noted that the accuracy of the severity index is reliant on the source of those figures utilised within its calculation. While UNAIDS ultimately correlates the statistics, the organisation's 2010 *Global Report* was based on information from only 182 states. Furthermore, the accuracy of the figures in question is reliant on the reports forwarded to UNAIDS by state governments, which may have a vested interest in withholding the genuine statistics. The HIV/AIDS pandemic is also a difficult disease to which to apply other epidemiological factors to, largely because the disease varies significantly between regions. Tony Barnett articulates another important inhibitor to accuracy when he notes that in regard to seroprevalence and prevalence,

> Reference is most frequently made to the former measure, while information about the latter is hard to obtain and is fraught with difficulties of interpretation given the problems of obtaining clinical diagnosis of illness and cause of death in circumstances where clinicians may be in short supply and where an AIDS diagnosis is stigmatizing.[40]

Indeed WHO guidelines[41] in determining the AIDS status of an HIV patient within developing countries, seek to establish a method to ascertain a patient's status

[40] Barnett, T. (2008) 'The Long Wave of HIV/AIDS: A Special Case of Pathogen-Host-Environment Interactions', in Volberding, P.A., Sande, M.A., Lange, J., and Greene, W.C., eds., (2008) *Global HIV/AIDS Medicine*, Philadelphia: Saunders Elsevier, p.779.
[41] *See* World Health Organization (1994) 'WHO Case Definitions for AIDS Surveillance in Adults and Adolescents', *Weekly Epidemiological Record* [online], 69(37), p.274, available: http://www.who.int/hiv/strategic/en/wer_94_69_273.pdf [accessed 24 July 2011].

without the use of 'sophisticated laboratory support'.[42] Such a system may lead to misrepresentation within the figures provided by WHO and UNAIDS.[43] Resulting figures are likely to be representative of 'what is likely to happen to a population in the near future given the likely absence of effective anti-retroviral treatments in most poor countries'.[44] The ability for states to mitigate the weight of the pandemic reduces the scope of the pandemic impact; however, such ability can only be ascertained at substantial expense. The cost of providing this treatment, particularly for the nation state, constitutes a considerable component of the pandemics power.

4.2.4 Cost

The cost of the HIV/AIDS pandemic has been substantial. Financial estimates are based on a three-pronged approach to the disease covering prevention, treatment, care and support.[45] In 2009, the provision by 'international donors and governments together provided US$15.9 billion for the global AIDS response',[46] and represented a substantial increase of the US$300 million available for AIDS funding in 1996.[47] UNAIDS contends that the elevated investment pays 'clear dividends-it saves lives now, improves the quality of life of people living with HIV, and will lessen future burdens of cost and disease.'[48] However, when assessing the impact of the cost to the state's power, it is important to consider associated costs related to combating the pandemic, such as the opportunity cost of the long-wave event. The long-wave financial impact of the AIDS pandemic results in greater expense to the state as it tends to the health needs of its population.

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[42] DeCock, K.M. (2008) 'The Global Epidemiology of HIV/AIDS', in Volberding, P.A., Sande, M.A., Lange, J., and Greene, W.C., eds., (2008) *Global HIV/AIDS Medicine*, Philadelphia: Saunders Elsevier, p.3.
[43] DeCock (2008) contends that 'the weakness of vital registration systems in developing countries has limited the use of AIDS mortality…In general, international estimates of AIDS incidence and mortality have been made through modelling from HIV prevalence data.' (p.4)
[44] Barnett, T. (2008), *op. cit.* p.779.
[45] UNAIDS (2006a), *op. cit.* p.224.
[46] UNAIDS (2010a), *op. cit.* p. 146.
[47] UNAIDS (2004), *2004 Report on the Global AIDS* Epidemic, Geneva: UNAIDS, p.131.
[48] *Ibid.*

The high medical expenses related confronting the AIDS pandemic is preventing nations from investing in other areas of development. The UNAIDS 2010 report contends that 'in many low- and middle-income countries, the largest source of HIV funding- 52% -is domestic expenditure'.[49] The diversion of funds on such a long-term basis is unparalleled, in comparison to short-wave disease pandemics. The increased burden placed on these countries prevents a diversification of funds toward other social development initiatives. Such a scenario is why the mitigation of the HIV/AIDS pandemic is fundamental to efforts to improve levels of human development globally.

Even by only contemplating the dimensions of domain and scope, two important arguments are cultivated in respect to the relational power of the HIV/AIDS pandemic. First, the scope of the pandemic indicates significant behavioural impact, asserting its power over both the economic and socio-political elements of a nation's power. Second, while there is a global presence of the pandemic, the severity of the pandemic is varies from region to region. This poses a significant difficulty for those tasked with defeating the pandemic actor. Conquering the AIDS pandemic requires a more regionally, if not locally, focused approach, as opposed to a 'one size fits all' global effort.

Baldwin's dimensions of power provide the foundation for a greater assessment of the impact of the AIDS pandemic actor on the national power of the state. The relationship between the state and the pandemic has revealed the pandemic to have a distinctly long-range effect on the state, thereby increasing the scope of the pandemic's impact. In order to facilitate a greater understanding of the impact of the pandemic on the state, there is a need to break down the pandemic's assault on

[49] UNAIDS (2010a), *op. cit.* p.146. According to UNAIDS (2010a), 'government donors provide an additional 42% and the international philanthropic sector 5%'. (p,146)

the elements that constitutes the state's national power. Morgenthau's elements of national power framework provide the criteria necessary to ascertain such an understanding.

4.3 The HIV/AIDS Pandemic Assessment

The utilisation of Morgenthau's elements of national power to diagnose the impact of the AIDS pandemic on a state's power reveals the multifaceted threat generated by this pandemic. While not all elements of national power were assaulted at the outset, the longevity of the pandemic has enabled this actor to erode the various elements that constitute a state's power base. In doing so, the AIDS pandemic has established itself as a notable non-state actor of considerable strength, and one that poses a threat to both the stability and security of a nation state. Morgenthau reminds us that for a state to be a strong international actor, it must best utilise its wealth in the following elements[50]. Pandemics undermine that strength.

4.3.1 Geography

The UNAIDS information presented in *Table 4.1: Global Summary of HIV/AIDS Epidemic, 2009* confirms that there is not a region of the world untouched by the AIDS pandemic. Indeed, Morgenthau's assertion regarding the benefits of a state's geographic locale providing some isolation for aggressors, not surprisingly, did not anticipate the path of this pandemic. In the initial stages of the pandemic, advances in transportation technology played a vital role in eroding any advantage given to nations by their geographic location. John Aberth informs of the first known cases of HIV and the role that advances in transportation technology played in overcoming any geographic barrier:

> The oldest HIV-positive blood result has been obtained from a native of Kinshasa on the eastern border of the Democratic Republic of Congo. Genetic mapping of progressive changes in the HIV genome indicates that the first infection of humans from chimpanzees probably took place during the 1930s,

[50] Morgenthau, H.J. (2006), *op. cit.* p.122.

> which coincided with massive conscription of natives for railroad construction in the French colonies of west-central Africa, where famine forced workers to consume wild animals, including monkeys. From its "ground zero" point of contact, HIV then spread rapidly in human populations throughout Africa and around the world through the new, interconnected global networks of the second half of the twentieth century.[51]

Research suggests that the interconnected global transportation networks played a significant role in the proliferation of the virus, particularly from Africa to the USA albeit at a sedentary pace.[52] Such a pace is derived from the period of time for HIV positive persons to become symptomatic, which allows an infected person to travel symptom free. This latency period was a contributing factor to preventing states from utilising their geographic location to their advantage with enforced isolation and local quarantine when confronting this pandemic actor.

The latency period of HIV, being the amount of time it can take for a patient to show symptoms of the disease, is relatively long.[53] This poses significant difficulties for authorities to detect infection of persons without conducting stigmatising tests, preventing them from taking aggressive measures to prevent the entry of HIV persons into the country.[54] There were, however, some exceptions, with some countries opting to treat HIV aggressively in the same fashion as previous outbreaks of infectious disease that had threatened the integrity of the nation's power. Here, there was the introduction of mandatory testing and quarantine measures against those crossing its borders.[55] The predominant example is Cuba who, 'imposed screening on broadly defined groups (travellers abroad, hospital and STD patients,

[51] Aberth, J. (2011), *op. cit.* p.142.
[52] Investigative journalist Randy Shilts' book *And the Band Played On* (1987) provides an account of flight attendant Gaetan Dugas. Dugas was perceived to be the patient zero of the AIDS pandemic within the United States. Dugas appears to have facilitated the transferral of the virus through the litany of homosexual partners he maintained around the world, in large part established via his employment. (Garrett, 1994, pp.306-307)
[53] Garrett (1994) contends that 'the disease's latency period for gay men averaged over ten years'. (p.307) This is supported by Aberth (2011) who maintains that without access to treatment, and dependent on contributing lifestyle factors (such as drug use), this period can be reduced to six months to two years. (p.137) By way of comparison the latency period for influenza is about two days.
[54] *See* section 4.3.7 *The AIDS Pandemic: National Morale*.
[55] Baldwin (2006) provides a summary of the efforts made by some countries to counter the pandemic, 'China, Iraq and Syria demanded testing of aliens entering for long stays and nationals returning from abroad. In China anyone with reason to believe that another citizen suffered from AIDS was required to report that person for isolation and treatment…In the Indian state of Goa, no one could refuse HIV testing if disease was suspected and seropositives were isolated.' (p.35)

pregnant women, and the sexual contacts of seropositives) and, ultimately, on the entire population through its inevitable contacts with the national health system.'[56]

The second aspect of geographic location relates to the varied prevalence and severity of the pandemic across different regions. John Aberth contends that the pandemic exists in three different 'patterns'.[57] The first such pattern relates to 'primarily the United States and Western Europe…while the other is set mainly in sub-Saharan Africa and the Caribbean', and 'what will happen in those countries where AIDS is still emerging, such as Eastern Europe, Asia and the Middle East' being the third pattern'.[58] Aberth infers that the varied levels of human development within regions determine the pattern, or severity, of the AIDS pandemic within that region. The International Labour Organization (ILO) agrees:

> The pandemic has taken on different forms in the various parts of the world. In some areas, HIV has spread rapidly to the general population, while in others certain sub-populations have been particularly affected, including sex workers and their customers, men who have sex with men, and injecting drug users.[59]

The disparity among these regions is a replication on the macro scale of what has been taking place on a micro level, or domestically, in developed states.[60]

The micro impact of the pandemic centres on Morgenthau's second prominent measure for the geographical element, being the size of the territory, and highlights the particularly insidious behaviour of the virus. The greatest proliferation of the pandemic occurs where it can operate most opportunistically: at a distance from medical intervention. Consequently, occurrence erupts in developing countries as well as regions, rural towns and villages. The tyranny of distance ensures that the pandemic is at its strongest in rural environments, that are likely to be a significant

[56] Baldwin, P. (2006), *op. cit.* p.35.
[57] Aberth, J. (2011), *op. cit.* p.135.
[58] *Ibid.*
[59] International Labour Organization (2000) *HIV/AIDS: A Threat to Decent Work, Productivity and Development*, Geneva: International Labour Organization, p.5.
[60] Amie L. Meditz, of the University of Colorado-Denver contends that 'Women, nonwhites, and people in the southern United States who were newly infected with HIV and followed for an average of four years experienced greater HIV/AIDS related morbidity compared to men and people of other races living in other regions of the country'. (e!Science News, 2011)

distance away from urban medical assistance, and poses a particular challenge to centralised state authorities tasked with combating the AIDS pandemic.

One particular example offered by Anne-Christine D'Adesky in her work *Moving Mountains: The Race to Treat Global AIDS*, is offered through an interview with a local Doctor from Oaxaca, Mexico,

> There are two worlds, two completely different realities when it comes to AIDS in Mexico…You cannot compare what you find in Oaxaca to Mexico City. Unfortunately, what exists up in the mountains is the truer picture. There you find a lack of infrastructure and medical attention, lack of training of doctors, and totally inadequate combinations of drugs prescribed for HIV. This is what we see in a huge percentage of cases. Patients are not only dying of AIDS, but are dying without any medical attention at all.[61]

D'Adesky's findings are repeated around the world for similar reasons; for example: Papua New Guinea, where a crippled health infrastructure has seen a drastic reduction in the number of trained medical personnel, and reduced access to health resources.[62] Morgenthau thought geography to be an important element in self-defence, and that large expanses of terrain would be difficult to control. The AIDS pandemic, as an actor, has agreed and used geography to maximise its lethal potential.

The threat posed to the geographic element by the AIDS pandemic is not as blatant as the threat it poses to other elements of national power. There is, however, a certain avenue of assessment that geography provides for greater insight into the impact of AIDS. The disparity between the various WHO and UNAIDS regions illustrates a connection between the state's geographic location and the prevalence of the AIDS pandemic. Furthermore, the geographic makeup of the state, meaning the geography within the state's borders, may offer states great difficulty in treating, as well as mitigating the impacts of, the pandemic. By appreciating the geographical barriers that prevent a state from aggressively defending itself from the AIDS

[61] D'Adesky, A.C. (2004) *Moving Mountains: The Race to Treat Global AIDS*, London: Verso, p.124.
[62] Tobias, M.D. (2007) 'The HIV/AIDS Crisis in Papua New Guinea', *Issue Analysis*, 81, Sydney: Centre for Independent Studies.

pandemic, there can be no guarantee, or contribution to, the defeat of this pandemic actor.

4.3.2 Natural Resources

The AIDS pandemic poses a unique threat to the natural resource power of the state. Unlike an invading army, which may be seeking to abscond with the resources for its own state's power, the pandemic impedes the state from capitalising on the resources it already possesses. Essentially, the pandemic places an increased strain on the self-sufficiency of the state by impacting on such essentials as food security of the state. The effect of the pandemic on food security is manifold, from the negative impact on agricultural production from loss of labour, to the perceived increased demand caused by food insecurity in urban areas. Both contribute to increased levels of high-risk behaviour by the state and the citizenry, further increasing the 'power' of the pandemic. Such high-risk behaviour would include women who are forced into sex work for food security. Furthermore, the economic ramifications of a pandemic assault on natural resources elevate the impact of the pandemic on national power. In addition, the high cost for resource-oriented corporations of maintaining a viable, healthy workforce, free from the burden of HIV has had significant implications for the economies of a number of developing countries.

In summary, while impeding the exploitation of natural resources does not threaten the existence of a state's raw materials, it does prevent the state from being able to maximise their worth. Over the two sub-elements of food and raw materials, the threat to the industrial sector of a nation's power, posed by the AIDS pandemic, becomes more acute.

4.3.2.1 Food

The AIDS pandemic impacts on a nation's food supply in three ways. First, death and infection from the pandemic impact on the agricultural sector by impeding both the cultivation of food products, and the economic benefit of excess production. Second, the inability to produce food contributes to food insecurity within a state. This phenomenon is amplified if a state already suffers from food shortages. Finally, as mentioned in relation to natural resources, food insecurity leads to an increase in levels of high-risk behaviour, which further accelerates the spread of the pandemic.

Agriculture plays an integral role in the establishment of a nation's power, particularly for developing countries. As Barnett and Whiteside contend,

> Without this sector [agriculture] there would be no industry, no services and no urban areas. We all have to eat. Seed production, plant breeding, food production, processing and marketing have been interlinked worldwide activities for thousands of years.[63]

The agricultural sector has the ability to affect 'food security, the fate of national economies and the sustainability of environmental assets'.[64] The threat the AIDS pandemic poses for agricultural sectors stems from the disease's impact on rural populations, which are the essential worker component of the state's agricultural sector.

UNAIDS maintains that 'the epidemic attacks the agricultural base - it infects and then kills many agricultural workers prematurely'.[65] These premature deaths contribute to an erosion of knowledge regarding crop production and food stock preservation techniques.[66] Furthermore, The United Nations Department of

[63] Barnett and Whiteside (2002), *op. cit.* p.222. [Brackets Added]
[64] UNAIDS (2006a), *op. cit.* pp.100-101. UNAIDS (2004), *op. cit.* p.50.
[65] UNAIDS (2004), *op. cit.* p.50.
[66] Hlanza, Gama, and Mondlane (2005) contend that 'because HIV/AIDS kills certain members of the family who have certain types of knowledge, those who are left behind will not have the knowledge if they have not yet given themselves time to learn. Young orphans were particularly at a disadvantage because the parents die at a time when they are still too young to learn'. (p.17)

Economic and Social Affairs/Population Division contends that the erosion of knowledge has also contributed to a change in the intent for the crops,

> HIV/AIDS has caused shifts of production from cash crops to food crops in AIDS-affected households. The change has resulted in lower household incomes and a lack of funds to buy non-food essentials or non-labour inputs necessary to maintain agricultural yields.[67]

As agricultural production regresses towards self-subsistence, placing the interest of the household first, the levels of food security attainable by the nation further diminishes.

The impact on a state's national power from agricultural change is summarised by the ILO in their 2000 report:

> Agriculture is the largest sector in most African economies, accounting for a large proportion of production and a majority of employment. Studies carried out in Tanzania and other countries have shown that AIDS will have adverse effects on agriculture, including loss of labour supply and remittance income. The loss of a few workers at crucial periods of planting and harvesting can significantly reduce the size of the harvest. In countries where food security is an important issue because of drought, the decline in household production can have serious consequences. A loss of agricultural labour also causes farmers to switch to less labour-intensive crops. In many cases, this means switching from export crops to food crops, thereby affecting rural economies.[68]

The movement away from export crops directly impinges on the state's national economy and limits stronger profits for rural economies. These inhibitors force the state to seek external resources to fill the void created by the pandemic's impact on food supply. The inability for the state to guarantee access to food supply provides the second insight into the pandemics impact on the state, being the increase in food insecurity.

Food insecurity, as defined by Miller *et. al.* as 'having uncertain or limited availability to nutritionally adequate or safe food or the inability to produce food in

[67] United Nations Department of Economic and Social Affairs/Population Division (2004a) *The Impact of AIDS,* New York: The United Nations, p.66. Barnett and Whiteside (2002) expand on this justification by contending that 'in subsistence agriculture all is dependent upon timely availability of competent labour. Illness and death bring downshifting in cropping systems and livestock management: a smaller range of crops is grown on a smaller area and husbandry is less punctilious. Livestock are less well-protected from hazards such as straying and theft or from insect pests and predators. A small, inexperienced boy or girl cannot know the best pasture land and does not have the energy to take the animals long distances. In time the livestock diminish in quantity and quality.' (p.229)

[68] International Labour Organization (2000), *op. cit.* p.14.

socially acceptable ways,'[69] poses a significant challenge to the state. Within a developed state the ability to adequately prepare for an impending food shortage is possible as long as there is 'ample forewarning before'.[70] However, as UNAIDS illustrates, 'AIDS-affected households have reduced coping capacity' in relation to food security, increasing the strain on the state.[71] Medically, food security is of particular importance to those susceptible to HIV infection as 'food insecurity and malnutrition can increase the risk of HIV infection following exposure, and accelerate progression to AIDS and death among those infected'.[72] Indeed UNAIDS has expressed concern as the role that food insecurity has taken on in the proliferation of the pandemic.

> Food insecurity is widespread globally and forces people to use various types of coping behaviour, some of which increase the likelihood of engaging in unprotected sex, particularly sexual risk-taking among women, as they may engage in transactional sex to procure food for themselves and their children.[73]

Such acts increase the likelihood of exposure to, and transmission of, the pandemic. By compelling individuals to take high-risk behaviour the power of the pandemic actor is further increased.

Central to the power potential of food is the notion of self-sufficiency. In short, the AIDS pandemic impedes a nation from developing and maintaining levels of self-sufficiency in relation to the natural resource of food. By reducing the state's agricultural capacity, the pandemic reduces the power that the state is able to garner from this particular element. Medically, the inability for a state to provide food security for its population has an almost cyclical effect in the proliferation of the disease. Whenever a state lacks the ability to capitalise on their raw materials, there is further diminution to the power of the state.

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[69] Miller, C.L., Bangsberg, D.R., Tuller, D.M., Senkungo, J., Kawuma, A., Frongillo, E.A., and Weiser, S.D. (2010) 'Food Insecurity and Sexual Risk in an HIV Endemic Community in Uganda', *AIDS and Behaviour* [online], available: http://www.springerlink.com/content/118v114066v7457w/ [accessed 24 Jan 2011].
[70] UNAIDS (2004), *op. cit.* p.47.
[71] *Ibid.*
[72] Miller, C.L. *et. al.* (2010), *op. cit.*
[73] UNAIDS (2010a), *op. cit.* p.76.

4.3.2.2 Raw Materials

The state's ability to capitalise on raw materials rests with its ability to extract and capitalise on those materials. As Anna Stablum succinctly wrote, AIDS often precludes such capitalisation: 'from Africa to Russia, from Peru to China, mining companies face a problem: the workers who haul up the earth's riches are coming down with AIDS, and it is hampering operations at a time of booming demand for minerals'.[74] Similar to the impact of the pandemic on a state's food supply, the AIDS pandemic prevents a state from utilising its raw materials by attacking the human element.

The 'assault on human capital'[75] has a considerable impact on companies. According to Reuters, a sick employee may cost a mining company 'over three times as much as his annual salary.'[76] The increase in cost is derived from a variety of aspects:

> With more employees falling sick due to HIV/AIDS, companies face increased costs for health insurance, sick leave and funeral benefits. Companies also bear the costs of recruiting and training new staff. Lower morale due to illness and loss of co-workers threatens the stable environment needed to sustain operations.[77]

Importantly, the shortage of skilled workers leads 'to higher production costs and a loss of international competitiveness'.[78] Such a distinct effect has seen a number of governments, and international organisations, look to ways of mitigating the impact of the AIDS pandemic on this specific demographic. For example; in 2003, spurred on by the 'urgency of the AIDS crisis, global unions agreed to join forces so that the combined strength of mass organizations could be the basis for an unprecedented worldwide response towards the disease'.[79] The global union was able to facilitate

[74] Stablum, A. (2007) *Is HIV a Time Bomb Under the Mining Industry?* [online], available: http://www.reuters.com/article/idUSL0263192420070711 [accessed 24 Jan 2011].
[75] International Crisis Group (2000), *op. cit.* p.9.
[76] Reuters (2007) *FACTBOX: AIDS and the Mining Sector* [online], available: http://www.reuters.com/article/idUSL0258647420070710 [accessed: 25 Jan 2011].
[77] *Ibid.*
[78] International Labour Organization (2000), *op. cit.* p.12.
[79] UNAIDS (2006b) *Global Reach: How Trade Unions are Responding to AIDS: Case Studies of Union Action*, Geneva: UNAIDS, p.11.

greater collaboration with both the ILO and the WHO in order to assist its membership in confronting the pandemic.[80] The formation of the union signifies the global understanding of the multifaceted response required to combat the pandemic. However, the aim of the union was to mitigate the effects of the pandemic on elements such as, but not restricted to, the capitalisation of raw materials, as identified by Morgenthau. The impact on a state's raw materials by the pandemic is strongly related to the impact upon the state's industrial capacity.

4.3.3 Industrial Capacity

As with the previous element, the primary impact on a state's industrial capacity is derived from the demise of its human resources. Within a state's industrial complex there are three distinctive areas where the AIDS pandemic has a detrimental influence. First, the threat to humanity generated from the demise of the domestic working sector; second, the impact on migrant workers, often utilised to replace the gap caused by AIDS within the indigenous workforce; and third, the increased threat posed towards transport workers who have an instrumental role in maintaining the industrial capacity of the state.

This assessment not only looks towards the impact on the traditional industrial areas, but also widens the scope of assessment to investigate the impact of the pandemic on the education sector; as education makes a key contribution to the industrial capacity of the state. As Morgenthau contended the 'industrial capacity of a nation, and hence its power,' depends upon not just 'the quality and capacity of the industrial plant' but 'the know-how of the working man, the skill of the engineer, the inventive genius of the scientist, [and] the managerial organization'.[81]

[80] UNAIDS (2006b), *op. cit.* p.11-61.
[81] Morgenthau, H.J. (2006), *op. cit.* p.132. [Brackets Added]

Simply put, the industrial capacity of the state is largely derived from both the working population, and the education of the population.

Considerable attention[82] has been made to the impact of the AIDS pandemic on a state's workforce. This attention is derived from the disease 'primarily strik[ing] the working age population'.[83] At no time should the loss in revenue as a result of a loss of the size of the workforce be ignored. Such loss provides a number of difficulties for governments. The most prevalent being the increase in expenditure required to provide health infrastructure.[84] The implications of the pandemic are summarised by UNAIDS, in their 2006 *Report on the Global AIDS Epidemic*, where they argue that, 'the impact [of the AIDS pandemic] is widespread and complex: consumption is reduced, profits are foregone, tax revenue and investments are lost and essential services are not delivered'.[85] One such essential service that has been significantly impeded by the AIDS pandemic is education delivery.

The ILO contends that the AIDS pandemic impacts the education sector in three distinct ways. First, the pandemic reduces the supply of teachers; second, it increases school absences as a result of children being required to stay at home to care for a sick family member or to work; and third, children are being forced to drop out of school, due to the inability of sick parents to pay school fees.[86] Such repercussions ensure the cyclical, dangerous behaviour of the pandemics initial impact and further extend the longevity of the contagion. Even when children are able to attend school, the pandemic's impact on educators has reduced the level of education available to them.

[82] UNAIDS (2004), *op. cit.* UNAIDS (2006), *op. cit.* UNAIDS (2010a), *op. cit.* International Labour Organization (2000), *op. cit.* Barnett, T., and Whiteside, A. (2002), *op. cit.* The United Nations Department of Economic and Social Affairs/Population Division (2004), *op. cit.*
[83] UNAIDS (2004), *op. cit.* p.55. [Brackets Added]
[84] International Labour Organization (2000), *op. cit.* p.11.
[85] UNAIDS (2006a), *op. cit.* pp.97-98. [Brackets Added]
[86] International Labour Organization (2000), *op. cit.* p.11.

Globally the 'prevalence and death rates vary greatly,' among teachers.[87] For example, UNAIDS maintains that 'The United Republic of Tanzania needs around 45,000 additional teachers to make up for those who have died or left the system because of AIDS.'[88] Similar problems confront the Zambian school system where 'illness of teachers or their responsibilities of caring for family members (including attending family funerals) accounts for over 60% of teacher absences.'[89] Replacing teachers is also problematic. According to Coombe, teacher production through existing educational resources is also failing to cope with the demand for new teachers, ' The Zambian Ministry of Education reported that 2.2% of all teachers died in 1996. This was already more than the number of teachers produced by colleges that year.'[90] Any withdrawal of teacher services impacts on the quality of the teaching available to the next generation as 'more inexperienced and under-qualified teachers and increased class sizes reduce quality student-teacher contact'.[91] The pandemic has ensured a loss of potential power of the state by guaranteeing the under-education of the vulnerable youth.

The effect of the pandemic on the education sector extends the pandemic's impact on the state's national power. The domestic situation of students must also be considered here. UNAIDS contend that 'many AIDS-affected families may withdraw children from school to compensate for labour losses, increased care activities and competing expenses'.[92] In preventing access to the education that children require to maintain a competitive edge in the marketplace the pandemic practically ensures a negative longevity of its impact.

[87] UNAIDS (2006a), *op. cit.* p.97.
[88] *Ibid.* p.97.
[89] *Ibid.*
[90] Coombe, C. (2007) 'Mitigating the Impact of HIV and AIDS on Education Supply, Demand and Quality', in Cornia, G.A. (2007) *AIDS, Public Policy and Child Well-Being,* Florence, Italy: UNICEF Innocenti Research Centre, p.252.
[91] UNAIDS (2004), *op. cit.* p.53.
[92] *Ibid.* p.52.

The working class of a state is no less affected. The ILO, in their 2000 report *HIV/AIDS: A Threat to Decent Work, Productivity and Development*, contend that the impact of the pandemic on the working force within developing countries is two-fold. First, the pandemic's impact on the life expectancy of the population will account for 'changes in the age and sex distribution of the labour force.'[93] Second, the labour force will be significantly smaller.[94] The ILO maintains that while there is a dearth in the data available to make such assertions due to a lack of 'relevant and available studies,'

> It would…be expected that the age and sex distribution of the labour force will change, due to the rising number of widows and orphans seeking a livelihood and the large proportion of people with AIDS in the age group 20-49 years, resulting in early entry of children into the active labour force, the early withdrawal of people with AIDS and the retention of older persons in the labour force due to economic need.[95]

The ILO further contends that within high prevalence countries[96] 'there will be about 11.5 million few persons in the labour force, without even considering the impact on economic growth of absenteeism, productivity decline and morbidity.'[97] The impact of the pandemic is not restricted to a numbers game; the potential secondary, or indirect, effects of the AIDS pandemic must be taken into consideration.

> Firms confronted with a high level of adult HIV prevalence may be faced with other, less quantifiable effects. For example, HIV/AIDS can result in a substantial decline in morale among workers. As employees witness the deaths of their co-workers, they may adopt a fatalistic attitude towards work and life in general, which may have a detrimental impact on the production of firms.[98]

Furthermore, an increase in worker absenteeism is likely to escalate the amount of work required by healthy workers in order to compensate for the decrease in productivity. These measures come at an extra cost to the company, and increase the

[93] International Labour Organization (2000), *op. cit.* p.16.
[94] *Ibid.* p.18. The ILO maintain that 'the labour force in high prevalence countries in the year 2020 is estimated to be about 10 to 22 per cent smaller than it would have been if there had been no HIV/AIDS'.
[95] *Ibid.* p.16.
[96] The ILO study projected the impact of the pandemic on the labour force within the high prevalence countries of Botswana, Kenya, Malawi, Mozambique, Namibia, South Africa, Uganda and Zimbabwe. Within low prevalence countries, the study assessed that the labour forces would be between 3 and 9 per cent smaller. (p.18)
[97] International Labour Organization (2000), *op. cit.* p. 18.
[98] United Nations Department of Economic and Social Affairs/Population Division (2005), *World Population Prospects: The 2004* Revision, New York: The United Nations, pp58-59.

'stress among employees, which may result in a decline in both the quantity and quality of the final product'.[99] Alternatively, some companies, particularly within the industrial complex, will seek to replenish the depletion in their workforce by looking towards migrant workers to fill the void. In doing so, the companies further risk a greater impact on the industrial capacity of the state by exposing it to potentially unknown domestic variants of the AIDS pandemic, as well as other infectious diseases.

Within certain regions migrants and human traffickers take advantage of unsecured borders to move and replenish workers. According to UNAIDS, this 'growing phenomenon' plays 'an increasingly important aspect of global, regional and national economies', and 'HIV has become a key issue of concern with cross border and overseas migration'.[100] However, the porous nature of the borders of a number of countries around the world, "the soft geography element", impedes the ability of governments to track this significant issue. Such actions take place particularly within sub-Saharan Africa, as well as within Asia, which makes a significant contribution to the increased rate of infection within the regions.

For example, a 2004 study by the United Nations Development Programme (UNDP) on Thailand's response to HIV/AIDS, contends that while 'studies of HIV prevalence among foreign migrants have been sporadic…the actual magnitude of HIV infections among them is unknown. Nevertheless, available information indicates a troubling glimpse of the virus's presence among these mobile populations.'[101] While the primary focus of the UNDP's investigation centred on the sex worker industry,

[99] United Nations Department of Economic and Social Affairs/Population Division (2005), *op. cit.* p.59.
[100] UNAIDS (2009) M*igrant Workers and HIV Vulnerability in South Asian and South East Asian Countries* [online], available: http://www.unaids.org/en/resources/presscentre/featurestories/2009/may/20090518migrantworkersed/ [accessed: 26 Jan 2011].
[101] The United Nations Development Programme (2004) *Thailand's Response to HIV/AIDS: Progress and Challenges,* Thailand: UNDP, pp.58-59.

other recent studies have resulted in similar results for other industries.[102] Such problems are not solely isolated to the developing regions of the world; the USA faces a similar issue, with Mexican migrant workers who had a prevalence of HIV three times as high as both the general American and Mexican population.[103] The inability for a state to maintain vigilance on the health of migrant worker populations poses significant and specific problems for securing the industrial capacity of the state.

The third aspect of a state's industrial capacity to take into consideration is its transportation sector. The very nature of a transport worker's lifestyle has the ability to expose the drivers to HIV infection. As the International Crisis Group contend,

> Like miners, their work often takes them far from home for extended periods, and they receive a steady salary. Both of these characteristics make them attractive to the commercial sex trade…In an example, 90 per cent of sex workers targeting truckers at one Botswana-South Africa border crossing were found to be HIV-infected. It is often through the mixing of transient truckers with populations of sex workers with high prevalence of HIV that the disease diffuses back into the countryside and into new populations of women and children.[104]

Similar scenarios are transpiring in other regions of the world as well. In India a survey conducted by the Centre for Media Studies indicate that 'almost 40 percent of India's truck drivers and their helpers are infected with AIDS'.[105] The implications of the AIDS pandemic for the transportation worker mimic any other sector: the individual, family and employers all pay a cost for the spread of the disease and the industrial base of the economy.

The impact of the AIDS pandemic on the state's industrial capacity remains detrimental to a state's ability to promote and preserve its national power. In

[102] UNAIDS, (2010b), *op. cit.* Hunter, S. (2005) *AIDS in ASIA: A Continent in Peril*, New York: Palgrave MacMillan. Poku, N.K., Whiteside, A., and Sandkjaer, B. (2007) *AIDS and Governance*, Hampshire: Ashgate. Cornia, G.A. (2007) *AIDS, Public Policy and Child Well-Being*, Florence, Italy: UNICEF.
[103] Henry J. Kaiser Foundation (2004) *HIV Prevalence Among Mexican Migrant Workers Three Times as High as General U.S., Mexican Populations, Studies Show* [online], available: http://www.thebody.com/content/art9969.html [accessed 26 Jan 2011].
[104] International Crisis Group (2000), *op. cit.* p.12.
[105] MedIndia Health Network (2006) *High Prevalence of AIDS Among Indian Truck Drivers* [online], available: http://www.medindia.net/news/view_news_main.asp?x=6733 [accessed 25 Jan 2011].

particular the impact on the human resource sector, which prevents the state from capitalising on its natural resources, has the potential to erode an economy, making the prospect of any post-pandemic recovery more difficult.

4.3.4 Military Preparedness

Morgenthau contends that the three sub-elements of a state's military preparedness; technology, leadership, and the quantity and quality of armed forces, are the 'most significant factors' that establish a military's capabilities.[106] The AIDS pandemic has negatively affected all three sub-elements that Morgenthau asserts to be most vital to a state's national power. Researchers agree that prevalence rates for AIDS within the military are higher than within the civilian population, being as high as 'two to three times, or two to five times that of the general population'.[107] Yet confirmation of such assertions from national defence forces is relatively uncommon.[108] The release of such data is likely to indicate potential weaknesses within a state's national defence apparatus, thereby increasing the national security implications of the disease. The rates are derived from the perception of the high-risk environment within which a state's military operates.[109] In outlining the threat posed towards the military by the AIDS pandemic, the US National Intelligence Council maintain that while

> It is difficult to make a direct connection between high HIV/AIDS and other infectious disease prevalence in military forces and performance in battle…given that a large number of officers and other key personnel are dying

[106] Morgenthau, H.J (2006), *op. cit.* p.133.
[107] McInnes, C. (2007), *op. cit.* p.97.
[108] Elbe, S. (2003) *Strategic Implications of HIV/AIDS*, Oxford: Oxford University Press p.17.
[109] UNAIDS (1998) contend that there are five main justifications for the increase in the risk of exposure for military personnel: '1) military and peacekeeping service often includes lengthy periods spent away from home, with the result being that personnel are often looking for ways to relieve loneliness, stress and the building up of sexual tension; 2) the military's professional ethos tends to excuse or even encourage risk-taking; 3) the majority of the personnel are in the age group which allows for the greatest risk of HIV infection-the sexually active 15-24 year age group; 4) personnel sent on peacekeeping missions often have more money in their pockets then the local people, giving them the financial means to purchase sex; 5) military personnel and camps, including the installations of peacekeeping forces, attract sex workers and those who deal in illicit drugs'. (p.3)

> or becoming disabled, combat readiness and capability of such military forces is bound to deteriorate.[110]

The implications of such deterioration 'are clear: a military force that is sick and dying will not be as effective - or as disciplined-as one that is healthy'.[111] Such an impact escalates the AIDS pandemic threat considerably, from one of domestic concern to one with international ramifications. Morgenthau's three traditional sub-elements of military preparedness still allow an investigation into the impact of AIDS. By doing so, the threat to the traditional first line of a state's defence is developed and, with it, a stronger understanding of the political implications of the AIDS pandemic to the national power of a state.

4.3.4.1 Technology

Morgenthau contends that the 'fate of nations and of civilizations has often been determined by a differential in the technology of warfare for which the inferior side was unable to compensate in other ways'.[112] In regard to countering the AIDS pandemic, the technological advantage rests in the hands of the state, given the ease with which transmission of HIV can be prevented.[113] However, the promiscuous nature of military personnel[114] places them at a similar, if not greater risk, than those employed within the industrial sector analysed above.[115] The main difficulty for the military within this element is twofold: first, the inability to prevent, or at least reduce the incidence of, transmission; second, the inability to provide adequate treatment for infected personnel. Both these difficulties are indicative of an initially flawed technological capacity of the military.

[110] NIE99-17D (2000) *The Global Infectious Disease Threat and Its Implications for the United States*, National Intelligence Estimate: Washington, p.52.
[111] International Crisis Group (2000), *op. cit.* p.19.
[112] Morgenthau, H.J. (2006), *op. cit.* p.133.
[113] For example, through the use of condoms.
[114] *See* above n.107
[115] UNAIDS (2008), *op. cit.*

The United Nations General Assembly was only able to launch 'a global initiative to improve AIDS awareness in militaries' in 2003,[116] some twenty years after the recognition of the pandemic. Yet, because of military structures they have had a moderate amount of success in executing the program, as McInnes summarises,

> In Thailand, not only was an awareness and prevention programme extremely successful in reducing HIV prevalence, but the structured, disciplined nature of the military was seen as useful in raising awareness and ensuring that preventative measures were taken. In Eritrea, UNAIDS commented that the military were a captive audience and an 'ideal medium' for AIDS awareness campaigns, contributing to near universal knowledge of HIV. Nevertheless, 62 per cent of the Eritrean military saw themselves as not being at risk from AIDS. Similarly, surveys of Nigerian, Cameroonian and Cambodian armies all revealed both a high level understanding of how HIV was transmitted and how it could be avoided, but that a significant percentage still engaged in unprotected sex with non-regular partners.[117]

The reluctance to utilise a condom is not restricted to developing countries. The USA Navy's HIV infection rate doubled between 1999 and 2009, in large part due to a growing unwillingness to use condoms.[118] Naturally, unwillingness increases the likelihood of exposure to HIV and personnel becoming infected.

With adequate treatment, the ramifications of HIV infection can be significantly minimised. For this reason 'around the world many militaries are quietly putting their infected commanders on antiretroviral medicines' and encouraging their troops to put condoms to use.[119] There are some dangers within this practice however, as Garrett illustrates,

> Brazil, like the United States, has also used antiretroviral drugs to treat the estimated 1 percent of its uniformed personnel who are HIV positive. But the Brazilian officers and enlisted men treated have grown steadily more resistant to the drugs, with some 86 percent of affected personnel now reporting resistance to at least one of the powerful protease-inhibitor drugs used to hold the virus at bay.[120]

While the element of military technology is usually reduced to assessing the weaponry of a state, the inability for a military to utilise technological advances to

[116] McInnes, C. (2007), *op. cit.* p.99.
[117] *Ibid.* pp.99-100.
[118] The Body (2009) *With Highest Rate of Cases, Navy Sees HIV Infections Rise* [online], available: http://www.thebody.com/content/whatis/art54293.html [accessed: 26 Jan 2011].
[119] Garrett, L. (2005b) 'The Lessons of HIV/AIDS', *Foreign Affairs*, 84, p.55.
[120] *Ibid.* pp.55-56.

provide the resources necessary to assist HIV positive personnel is problematic.[121] As the *International Crisis Group* reported in 2002, within African countries, 'with expensive AIDS therapies exceeding the average soldier's income of US$50 per month, there is no perceived benefit in knowing one's HIV serostatus.'[122] Until a military is able to utilise technological advancements to benefit its own members, there is little assistance that this sub-element is able to offer the state in maintaining its national power when faced with the AIDS pandemic.

4.3.4.2 Leadership

The first implication of the AIDS pandemic on military leadership is the loss of military officers of experience and particular expertise. The loss of leadership poses some difficulty for states as while 'dead recruits and infantry troops tend to be easy to replace…a general or top technical officer…often represents decades of training and acquired experience.'[123] McInnes expands on this issue contending that the threat is significantly broader than merely the loss of experience:

> The high rate of infection among officer corps and NCOs will not only affect leadership and experience, but may mean the loss of informal networks crucial to the efficient operation of complex institutions such as military. Of particular concern appears to be the potential loss of experienced military and technical specialists with 8-15 years service, the 'middle management' and technical glue which holds an organisation together.[124]

Military leadership plays an important role in marshalling support among the members of the armed services for prevention techniques to take effect. McInnes goes as far as to incorporate the 'willingness of military leaders to acknowledge the problem' of the AIDS pandemic, to be a decisive variable in the success of awareness training.[125] The level of leadership within the military, and the role they play in combating the AIDS pandemic, directly correlates to the final component of military preparedness - being the quality and quantity of the armed forces.

[121] Such technological advances include condoms and anti-retroviral medications. While condoms may not be perceived as a significant technological advantage for the military, their ability to prevent transmission of HIV is well established.
[122] International Crisis Group (2000), *op. cit.* p.20.
[123] Garrett, L. (2005b), *op. cit.* p.55.
[124] McInnes, C. (2007), op. cit. p.98.
[125] *Ibid.* p.100.

4.3.4.3 Quality and Quantity of Armed Forces

The advantage of technology and leadership is minimalised if the state does not possess the quality and quantity of armed forces required to ensure its military preparedness.[126] The AIDS pandemic has assaulted the preparedness of the state's military in three important areas: first, the impact of the pandemic on the population has reduced the quality of the population from which the military can draw. Second, the pandemic has affected the health and well being of the armed forces, translating to a heavy toll on the quality of the armed forces; third, the pandemic's attrition rate for military personnel is reducing the ability of the military to protect the state's national power.

Russia is one particular country where the AIDS pandemic, along with other significant health concerns, is having a detrimental effect on the military's recruitment base. According to Garrett, 'in both 2002 and 2003, about 5,000 conscripts - or about a third of all young men drafted - were rejected for military service for health reasons, that included chiefly HIV/AIDS, tuberculosis, drug addiction and "psychological problems".'[127] The diminution of the recruitment base for the Russian military is further exacerbated by the declining number of births within Russia,[128] a situation that is representative of 'similar trends in the armed forces of Ukraine, the Baltic states, and possibly Belarus and Moldova as well'.[129] A reduction in the recruitment pool for the military directly translates to a reduction in the future quantity and quality of armed forces personnel. The lack of quality recruits is also being replicated within the ranks of armed forces.

[126] Morgenthau. H.J. (2006), *op. cit.* p.137.
[127] Garrett, L. (2005b), *op. cit.* p.54.
[128] *See* Barnett, T. and Prins, G. (2005), *op. cit.* There has been a 50 percent reduction in annual births in Russia 'between 1987 and 2000.' Barnett and Prins argue that if 'we consider the decline in births from 2.5 million to 1.25 million over this period, and if we assume a basic split of 50-50 in sex distribution, the number of males has declined from 1.25 million in 1987 to 630,000 in 2000. And as they age to 18 years old, the number available to be recruited to military service declines correspondingly'. (p.25)
[129] Garrett, L. (2005b), *op. cit.* pp.54-55.

The quality of the troops the state already possesses is even more important to the state of military preparedness. The ill health of military personnel has affected the quality of their work. According to McInnes, evidence exists that:

> Flight times in African militaries have been significantly affected because crew have been too ill to fly; there is concern that soldiers may be wary of helping comrades with blood injuries in combat due to fear of infection; and unit cohesion may suffer if some are HIV-positive and others are not.[130]

The overall effect of the HIV/AIDS pandemic on the quality of armed forces is a reduction of cohesiveness, capabilities, and readiness,[131] when this is combined with the impact of the pandemic on the quantity of the armed forces, the state's national power is significantly impaired.[132]

The HIV/AIDS pandemic is decimating the quantity of a number of armed forces throughout the world. The figures are a growing concern for those tasked with maintaining national security, 'troop strength in Malawi, for example, has already reportedly fallen to 50 percent of the minimum capacity needed to guarantee safety…In Mozambique, police recruits cannot be trained fast enough to replace those dying of AIDS.'[133] Of significant concern is the secondary impact a decline in troop numbers presents to the international community. International peacekeeping missions, in large part are, supported by developing countries with high infection rates; these missions may well suffer as a result of the impact of AIDS pandemic on the quantity of the troops.[134] As a result, the international community may be hindered in adequately responding to outbreaks of violence.

[130] McInnes, C. (2007), *op. cit.* p.98.
[131] NIE99-17D (2000), *op. cit.* Elbe, S. (2003), *op. cit.* McInnes, C. (2007), *op. cit.* Garrett, L. (2005b), *op. cit.*
[132] McInnes (2007), echoing Elbe (2003), Heinecken (2003), NIE99-17D(2000) and the International Crisis Group (2001), contends that 'if military effectiveness is reduced as a result of HIV/AIDS, or even if it is perceived to have been affected, then states may be at greater risk from internal conflict of external aggression.' (p.98)
[133] Garrett, L. (2005b), *op. cit.* p.55.
[134] International Crisis Group (2000), *op. cit.* p.22.

The AIDS pandemic tests the strength of a state's military preparedness across all three sub-elements. By doing so the pandemic exposes a number of concerns that need to be addressed in order to allow the military to carry out its task in preserving a state's national power. The assault on all levels of military personnel, coupled with the impact of the pandemic on the general population, facilitates a significant reduction in the state's ability to maintain a comprehensive and robust military able to counter any threat towards the nation state.

4.3.5 Population

As outlined above the impact of the AIDS pandemic varies across regions. According to WHO, in 2004 HIV/AIDS was the sixth largest cause of death worldwide, accounting for 3.5% of all deaths.[135] The majority of deaths related to the pandemic are in low-income countries,[136] indicating that middle and high-income countries have had some success in reducing the burden of the AIDS pandemic on their population. The assessment of the AIDS pandemic's impact on a state's population distribution and trends, provides a quantitative understanding of the pandemic.

4.2.5.1 Distribution

The variance in the regional mortality rate of the AIDS pandemic poses some difficulties in establishing a global assessment of the impact of the AIDS pandemic on global population distribution. Morgenthau contends that 'a nation cannot be in the first rank without a population sufficiently large to create and apply the material implements of national power.'[137] The AIDS pandemic prevents a state from meeting such a rank through its assault on the population of the state. By assessing the impact of the pandemic on the demographics that make up a state's population; namely size, age, geographic distribution, and level and distribution of

[135] World Health Organization (2008) *Fact Sheet: The Top Ten Causes of Death*, Geneva: World Health Organization.
[136] According to the WHO (2008) within low-income countries HIV/AIDS is responsible for 5.7% of all deaths making it the fourth leading cause of death in 2004. Within middle and high-income countries, HIV/AIDS is not listed in the top ten leading causes of death.
[137] Morgenthau, H.J. (2006), *op. cit.* p.139.

human capital, the impact of the AIDS pandemic on the state's population distribution becomes evident.

Size

While a precise figure is difficult to come by, there appears to be a general consensus among scholars[138] that the AIDS pandemic has been responsible for the deaths of between 20 and 22 million persons globally. One study maintains that between the period 1995-2025, AIDS will be responsible for over 64 million deaths.[139]

The 2006 United Nations Department of Economic and Social Affairs/Population Division report on *The Impact of AIDS* assesses the burden of the AIDS pandemic on the population of fifty-three states with varied prevalence.[140] The study offers a more detailed examination of impact of AIDS on the size of the population, paying close attention to gender disparity. While the study concluded that globally AIDS would be responsible for 38 million excess deaths in the period 2020-2025, it was also suggested that the pandemic would reduce life expectancy at birth by 4.9 years.[141] While these figures are gender-neutral, evidence indicates that more females are likely to die from the AIDS pandemic than males.

The gender disparity of the AIDS pandemic has resulted in 'more than half of all people living with HIV [being] women and girls'.[142] This is a particular problem in sub-Saharan Africa where, according to the 2010 UNAIDS *Report on the Global*

[138] Ashford, L.S. (2006) 'How HIV and AIDS Affect Populations', *Population Reference Bureau Policy Brief*, Washington D.C.: Population Reference Bureau. United Nations Department of Economic and Social Affairs/Population Division (2004a), *op. cit.* Barnett, T. and Whiteside, A. (2002), *op. cit.* Barnett, T. and Blaikie, P. (1992) *AIDS in Africa: Its Present and Future Impact*, New York: The Guilford Press. Garrett, L. (2005a), *op. cit.*
[139] United Nations Department of Economic and Social Affairs/Population Division (2004a), *op. cit.*
[140] The countries assessed had the following prevalence breakdown – 20 per cent or more (7 countries); 10 to 20 per cent (5 countries); 5 to 10 per cent (14 countries); 2 to 5 per cent (17 countries); less then 2 per cent (10 countries)
[141] United Nations Department of Economics and Social Affairs/Population Division (2004a), *op. cit.* p.16. This reduction would see the average life expectancy at birth decrease from 70.8 years (without AIDS) to 65.9 years (with AIDS).
[142] UNAIDS (2010a), *op. cit.* p.10. [Brackets Added]

AIDS Epidemic, 'more women than men are living with HIV, and young women aged 15-24 years are as much as eight times more likely than men to be HIV positive'.[143] The 2006 study indicated that 'the impact of AIDS on life expectancy is projected to be higher for women than men' with countries within the 20 percent or more prevalence range seeing a loss of 'at least 6 years of life expectancy more than their male counterparts'.[144] Such a disparity alters the gender makeup of the population and is likely to have ramifications for the future trends of the population.[145] These ramifications are largely derived from the age of the persons being infected with the disease, which in most instances 'are the years when people are most likely to start becoming parents'.[146]

Age

The AIDS pandemic most frequently attacks those considered to be within the most industrially productive age demographic of 15-59 years. The 'young adult years,' as the United Nations Department of Economics and Social Affairs/Population division refers to them, 'are the most productive for income generation and family care giving, so the loss of people in this group to AIDS has far-reaching implications for households, the labour force, food production and the well-being of society'.[147] The most recent 2010 Global report for UNAIDS indicates that both HIV prevalence and AIDS related deaths are declining amongst children.[148] Whilst this decrease is a positive sign, there is an increasing gap within the population age distribution given the high rates of AIDS-related deaths in older generations. The increased death rate

[143] UNAIDS (2010a), *op. cit.* p.10.
[144] United Nations Department of Economics and Social Affairs/Population Division (2004), *op. cit.* p.24.
[145] *See* section 4.3.5.2. *The AIDS Pandemic: Population: Trends*
[146] Barnett, T., and Blaikie, P. (1992), *op. cit.* p.34.
[147] United Nations Department of Economic and Social Affairs/Population Division (2004), *op. cit.* p.21.
[148] UNAIDS (2010a), *op. cit.* pp.17-19.

in the young adult generation leads to an increase in the older demographic,[149] and an increase in the number of resulting child orphans.

Indeed, the increase in the number of orphans is 'one of the worst consequences of the AIDS epidemic'.[150] The 'total number of children aged 0-17 years who have lost their parents due to HIV has not yet declined'.[151] In 2009 UNAIDS estimated that there were close to 16.6 million orphans with 'almost 90%' living in sub-Saharan Africa.[152] An increase in the amount of orphans in turn increases the number of children vulnerable to recruitment as child soldiers, as Barnett and Whiteside illustrate,

> In a society which is already stressed and where government offers very little, large numbers of 'youth' who have been orphaned from an early age can easily become armed youths, easy recruits for millenarian cults or prey to unscrupulous politicians.[153]

The use of child soldiers also places further strain on the military preparedness of the state, specifically; whether or not the military is capable of engaging child soldiers. The implications of the AIDS pandemic on the age demographic are perhaps one of the more insidious aspects of the disease. By sapping a population of its most productive segment, the pandemic significantly increases the burden of the disease on the state.

Geographic Distribution

Anecdotally, geographic distribution plays a crucial role in assessing the impact of the AIDS pandemic because it establishes the disparity between rural and urban areas in both prevalence, and access to treatment. There is very little data available to compare the rate of HIV prevalence in rural and urban areas within a state. However, there is some evidence that while there has been some success in urban

[149] As Barnett and Whiteside 2002) contend that 'the standard definitions, population aged 65 years or over, do not reflect the nature of old-age in sub-Saharan Africa and other poor regions of the world and in poor communities'. (p.213)
[150] Barnett and Whiteside (2002), *op. cit.* p.177.
[151] UNAIDS (2010a), *op. cit.* p.112.
[152] *Ibid.*
[153] Barnett and Whiteside (2002), *op. cit.* p.210.

areas at promoting prevention methods, and supplying treatment to those that require it, this is not replicated at the rural level. A 2001 study, *Real and Perceived HIV Risk by Population Density: An Exploratory Examination,* indicates that,

> Although the prevalence of HIV/AIDS is substantially lower among less populated areas, including smaller metropolitan and rural areas, the stability of these rates suggests that those living in these areas have been less likely than those in larger cities to adopt effective risk-reduction practices.[154]

The study primarily focuses on the United States where infection rates are considerably lower compared to other countries. However, the results are likely to be replicated elsewhere in the world where efforts of awareness are concentrated within urban areas. Such a situation is exacerbated by the inability to deliver treatment to sustain life to a number of rural areas in high-prevalence countries.

Over the last ten years significant resources, spearheaded by UNAIDS and WHO, have gone into scaling up access to treatment for HIV, aimed at lowering the mortality of the AIDS virus. However, as WHO maintains, 'the geographical location of treatment sites can also increase barriers to treatment - both directly, such as through increased costs associated with transport and food, and indirectly, in terms of time spent on travel and waiting in queues.'[155] All such treatments are dominated by the level and distribution of human capital.

Level and Distribution of Human Capital

In regard to combating the AIDS pandemic, the level and distribution of human capital directly relates to the availability of health care facilities designed to mitigate the impact of the pandemic. The AIDS pandemic has come at a tremendous cost to the health care systems of low- and middle-income nations. As Ashford maintains, 'the epidemic has already crippled health systems in Africa, where systems were

[154] Leukefeld, C.G., Farabee, D., McDermeit, M., Dennis, M.L., Wechsberg, W.M., Inciardi, J.A., Surratt, H.L., Compton, W.M., Cottler, L.B., Klein, H., Hoffman, J.A. Desmond, D., and Logan, TK (2001) 'Real and Perceived HIV Risk by Population Density: An Exploratory Examination', *Journal of Drug Issues*, 31(4), p.890.
[155] World Health Organization (2009b) *Towards Universal Access: Scaling Up Priority HIV/AIDS Interventions in the Health Sector Progress Report 2009,* Geneva: World Health Organization, p.66.

weak before the epidemic struck'.[156] The concentration of healthcare within urban centres has contributed to the overwhelming of these systems with HIV/AIDS patients, at the cost of other health concerns. Furthermore, the concentration of healthcare facilities in urban, as opposed to rural, areas has further impeded the access to healthcare for large proportions of the population.

Even when members of the population are able to access health facilities, the access to treatment may not be forthcoming. The increased burden of the AIDS pandemic has placed a strain on the health infrastructure with AIDS patients frequently occupying more than half of hospital beds in some sub-Saharan Africa countries.[157] Increased access to antiretroviral therapy continues to ease this burden. However, the insidious nature of the pandemic means a cost is further incurred as healthcare workers also fall ill,

> The loss of healthcare staff to AIDS is another blow to the health care sector in heavily affected countries. Their loss is particularly painful given the escalating need for their professional skills as more people fall ill with AIDS. According to the health service in South Africa, 14 percent of staff (mostly nurses) died from AIDS between 1997 and 2001.[158]

Similar instances have been cited by UNAIDS in their *2006 Report on the Global AIDS Epidemic* for other countries.[159] While the impact of the AIDS pandemic on the level of human capital, through its assault on health care workers, is a significant impediment to defeating the pandemic, this issue is compounded by the inability of states to adequately distribute their health infrastructure throughout their population.

[156] Ashford, L.S. (2006), *op. cit.* pp.2-3.
[157] Lamptey, P.R., Johnson, J.L., and Khan, M. (2006) 'The Global Challenge of HIV and AIDS', *Population Bulletin,* 61(3), p.10. [Brackets Added]
[158] *Ibid.*
[159] Particularly, 'Botswana lost approximately 17% of its health-care workforce due to AIDS between 1999 and 2005. In Zambia, an estimated 40% of midwives in Lusaka are believed to be HIV-positive, while 16% of a sample of public and private health-sector workers in four South African provinces were living with HIV in 2002'. (UNAIDS, 2006, p.95)

4.3.5.2 Trends

The trend of a state's population growth is an important facet in gauging the impact of the pandemic as it provides an indication of the potential recovery rate of the power, which the state derives from its population. The AIDS pandemic poses a multi-faceted problem for a state seeking to protect the power derived from this particular sub-element. The impact of AIDS on the birth-rate can deny the state the potential benefits from a positive population trend; such as, a population base to support the military preparedness, and the industrial capacity of the state. Lamptey, Johnson and Khan utilise South Africa as an example of the complexities derived from the pandemic.

> South Africa embodies many of the challenges projected for populations severely affected by AIDS. By 2020, fewer children will be born because of deaths and lower fertility among HIV-positive women. Many children will die of AIDS-related causes during childhood. The adult population will shrink, with especially high losses among women in their 30s and 40s, and men over 40, which will be evident in the country's age and sex structure in 2020.[160]

The summary of trends in South Africa is likely to be replicated throughout high-prevalence countries. A long wave event interpretation further emphasises that such devastation is unlikely to be fully realised until at least ten years after HIV prevalence has peaked.[161] Such an outcome highlights the importance of Morgenthau's sub-element of trends when taking into account the impact of a pandemic on the national power of the state.

The element of population provides a quantitative exploration of the AIDS pandemic. The spread of the HIV/AIDS pandemic appears to be reducing in size. According to UNAIDS, 2009 saw a notable reduction in the incidence of HIV infection globally, by 19% from 1999.[162] This reduction has been replicated by a decrease in the amount of AIDS-related deaths in 2009 when compared to 2004, a

[160] Lamptey, P.R., *et. al.*. (2006), *op. cit.* pp.9-10.
[161] Lamptey, P.R. *et.al.* (2006), *op. cit.* UNAIDS (2006a), *op. cit.* Barnett T., and Whiteside, A. (2002), *op. cit.*
[162] UNAIDS (2010a), *op. cit.* p.16. The Report states that '2.6 million people…became newly infected with HIV...this is nearly one-fifth fewer than the 3.1 million newly infected in 1999, and more than one fifth (21%) fewer than the estimated 3.2 million in 1997.' (p.16)

result in the increased access to medication.[163] While such figures seem to indicate a level of success in reducing the population's susceptibility to the AIDS pandemic, the population's support for the policies enacted can only be assessed through the element of national character.

4.3.6 National Character

Specifically, the national character is determined by the 'intellectual and moral qualities' of a population.[164] In essence, the element of national character seeks to establish a more qualitative aspect of the population's contribution to national power. While Morgenthau contends that both national character and national morale 'stand out…for their elusiveness from the point of view of rational prognosis' an understanding of the importance of the national character can be developed by looking toward the response to the population to the AIDS pandemic.[165]

The social construction of AIDS from the nascent days of the pandemic established the foundation of its assault on national character. As John Aberth maintains 'AIDS is perhaps the most culturally constructed [infectious disease], whose ever-shifting metaphors relative to each society's attitudes and behaviours are intimately connected with the clinical and biological manifestations of the disease.'[166] The ability to respond adequately to the growing threat of the AIDS pandemic was held up by the nature of the social construction of the disease. That is, the 'emerging politics' relating to the pandemic resulted in two sides of the argument becoming ingrained within the population. One side consisted of a 'highly organized radical and vocal disease constituency,' while the other side was an 'organized opposition

[163] UNAIDS (2010a), *op. cit.* p.19. AIDS related deaths peaked in 2004 at 2.1 million and over a five-year period this figure has been reduced to 1.8 million. (p.19)
[164] Morgenthau, H.J. (2006), *op. cit.* p.145.
[165] *Ibid.* pp.140-141.
[166] Aberth, J. (2011), *op. cit.* p.135. [Brackets Added]

by a radical and organized religious right'. Both sides made a concerted effort to frame the national character of the state.[167] Levin and Sanger contend that such a discourse between the disease constituency and their opposition offered,

> A lethal combination capable of paralysing and reinforcing the timidity of legitimate public actors, from elected officials to appointed agency heads. Further, the legitimate scientific complexity and uncertainty of developing safe and effective treatments and preventative agents exacerbated the impediments to purposeful action.[168]

The stereotypes attached to the HIV/AIDS pandemic saw a varied interpretation of the causes of the virus. As Dennis Altman succinctly implies, 'the taboos around dealing with HIV stem from the history of the epidemic, the means of its spread and the fear of recognising its potential consequences'.[169] In essence the battle to confront the pandemic became more of an ideological battle, than one of man versus microbe. Without exception, national character has played an important role in both the proliferation of, and response to, the AIDS pandemic. This assessment looks towards the role of four predominate elements of authority, which play a role in the framing of the national character of the state: the political, religious, intellectual, and professional, authority.

The lack of strong political authority at the beginning of the epidemic provided for a foundation of inaction. According to the World Bank,

> The denial of the problem throughout the early years of the epidemic, including at national political levels, and the lack of political commitment, national prevention strategies, and coordinated response, all result[ed] in inaction and entrenchment of the disease.[170]

The relegation of HIV/AIDS to be solely a problem for homosexuals,[171] made addressing the disease at its outset an unpopular advocacy among politicians. Altman contends that, 'the behaviours associated with the spread of the disease

[167] Leven, M.A. and Sanger, M.B. (2000) *After the Cure: Managing AIDS and Other Public Crises*, Lawrence, Kansas: University of Kansas Press, p.120.
[168] *Ibid.* p.120.
[169] Altman D. (2007) 'Taboos and Denial in Government Responses', in Poku, N.K., Whiteside, A., and Sandkjaer, B., eds., *AIDS and Governance*, Hampshire: Ashgate, p.133.
[170] World Bank Staff (2002) *Education and HIV/AIDS: A Window of Hope,* Washington DC: World Bank, p.3. [Brackets Added]
[171] A 1981 article for the New York Times reports that according to the spokesperson for the Federal Centers for Disease Control in Atlanta, Dr James Curran, 'there was no apparent danger to nonhomosexuals from contagion'. (Altman, L.K., 1981) [Brackets Added]

embarrass many authorities, who would rather deny the existence of HIV than admit that stigmatised and unpopular behaviours exist within their countries.'[172] This form of denialism reflected the social construction of the means of transmission. However, the sexual mode of HIV transmission is not the only form of "denialism" that political authorities have had relating to the AIDS pandemic.

The propagation of medical 'AIDS denialism', a disproven contention that HIV does not cause AIDS, has permeated political efforts at dealing with the pandemic.[173] The denialist approach to HIV adopted by South African President, Thabo Mbeki, is estimated to have cost the lives of 330,000 souls, 'because a feasible ARV [Antiretroviral] treatment program was not implemented in South Africa'.[174] In summarising the case, Chigwedere *et. al.* contend that

> In 1999, President Thabo Mbeki, under pressure to provide zidovudine (ZDV or AZT) for prevention of mother-to-child HIV transmission (PMTCT) and AIDS treatment announced that the government was not going to provide it. He then questioned whether HIV was the cause of AIDS, and this broadened the debate from the usefulness of ZDV to the usefulness of antiretroviral (ARV) drugs in fighting the AIDS epidemic because they all target HIV. President Mbeki's government restricted the use of freely donated nevirapine and obstructed the acquisition of Global Fund grants.[175]

At this point the medical argument saw the cross over from medical denialism to social consequence, and contributed to the proliferation of the pandemic. Furthermore, the questionable tactics of the Mbeki government contributed to the further proliferation of the pandemic at a time when the preponderance of scientific evidence has clearly established the causes of the AIDS pandemic.[176]

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[172] Altman, D. (2007) *op. cit.* p.136.
[173] University of California Research Scientist Peter Duesberg is seen to be the main purveyor of the denialist theory. According to Aberth (2011), 'Duesberg does not deny the existence of HIV but rather contends that it is a harmless passenger in the bodies of infected victims and that the disease of AIDS is instead brought on by lifestyle "stressors" such as poor diet and nutrition, recreational drug use, or even by the very antiretroviral therapies used to control and manage the disease.' (p.143)
[174] Chigwedere, P., Seage, G.R., Gruskin, S., Lee, T., and Essex, M. (2008) 'Estimating the Lost Benefits of Antiretroviral Drug Use in South Africa', *The Journal of Acquired Immune Deficiency Syndrome,* 49(4), p.412. [Brackets Added]
[175] *Ibid.* p.410.
[176] Aberth, J. (2011), *op. cit.* Altman D. (2007), *op. cit.* Chigwedere, P., *et. al.* (2008), *op. cit.*

Political authority in relation to the AIDS pandemic has impacted on the national character by promoting a number of falsehoods about the pandemic, the legacy of which still exist today. Indeed, 'the hypocrisies of official discourse means that messages about HIV are often confusing and misleading…in countries as different as Singapore, Chile and Kenya governments have limited prevention campaigns in the name of "tradition", "morality" and "religion"'.[177] This trilogy of national character is used in many domestic political discussions where there are perceived threats from external sources and globalisation.

The World Bank explicitly addresses this notion that 'the cultural and religious conservatism that constrains open discussion and information provisions about sexual matters in general, and about AIDS in particular'[178] is a key determining factor in the misunderstanding of the AIDS pandemic. These misunderstandings permeate the national character of many states. In the earlier years of the pandemic within Africa, a 'belief that the act of marriage itself makes partners immune to infection' appears to have come about 'because both the Catholic and Anglican churches, as well as Muslim leaders have urged marriage' and fidelity or 'zero grazing', or monogamy.[179] As a result, the influence of religious authority on the policies of governments in combating the AIDS pandemic has served to undermine mitigation. The ideological persuasion of governing authorities has seen decisions being based on belief, as opposed to science. One such example is the US foreign aid initiative to address the AIDS pandemic.

The President's Emergency Plan for AIDS Relief (PEPFAR) was first announced by USA President, George W. Bush, during his 2002 State of the Union Address.[180] The program was designed to combat the effects of the pandemic with the delivery of

[177] Altman, D. (2007), *op. cit.* p.137.
[178] World Bank Staff (2002), *op. cit.* p.3.
[179] Barnett, T. and Blaikie, P. (1992), *op. cit.* p.45. [Brackets Added]
[180] Garrett, L. (2005b) 'The Lessons of HIV/AIDS', *Foreign Affairs,* p.61.

HIV treatment to 15 countries at an estimated cost of US$18 billion. As Garrett contends 'no other nation has mounted an HIV/AIDS campaign of this scale'.[181] However, the influence of ideology tainted the potential success of the campaign.

> In 2004, the appropriations bill allocating money for PEPFAR stipulated that a third of the prevention and education funds had to be spent on abstinence-promoting programs, that none of the money could be spent buying sterile syringes or needles for intravenous drug users, and that faith-based organizations should receive special priority in the receipt of care and treatment funds.[182]

The inclusion of faith-based organisations as a channel for HIV mitigation funding, as well as the apparent move away from harm minimisation programs, was controversial. Simply put, the program moved away from science based solutions toward more ideological assumptions regarding the pandemic's spread and mitigation. Indeed Garrett and Rosenstein contend that PEPFAR became 'so highly politicized that its achievements are obscured by controversy'.[183] Faith-based initiatives and religious leaders continue to play an important role in influencing the national character, and the ability of that character to overcome the impact of the AIDS pandemic.[184] In some respects, religious authority also acts as intellectual authority, further confusing the element of national character.

In order to strengthen the national character of a population facing the AIDS pandemic, the deferral to an intellectual authority is preferred. However, what defines 'intellectual authority' is blurred. Essentially, persuasive members of the public assert an intellectual authority on the matter, regardless of their knowledge gap. The World Bank illustrates how proliferation of the pandemic continues because of the "knowledge gap";

> Such gaps can be dangerous, for example, where infected men seek out uninitiated girls with the aim of curing themselves. In South Africa, a third of survey respondents believed that HIV-positive people would always show

[181] Garrett, L. (2005b), *op. cit.* p.62.
[182] *Ibid.*
[183] Garrett, L. and Rosenstein, S. (2005) 'Missed Opportunities: Governance of Global Infectious Diseases', *Harvard International Review*, Spring, p.64.
[184] UNAIDS Executive Director Michael Sidibe argues 'religious leaders play a vital role in the AIDS response, by promoting community solidarity they can prevent new HIV infections and ensure that people living with HIV are treated with dignity and respect'. (The Hindu)

> symptoms. In Kenya, AIDS orphans-often in denial-believed that their parents had died from witchcraft or a curse.[185]

Burnett and Blaikie, highlight another knowledge gap danger found in Buganda where 'the idea that female beauty is a protection against AIDS infection is prevalent among men', and that 'this is mentioned by adolescent school children in their essays.'[186] Here the groundwork for proliferation rather than mitigation or containment is established. A sound national character is required, and intellectual authorities that are competent and well informed. Where the AIDS pandemic is involved, there is a clear undermining of the element at the cost of national power.

Finally, the ability for multinational corporations to have usurped all professional authority to contribute to enhancing the national character of the population in the face of the pandemic has been well established, and practiced, for at least the last decade. Essentially, corporations have been challenging the traditional role of government, being the provision of health care, by providing access to AIDS medications for their employees.[187] Arguably, the actions taken by corporations are entirely self-serving.[188] However, by doing so companies are placed in a unique position to be able to cultivate, or at least influence, the character of the population they employ.

Assessing the impact of the pandemic on a state's national character should be considered in isolation. The ability of authorities to frame the national character of its population is vital to an effective response to the AIDS pandemic. Such ability must draw on the influence of all forms of authority; including political, religious, intellectual, and professional if the approach is to be successful. As Morgenthau

[185] World Bank Staff (2002), *op. cit.* pp.5-6.
[186] Barnett, T. and Blaikie, P. (2002), *op. cit.* p.45.
[187] For a detailed discussion on the advantages of such a program *see* Van der Borght, S.V. *et al.* (2006), *op. cit.*
[188] In this particular instance corporations are embracing the central tenants of realism, being self-survival, in a significantly more successful fashion than the state has.

warned from the outset, the failure to account for the national character of the population is detrimental to establishing the national power of the state.

4.3.7 National Morale

Simply put, the national morale of a population goes to the 'degree of determination with which a nation supports' the policies being enacted by governments.[189] In regard to mitigating the AIDS pandemic, a number of governments have sought the assistance of the wider international community to combat their localised epidemics. This assistance offers the ability to assess two areas of national morale: the degree of determination with which the nation supports its domestic policies regarding AIDS, as well as the support for the international community's efforts. The ability for both governments and international organisations to sustain the national morale of the population has been significantly tested by AIDS being a long-wave pandemic. The longevity of the AIDS pandemic has provided a rare insight and assessment of constantly varying government policies to control the pandemic as well as the public's response.

The initial public policy response to the AIDS pandemic really fell across two choices;

> The first involved traditional transmissible-disease control: identifying and reporting the infected and tracing their contacts, isolating and quarantining them, treating potentially dangerous carriers, and taking steps to destroy the contagion through disinfection, cleansing, or other antimicrobial means. Proponents of the second approach claimed that such techniques were antiquated, ineffective and counterproductive. Instead of seeking to control the infected, health officials should encourage voluntary compliance with procedures of identification, testing, and treatment and regard behavioural changes that lessened transmission.[190]

Determining the approach embraced by the state was significantly aligned with the national character of the population. The traditional "quarantinist" approach to

[189] Morgenthau, H.J. (2006), *op. cit.* p.147.
[190] Baldwin, P. (2006), *op. cit.* p.38.

infectious disease outbreaks had served a number of states well during previous pandemics, and for most states this approach had become ingrained within their domestic legislature.[191] Cuba seems to have adopted the quarantinist approach to the AIDS pandemic. However, the AIDS virus posed a different challenge for some states as they needed to contemplate as to whether to place the rights of the individual above the rights of the state. This topic would become the centrepiece of the debate surrounding public policy and AIDS.[192]

In responding to the AIDS pandemic, Cuba instigated a series of policies designed to mitigate the spread of the virus throughout the country, and impede any impact of the virus on its national power. According to Garrett,

> No nation on earth had ordered as broad a sweep of AIDS regulations as had Cuba. Between March 1986 and January 1988 the government conducted 1,534,993 HIV tests…and the intention was to test every citizen and nontourist visitor to the country, or 10.4 million people.[193]

The Cuban government commenced their testing regimen with the military, particularly the 'hundreds of thousands who served as soldiers on military duty in Africa,'[194] before expanding it to include the general population. Those found to be HIV positive were then isolated in 'sanatoriums where, though they were quarantined, their salaries were paid…they were allowed to pursue education, permitted home visits, and otherwise treated (by most accounts) in a humane fashion'.[195] The program, despite being seen as 'impracticable, oppressive and

[191] Baldwin (2006) maintains that 'because of existing contagious-disease legislation, those who favored interventionist measures against AIDS did not have to pass new legislation, but had only to include HIV disease among those [diseases and infections] already covered'. (p.51) [Brackets Added]
[192] Although other countries, such as Sweden under the *Contagious Disease Law of 1968*, and Germany under their *1961 Contagious Disease Law*, have the ability to apply similar measures. According to Baldwin (2006) Sweden, 'by the mid-1990s...invoked over sixty times' (p.55) the infectious disease law. Whereas, Germany, initially was 'one of the first countries to respond to AIDS with a national education campaign, distributing 27 million leaflets on the disease and promoting condom use.' (Garrett, L. 1994, p.466) However, after convicting a US Army sergeant as well as a German homosexual of intentional spread of the virus, Garrett (1994) contends that 'AIDS panic in Bavaria increased' and the public showed strong support for the arrests of the individuals. (p.466) Prompting the Bavarian government to 'announce that all prostitutes, civil service job applicants, drug addicts, immigrants, prisoners, and foreigners applying for extended residency permits would be required to undergo HIV blood tests'. (p.466)
[193] Garrett, L. (1994), *op. cit.* p.466-467.
[194] Aberth, J. (2011), *op. cit.* p.168.
[195] Baldwin, P. (2006), *op. cit.* p.35.

discriminatory,'[196] has been remarkably successful in decreasing the rate of prevalence within Cuba.[197] Furthermore, the sanatorium system has evolved considerably over time, and the draconian regulations governing their patients have been somewhat reduced. As a wider understanding and awareness of the pandemic has come to fruition, the Cuban government adjusted their program accordingly.[198] Debate surrounding the Cuban program mainly refers to the lack of 'privacy or consent for Cubans living with HIV,' particularly in regard to mandatory testing.[199]

Other members of the international community largely adopted a voluntary approach to HIV testing for civilian populations. Such an approach was indicative of a movement away from recognising the collective interests of society, towards acknowledging that individual rights now took precedence.[200] The framing of the AIDS pandemic to be a personal matter, as opposed to one that is detrimental to national power, has played a part in the increased spread of the pandemic. The response of governments that adopted the "individual's responsibility" approach further framed the national character through the cultivation of immense fear campaigns that contributed significantly to the stigmatisation of the disease.

The response of governments concentrated on divulging information regarding the spread of HIV. Arguably, these awareness campaigns did benefit society in increasing awareness, yet at the same time the campaigns instigated the

[196] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.41.
[197] UNAIDS estimates for 2009 indicate that Cuba has a prevalence of 0.1% with less then 100 deaths due to AIDS. This is in stark contrast to one of its nearest neighbours Haiti where the prevalence was 1.9% in 2009 and 7,100 persons died of AIDS. Cuba's achievements are even more impressive when the trade embargo is taken into account. Enforced by the United States since well before the discovery of HIV, the embargo has forced Cuba to look towards the manufacturing of generic treatments, which it provides to its citizens for free. (*See* UNAIDS (2010a), *op. cit.*)
[198] According to Aberth (2011), 'it is reported that most AIDS patients in Cuba reside in their local communities and receive care at outpatient clinics, while the sanatoriums now function as educational or training centers for an initial three-month period or else a home base for those who otherwise live and work on the outside'. (p.169)
[199] D'Adesky, A.C. (2004), *op. cit.* p.78.
[200] Baldwin, P. (2006) *op. cit.* p.39.

development of a national morale that, in some instances, is perceived to be worse than the virus itself.

> For many, HIV is linked with issues of immoral behaviour such as sex work or drug use. The stigma related to HIV is therefore reinforced and exacerbated by the stigma which already exists for groups such as gay men, drug users, prison workers or sex workers…Because of the stigma and fear associated with HIV, people are reluctant to get tests. Indeed, it is estimated that more than 80 per cent of people with HIV do not know they have the virus. Stigma also blocks people from accessing services, including counselling and treatment. Most of all, stigma means people who do test positive often keep their status a secret.[201]

Such stigma is still ingrained within the national character of many states. This attribute of national character has allowed some governments to ignore the growing pandemic, with the public providing tacit approval for government policy based on the stigma attached to the disease. Responsibility for effective AIDS programs has now largely fallen within the purview of the international community, which provides a further avenue of the assessment of national morale, being the level of support for the international community's actions to mitigate the pandemic.

In order to assess the impression of its efforts, in 2010 UNAIDS commissioned Zogby International to 'survey the world on what people think about the AIDS epidemic and response,' which is provided in Table 4.3 Is the World Effectively Dealing with AIDS, below.[202] When asked specifically about their support for the global response to AIDS, 43.6% of respondents indicated some element of dissatisfaction, with 22.8% unsure.[203] Such a response is a likely outcome given the amount of time taken by the international community to respond to the pandemic, as well as the lack of clarity regarding just what the global response to the pandemic has been.

[201] Boler, T., and Archer, D. (2008) *The Politics of Prevention: A Global Crisis in AIDS and Education*, London: Pluto Press, p.13.
[202] UNAIDS (2010b) *Outlook Report 2010*, Geneva: UNAIDS, p.34. Zogby International conducted an online survey of adults with Internet access in 25 countries. A total of 11,820 respondents participated in the study. (UNAIDS, 2010b, *op. cit.* p.38.)
[203] *Ibid.* p.35. 33.6% of respondents indicated yes.

Table 4.3: Is the World Effectively Dealing with AIDS

	North America	Latin America	Western/ Central Europe	Eastern Europe/ Central Asia	East Asia	South/ Southeast Asia	North Africa/ Middle East	Sub-Saharan Africa	Oceania	Caribbean
Yes	21	32	26	18	45	53	32	30	22	75
No	54	58	42	61	23	28	39	56	42	25
Not Sure	25	10	32	22	32	19	30	14	36	-

Source: UNAIDS (2010c) *The Benchmark: What the World Thinks about the AIDS Response*, Geneva: UNAIDS, p.19.

The geographic breakdown, outlined in the able above (Table 4.3), indicates the variance in support for the global response, and provides significant insight into regional perceptions. Overwhelming support for the global effort is limited to the Caribbean and South and South-East Asia regions, with 75% and 53% respectively answering in the affirmative. Those regions most underwhelmed with the global effort were 'Eastern Europe (61%), the USA (54%), and sub-Saharan Africa (50%).'[204] The poll reveals that over one-fifth of participants were unable to determine the success, or failure, of global efforts to deal with the AIDS pandemic. Such a large response rate may be indicative of a lack of knowledge regarding international leadership within the AIDS response, or the remnants of the initial and human responses to AIDS being considered a 'dirty disease', both of which bear an impression of the international character of the global constituency.

Contrastingly, when asked whether or not their country was responding effectively to AIDS, as seen in Table 4.4: Is your Country Effectively Dealing with AIDS?; 41.9% indicated "no", 41.2% indicated "yes", and 16.9% were unsure, such a result ensures a divide in national responses to any policy to stop the contagion enacted thus far by government.[205] Moreover, the close-to-even split relating to a country's AIDS response program would indicate a less than enthusiastic level of support for

[204] UNAIDS (2010b), *op. cit.* p.34.
[205] *Ibid.* p.37.

any future development policies the government embraces in order to mitigate both the pandemic its the impact.

Table 4.4: Is your Country Effectively Dealing with AIDS?

	North America	Latin America	Western/ Central Europe	Eastern Europe/ Central Asia	East Asia	South/ Southeast Asia	North Africa/ Middle East	Sub-Saharan Africa	Oceania	Caribbean
Yes	55	39	47	11	44	39	28	26	51	63
No	29	54	26	78	30	40	46	69	20	37
Not Sure	16	7	26	12	26	21	26	5	29	<1

Source: UNAIDS (2010c) *The Benchmark: What the World Thinks about the AIDS Response*, Geneva: UNAIDS, p.21.

However, the regional analysis, offered in Table 4.4, provides a different image. The only regions where the response indicated "overwhelming satisfaction" [206] with their country's response were: the Caribbean (63%); North America (55%); and Oceania (51%). Those least satisfied with their country's response were: Eastern Europe/Central Asia (78%); sub-Saharan Africa (69%); and Latin America (54%).[207] Such a split largely coincides with low and high infection rates of the regions, with low prevalence countries exhibiting greater satisfaction in their country's response. On a regional basis, the national morale relating to AIDS pandemic policies indicates significant room for improvement. Such improvement can be acquired through stronger engagement between states and international health organisations. The level of engagement that has transpired between governments through diplomatic means provides an indication of the level of seriousness with which the pandemic is being considered by the political constituency.

4.3.8 Quality of Diplomacy

The element of diplomacy covers a wide gamut of actions; from the ability of the state to gain access to the various treatments required, to utilising diplomatic

[206] Over 50%.
[207] UNAIDS (2010c) *The Benchmark: What the World Thinks about the AIDS Response*, Geneva: UNAIDS, p.19.

contacts to assure funding for various HIV programs. Central to the element of diplomacy is the ability of the government to maximise their elements of power in a way that decreases the impact of the pandemic. While previous pandemics have, to a degree, disrupted diplomatic communications, the AIDS pandemic has seemingly done the opposite. The diplomatic effort to combat AIDS on a global basis extends far beyond the traditional method of bilateral diplomacy. Indeed, the increased attention given to the AIDS pandemic during the first decade of the 21st century has placed AIDS firmly within the framework of Global Health Diplomacy.

The need for high-level diplomacy to deal with the AIDS pandemic was recognised by the international community as early as 1987, when WHO established a Special Programme on AIDS. The programme was primarily designed to 'dispel the many myths that existed about HIV/AIDS and to promote a human rights approach to the pandemic'.[208] Diplomatic activity regarding the pandemic would increase in 1994, when the United Nations' Economic and Social Council established UNAIDS,[209] in order to deliver a coordinated effort to deal with the broader pandemic effects. According to Das and Samaraskera, the UNAIDS programme would address several key objectives namely,

> To provide global leadership in response to HIV/AIDS; promote global consensus on policies; monitor trends; strengthen the capacity of national governments to develop comprehensive national strategies; promote broad-based political and social mobilisation to prevent and respond to HIV/AIDS within countries, involving a wide range of sectors and institutions; and advocate for greater political commitment to, and adequate resources for, tackling the disease.[210]

In the realm of international diplomacy, UNAIDS has played a vital role in ensuring that HIV/AIDS became a more prominent issue. The ability for UNAIDS to lobby the

[208] Das, P., and Samarasekera, U. (2008) 'What Next for UNAIDS', *The Lancet*, 372(December 20/27), p.2099.
[209] UNAIDS was finally launched in 1996 and brings together ten UN system organisations for 'co-ordinated and accountable efforts to unite the world against AIDS'. The organisations include: The Office of the United Nations High Commissioner for Refugees (UNHCR); the United Nations Children's Fund (UNICEF); the World Food Programme (WFP); the United Nations Development Programme (UNDP); the United Nations Population Fund (UNFPA); the United Nations Office on Drugs and Crime (UNODC); the International Labour Organization (ILO); the United Nations Educations, Scientific and Cultural Organization; the World Health Organization (WHO); and the World Bank.
[210] *Ibid.*

major organs of the United Nations, namely the Security Council and the General Assembly, to place the AIDS pandemic within their domain should not be overlooked.[211] Neither the Security Council nor the General Assembly had ever contemplated the impact of pandemics on international security prior to the year 2000.

The United Nations Security Council convened on the 10 January 2000 to address 'the impact of AIDS on peace and security in Africa.'[212] The Council meeting was chaired by United States Vice-President, Al Gore[213]; and 'marked the first time that the Council had addressed a health issue as a threat to international peace and security'.[214] In justifying the utilisation of the Security Council as the forum to deal with the AIDS pandemic, the United States Ambassador to the United Nations Richard Holbrooke explained that

> If we [got] AIDS in the Security Council, that will begin to break down the stigma; that will begin to get more money to the issue; that will bring more leadership to the issues, and that will lead to a solution.[215]

While the special session was largely focused on the continent of Africa, it still 'injected the issue into the international political discourse at the highest level' and eradicates any conjecture on the political actor status of the pandemic.[216] The passing of *Resolution 1308* signalled a turning point for international health diplomacy. The Resolution expressly recognised that the HIV/AIDS pandemic 'can have a uniquely-devastating impact on all sectors and levels of society', and that 'the HIV/AIDS pandemic, if unchecked, may pose a risk to stability and security'.[217] Furthermore, the resolution expressly mandated that there should be 'additional discussion among relevant United Nations bodies, Member States, industry, and

[211] Altman, D. (2003), *op. cit.* p.45.
[212] United Nations Information Service (2000) *Security Council Holds Debate on Impact of AIDS on Peace and Security in Africa* [online], available: http://www.unis.unvienna.org/unis/pressrels/2000/sc1173.html [accessed 31 Jan 2011]
[213] Behrman (2004) contends that this would be the first time a sitting US Vice President would chair a Security Council session. (p.163)
[214] *Ibid.* Barnett, T. and Whiteside, A. (2002), *op. cit.* p.314.
[215] Behrman, G. (2004), *op. cit.* p.162. [Brackets Added]
[216] *Ibid.* p.164.
[217] United Nations Security Council (2000), *op. cit.*

other relevant organizations to make progress, *inter alia,* on the question of access to treatment and care, and on prevention.'[218] In doing so, the Security Council increased the level of diplomatic attention that was given to the disease.

The next major diplomatic effort to confront the AIDS pandemic came in the form of the United Nations General Assembly Special Session on HIV/AIDS. The Special Session, which was convened in June of 2001, was the first Special Session to be called based on a health issue. The final resolution of the Session became known as the Declaration of Commitment on HIV/AIDS, and outlined the role that the international community would play in defeating the pandemic.[219] The Commitment resolved to provide for at least one full day of every future General Assembly Session to review and debate the report from the Secretary General on the AIDS pandemic.[220] Furthermore, in adopting the Declaration of Commitment, Member States obliged themselves to report on their countries progress to the General Assembly.[221] Such a commitment ensures continued and substantial diplomatic efforts would transpire to ensure the defeat of the pandemic.

Five years after the Declaration of Commitment was signed, a "follow-up" session of the General Assembly, based on the implementation of the Declaration, was convened. The Secretary-General's report to the Session argued that,

> The available evidence underscores the great diversity among countries and regions in implementing the response envisioned in the Declaration of Commitment on HIV/AIDS. While certain countries have reached key targets and milestones for 2005, as set out in the Declaration, many countries have failed to fulfil the pledges.[222]

The notion of goal setting as a measure to hold Member States to account of their commitment has become a stalwart of UN efforts against the AIDS pandemic.

[218] United Nations Security Council (2000), *op. cit.*
[219] United Nations General Assembly (2001) *Declaration of Commitment on HIV/AIDS*, New York: United Nations.
[220] *Ibid.* p.15.
[221] *Ibid.* p.14.
[222] United Nations General Assembly (2006) *Declaration of Commitment on HIV/AIDS: Five Years Later: Report of the Secretary-General*, New York: United Nations, p.1.

One further commitment can be seen with the prominent placement of combating the AIDS pandemic within the Millennium Development Goals.[223] In order to achieve these goals, Member States have been forced to enter into a diplomatic relationship with non-state actors; such as non-governmental organisations (NGO's) and pharmaceutical companies, to seek assistance in mitigating the effects of the pandemic on their national power.[224]

Successful mitigation of the pandemic also requires non-traditional diplomatic efforts where the state will need to engage with other actors within the international community to ensure its national power. Barnett and Whiteside maintain that those countries that have shown some success in containing the AIDS pandemic have 'adopted a multi-sectoral response'.[225] On the domestic front, such a response has seen 'a commitment across a society, from political leaders at all levels through to religious leaders, NGOs, the private sector and, where appropriate, traditional leaders' to confront the pandemic.[226] The multi-sectoral response has seen states become more reliant on non-government organisations to enter into negotiations, arguably a stalwart of diplomacy, in order to protect their national power. A strong reliance of organisations; such as the Bill and Melinda Gates Foundation for finances, and the negotiating strength of the Clinton Global Initiative, has seen the significant increase in diplomatic engagement from nation state in order to decrease the impact of the pandemic.[227]

[223] United Nations (2010) *The Millennium Development Goals: Report 2010*, New York: United Nations, p.40.
[224] *Ibid.* pp.40-51.
[225] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.336.
[226] *Ibid.* p.337.
[227] Seoane-Vazquez and Rodriguez-Monguio (2007) contend that 'several national and multinational efforts have been organized with the aim of reducing ARV prices. The Accelerated Access Initiative (AAI), created in May 2000 with the participation of international organizations and several originator pharmaceutical companies, achieved price reductions of original ARVs. The Clinton Foundation HIV/AIDS initiative, established in 2002, has also negotiated price ceilings for ARVs with generic suppliers.' (p.64.)

The HIV/AIDS pandemic has provided the impetus for increased cooperation between international actors in matters of global health. Taking into account the broader impact of the AIDS pandemic validates justification for such a diversified diplomatic approach. Short wave outbreaks of pandemics past had multilateral coordination and cooperation designed to impede the progress of the pandemic. Such diplomatic efforts were minute in comparison to the diplomacy required to combat the AIDS pandemic. While the diversified diplomatic approach to combating the AIDS pandemic has had some success in preserving state's national power, the responsibility for maintaining a balance between the elements of national power falls to the government of the state. Morgenthau's final element of the quality of government seeks to assess the overarching ability of a government to maintain such a balance.

4.3.9 Quality of Government

The quality of a state's government is vital in preserving the state's national power during a pandemic. The AIDS pandemic poses a unique challenge to governments, given the multifaceted impact of the virus. Indeed, governments must not only seek to reduce the impact of the AIDS pandemic on society as a whole, but look to protecting the institutions that they have created to facilitate that reduction.

Overwhelmingly, governments of low and middle-income countries have experienced significant difficulties in dealing with the AIDS pandemic due to a 'lack of resources, low salaries, and sometimes downright corruption'.[228] Barnett and Whiteside contend that these issues make the state 'inefficient or incapable of governing' with the illness and death related to AIDS adding 'to an apparently

[228] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.297.

endless downward spiral'.[229] All of which contributes towards the magnification of the scope of the pandemic.

The importance of a robust quality of government to combat the AIDS pandemic cannot be underestimated, as UNAIDS illustrates,

> An effective and functioning public sector is vital for delivering essential goods and services, and developing successful national AIDS responses. Before the epidemic, several worst affected countries were already struggling with daunting development challenges, excessive debt burdens, and declining trade. In many low-and middle-income countries, adjustment programmes involved deep public-spending cuts, and governments currently struggle to provide basic social services, support and infrastructure. In the worst affected countries, AIDS has additionally undermined the public sector's functional effectiveness.[230]

Assessing the impact of the AIDS pandemic on the quality of a state's government indicates the difficulties authorities have had in confronting the magnitude of threats posed by this pandemic actor is established.

Balance between Resources and Policy

In order to facilitate an adequate response to the AIDS pandemic, a government must facilitate the protection of all of the elements of its national power. In order to do this, the government needs to maintain a balance between the materials that it possesses, and the policy that it has developed. The longevity of the AIDS pandemic has made the likelihood of a perfect balance somewhat difficult to achieve. As the 2006 UNAIDS *Report on the Global AIDS Epidemic* asserts,

> In countries with high levels of HIV prevalence, the epidemic is having a serious impact on public-service sectors. At the same time as productivity and tax bases are being constrained by the deaths of adults in their productive prime, AIDS is placing increasing demands on public-sector services, such as health and education, and on public administration.[231]

Such a conflagration of issues provides the "perfect storm" for a government being unable to maintain the balance which is required. This is where the uniqueness of the AIDS pandemic becomes somewhat pronounced.

[229] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.297.
[230] UNAIDS (2004), *op. cit.* p.55.
[231] UNAIDS (2006a), *op. cit.* p.93.

Most pandemics would justify emergency measures being implemented by a government, such as quarantine and treatment. Such measures are incredibly effective during short-wave events. Given the longevity of the AIDS pandemic, and the reluctance for governments to react in a timely fashion, governments have struggled to insulate themselves from the pandemic. UNAIDS has expressed growing concerns 'about the long-term effects on the continuity and quality of public services and governance, with the significant disruption of institutional memory' resulting from the impact of the AIDS pandemic.[232] The impact of the pandemic on the human resources of the government impedes the quality of the government's ability to respond effectively by ensuring a balance among the resources that it possesses.

Balance among Resources

A successful effort in combating the AIDS pandemic comes with the realisation that 'AIDS control is part of government's activities, [and] where there is a large epidemic each ministry or department should look at their activities and consider what they may do differently.'[233] A whole-of-government approach has the ability to address areas on which the pandemic has impacted that do not fall within the gamut of the ministry of health. For example, Barnett and Whiteside illustrate the importance of various aspects of a government being able to minimise the burden of the AIDS pandemic upon the state in arguing that,

> Delays at borders due to slow customs and immigration procedures result in truck drivers spending days at border posts. Villages spring up to house, feed and entertain them. Prevention activities might include education and condoms for both truckers and local women. Alternatively, government departments in charge of immigration and customs could work together to speed border crossings.[234]

[232] UNAIDS (2006a), *op. cit.* p.94.
[233] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.299. [Brackets Added]
[234] *Ibid.* p.299.

By incorporating a whole-of-government approach to fighting the AIDS pandemic, the burden placed on the health services sector of the state could be considerably reduced.

As mentioned in Chapter Two, the ability of the government to maintain the level of governance, which its citizenry has come to expect, is vital when confronted with a pandemic. The AIDS pandemic has placed a tremendous strain on health care systems, particularly within sub-Saharan Africa, where the system was already fragile. UNAIDS contends that 'people with HIV-related disease occupy more than half of all hospital beds.'[235] The primary concern, according to Barnett and Whiteside, is that this 'increased demand is from people who are not normally users of health care: young adults'.[236] As mentioned above, with young adults, or those of 'maximum potential usefulness' (as Morgenthau would refer to them), unable to contribute to the national power of the state, the ability of a government to maintain the delicate balance among resources may be further impeded through a loss in tax revenue.

The increased burden placed on government budgets through the strain on health resources is part of an almost cyclical impact of the AIDS pandemic. Barnett and Whiteside contend that a reduction in tax revenue transpires because,

- GDP is lower. This has knock-on effects: companies making lower profits pay less company tax; fewer employed people means less personal tax; less economic activity reduces value added tax and customs revenues; reduced savings means less tax and stamp payments from financial institutions.
- Where companies are not bound by minerals, other natural resources or markets, they may, if the epidemic and its impact are serious enough, move to other less affected locations; new investments and businesses avoid affected areas.
- The revenue collection process itself may be affected. Morbidity and mortality hampers government operations and

[235] UNAIDS (2006a), *op. cit.* p.95.
[236] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.308.

> efficiency. For example, if border customs officials are absent or have died then revenue collection becomes less efficient.[237]

If a government is unable to maintain consistent revenue in order to provide the resources to its constituency, the burden of the AIDS pandemic continues to be magnified. Through this inability, the government's capacity to foster the final measurement of quality, popular support, is significantly challenged.

Popular Support

The maintenance of popular support for any government is vitally important to establishing its credibility and, arguably, its quality. Importantly, the notion of maintaining popular support is not entirely universal, particularly in regard to matters of public health. Communist countries, such as Cuba, have enacted policy regarding the AIDS pandemic, regardless of the level of popular support for the policy. Within democratic countries though, the ability to gauge the level of popular support through elections is a staple of the quality of government. The impact of AIDS on a democracy is an area that is highly under-researched.[238] Yet the logical presumption, as illustrated by UNAIDS, is that the pandemic carries with it a significant burden for democratic governance.

> AIDS can have a negative effect on political participation and other aspects of democratic government…possible effects include declining involvement in voluntary organizations and local politics (due to death, illness or demoralization), absenteeism and death of elected representatives, and a shift from debating long-term issues of democracy and human rights to focusing on more narrow and immediate issues of service provision.[239]

The ability for a constituency to be able to express its support for particular policies relating to AIDS is understandably impeded by the pandemic. Illustrating yet once again the ability of the AIDS pandemic to erode elements of a state's national power.

When assessing the impact of the AIDS pandemic on the quality of a government the result is relatively straightforward: 'AIDS will erode the capacity of governments

[237] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.303.
[238] *See* Barnett, T. and Whiteside, A. (2002), *op. cit.*
[239] UNAIDS (2006a), *op. cit.* p.94.

to govern.'[240] The pandemic does this by inadvertently manipulating the government's ability to maintain logical balances between resources, both human and otherwise, and policy. At the same time the pandemic impedes the ability of a government's constituency to express their support, or lack thereof, towards particular policies embraced by the government. In doing so, the pandemic further undermines not only the established power of a nation, but the ability of that nation to pursue further power.

4.4 Conclusion

The AIDS pandemic provides the opportunity to assess a long-wave pandemic that is still ongoing in the 21st century. The assessment reveals the AIDS pandemic actor to be able to exploit the lack of development within specific regions to its advantage. While developed regions have managed to reduce the impact of this pandemic, the high level of prevalence and mortality within economically developing regions reveals the likely social standing of this pandemic's victims.

The AIDS pandemic brings a significant scope of impact on both the economic and socio-political aspects of national power. The proliferation of the pandemic was assisted through its ability to mask its symptoms for a period of time preventing early detection without intrusive testing taking place. This latent period provided the avenue the pandemic required to spread globally. The growth of the pandemic within low-and middle-income countries has outpaced that in more developed countries, with those least-developed nations suffering from a significantly higher prevalence rate. Congruently, this economic correlation has been replicated on the domestic front within developed countries where the disease is more prevalent in lower segments of society than it is in higher.

[240] Barnett, T. and Whiteside, A. (2002), *op. cit.* p.315.

The AIDS pandemic has also provided a significant test for the gauging of the severity of pandemics. The use of mortality over prevalence offers a more accurate picture of the severity of the AIDS pandemic. While a high prevalence of HIV is indicative of a state's inability to protect its population from exposure to the disease, the mortality rate provides an indication of the state's inability to keep its population alive.

This chapter has sought to ascertain the impact of the pandemic on the various elements of national power, and demonstrate the veracity of considering AIDS as a pandemic actor when it assaults national power. This assault is further magnified because of the stigma attached to the HIV/AIDS virus. In essence, the chapter has detailed the likely behaviour of a state that is facing a long-wave pandemic that erupts among the socially segregated members of society. The findings suggest that to mitigate potential long-wave pandemics in the future, there is an inherent need to treat all pandemics, regardless of victims, as a threat to the national power of the state.

The AIDS pandemic has further verified the viability of using Morgenthau's element of national power as a tool of pandemic assessment. While the severity of the impact of AIDS has grown considerably over time, the need to test Morgenthau's elements on a short-term localised and recent pandemic now presents itself. In order to do this, the following chapter provides an overview of the SARS pandemic of 2003, paying particular attention to the realist response of the actors involved as they sought to protect their respective powers.

Chapter Five: The SARS Pandemic

5.0 Introduction

The SARS pandemic of 2002/03 offers a contemporary case that reaffirms the centrality of Morgenthau's realism in 21st century international relations, and assures that the responses by government to the non-state actor threat have not altogether changed over time. This case study adopts a more narrative approach than previous chapters, by contextualising the responses and measures that a number of actors, both state and non-state, deployed in order to mitigate the pandemic.

SARS erupted on the medical and political scene a mere two years after the UN Security Council had designated the AIDS pandemic a threat to international security. The rapid succession from AIDS to SARS would test the resolve of the international community in regard to confronting this newly designated form of non-traditional security threat. The outbreak of SARS 'was an attack by an unseen invader to which nations had to respond as they would to any other attack – by mobilizing their resources to repel the invader.'[1] Indeed, the way in which states responded to SARS mimicked the way in which states have responded to traditional threats, and threatening actors - with a form of warfare. Abraham reinforces this comparison to traditional warfare, contending that 'SARS hammered home the message that an infectious disease…could be as disruptive and costly as a conventional war'.[2] Abraham has, albeit unintentionally, alluded to the realist nature of states. His suggestion becomes explicit with his contention that the SARS

[1] Abraham, T. (2007), *op. cit.* p.2.
[2] *Ibid.*

pandemic 'awakened governments to the fact that microbial disease is as great a threat to national security as an invasion by a foreign army'.[3]

States have an ability to prepare for conventional warfare by ensuring their elements of national power are strengthened in order to deal with external, or internal, aggressions. If the aggressor happens to be an unknown, and an essentially invisible entity, such as SARS, the necessity for the state to secure its various elements is doubly tested. The action taken by states to secure their interests in response to SARS confirms the realist mentality embedded within modern international politics. Likewise, and given the nature of the political environment in which this contemporary pandemic existed, international organisations acting politically also adopt a realist posture.

The SARS case illustrates the behaviour of actors when they are forced to respond to the sudden appearance and dominance of another actor. While states had the opportunity to seek assistance through the interdependent international community, the realist attribute of self-interest saw some of them, particularly China, adopt a more self-centred approach - considering the initial epidemic to be a purely domestic affair. This chapter will illustrate the centrality of the realist response, being the reinforcement and protection of national power, to emergency situations such as pandemics.

The SARS outbreak has been a strategic choice for this thesis due to its infection in multiple political and governmental systems during its short life span. The chapter will begin by first addressing the core attributes, which are the medical and socio-political effects of the SARS pandemic. Second, the chapter will present the response of China to the domestic epidemic in the earliest days of the outbreak to highlight

[3] Abraham, T. (2007), *op. cit.* p.2.

how Morgenthau's realism explains the response to the non-state threat of pandemic. The assessment of the communist state's response to the pandemic, once the virus had breached its mainland border, has been useful. The examination of the Chinese experience with SARS aims to establish the case of how, regardless of the state system, all states responded in a realist form. In order to show how the realist response is multinational, the chapter will then turn to the Canadian SARS outbreak. Given the contemporary nature of this pandemic, the chapter will then turn its attention to the international links that were forged in the global response to the SARS pandemic. Specifically, the response of the WHO, whose unprecedented actions throughout the pandemic, promulgated the need for the organisation to possess far more realist tendencies than previously assumed, or required, by its member states.

5.1 The SARS Aggressor

The evolution of the SARS virus from its emergence as a zoonosis to pandemic took place over a four-month period.[4] The rapid dissemination of the virus was, in part, enabled by modern technology. Whilst advances in transportation technology played a role in the preceding cases, the speed and increased frequency of modern travel enabled the proliferation of the SARS virus to take place in a shorter period of time. Therefore, the SARS pandemic provides an example of the potential impact that an unknown pathogen can have on modern international relations. For a greater understanding of the SARS virus, the medical taxonomy of the virus is presented to establish SARS as the causative agent for the wider societal implications of the pandemic.

[4] Patient zero for the SARS pandemic was retrospectively determined to be a resident of Guangdong province, China on the 16th November 2002. In line with WHO guidelines on defining a pandemic, the death of a 78-year-old woman in Toronto, who eventually became the index case for the SARS pandemic, on 5th March 2003, also provided the evidence necessary to classify the SARS outbreak as a Pandemic. *See* Whaley, F., and Mansoor, O.S. (2006) 'SARS Chronology', WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, pp.3-10.

The ability of SARS to threaten the national power of states was largely derived from the symptoms of its victims being similar to seasonal influenza. The epidemiological characteristics of SARS are such that the virus has a short incubation period[5] with the symptoms (of SARS infection) generically described as 'flu-like'.[6] The similarity increases the likelihood of exposure for state health care providers and individual carers, who initially neglected the adoption of extraordinary precautions in treating the victims. The symptoms would eventually escalate to incorporate 'lower respiratory tract infection and gastrointestinal complications', which would lead to about 25% of patients developing respiratory failure, to which 10% would succumb, 'despite intensive therapy'.[7] The period of communicability, while not well defined, seems to be that 'transmission only occurs when cases are symptomatic.'[8] Given that infected persons are likely to seek medical assistance only once they are symptomatic, the exposure of a high proportion of health care workers to the pandemic, and hospitals becoming 'sites of transmission amplification', creates a viral hothouse.[9] Although the epidemiological footprint for SARS is now well established, at the time of the initial outbreak very little, if anything, was known about the pathogen. The dearth of information and a lack of international cooperation played a direct role in the global spread of the disease. A global summary of the SARS pandemic is provided below in Table 5.1: Global Summary and PSI of the SARS Pandemic, 2003.

[5] According to Merianos and Plant (2006) the 'incubation period is generally reported as two to 10 days'. (p.188)
[6] Sung, J.J-Y. (2006) 'Clinical Features', WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.182.
[7] Sung, J.J-Y (2006), *op. cit.* p.182.
[8] Merianos, A., and Plant, A. (2006) 'Epidemiology', in WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.188.
[9] *Ibid.* p.188.

Table 5.1 Global Summary and PSI of the SARS Pandemic, 2003

WHO Region	Country	Cases	Deaths	PSI[10] (%)	No. of Infected Health Care Workers (%)
African	South Africa	1	1	14	0 (0)
European	France	7	1	14	2 (29)
	Germany	9	0	0	1 (11)
	Italy	4	0	0	0 (1)
	Republic of Ireland	1	0	14	0 (0)
	Romania	1	0	0	0 (0)
	Russian Federation	1	0	0	0 (0)
	Spain	1	0	100	0 (0)
	Sweden	5	0	0	0 (0)
	Switzerland	1	0	0	0 (0)
	United Kingdom	4	0	22	0 (0)
Eastern Mediterranean	Kuwait	1	0	0	0 (0)
The Americas	Canada	251	43	17	109 (43)
	United States	27	0	0	0 (0)
South East Asia	India	3	0	0	0 (0)
	Indonesia	2	0	0	0 (0)
	Thailand	9	2	0	1 (11)
Western Pacific	Australia	6	0	0	0 (0)
	China	5327	349	7	1002 (19)
	China, Hong Kong *Special Administrative Region*	1755	299	17	386 (22)
	China, Macao *Special Administrative Region*	1	0	0	0 (0)
	China, Taiwan	346	37	11	68 (20)
	Malaysia	5	2	0	0 (0)
	Mongolia	9	0	40	0 (0)
	New Zealand	1	0	0	0 (0)
	Philippines	14	2	0	7 (50)
	Republic of Korea	3	0	0	0 (0)
	Singapore	238	33	0	97 (41)
	Viet Nam	63	5	8	36 (57)
	Total	**8096**	**774**	**9.6**	**1706 (21)**

Source: Table adapted from Global Alert and Response, World Health Organization (2003), *Summary of Probably SARS Cases with Onset of Illness from 1 November 2002 to 31 July 2003*, [online], available: http://www.who.int/csr/sars/country/table2004_04_21/en/index.html[accessed 22 March 2011].

As Table 5.1 indicates above, the SARS pandemic managed to infect persons within each WHO region. However, the prevalence of the pandemic, as well as its

[10] The PSI is calculated as the mortality rate of the SARS pandemic thought the following formula: If n= number of SARS cases and m= number of deaths; PSI=m/n*100.

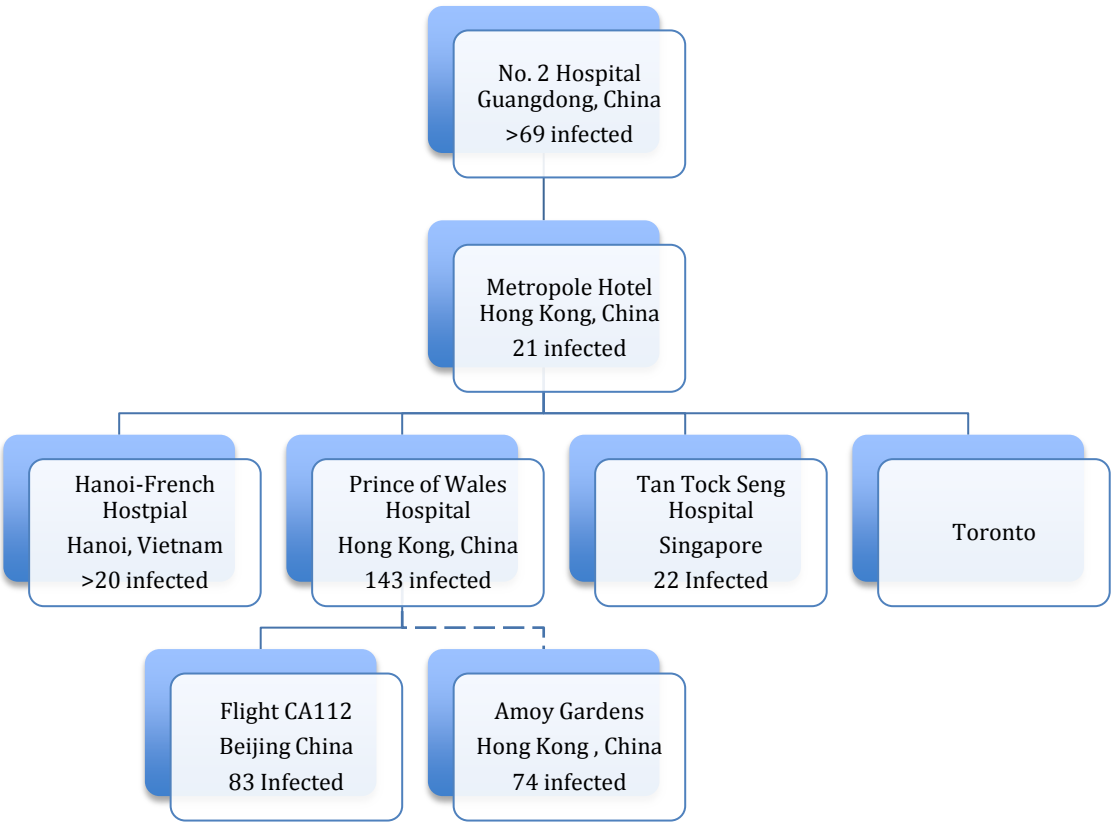
mortality, represented by the PSI, was substantially varied from 100% in the African region, to 0% in the Eastern Mediterranean region. The regional assessment of the SARS pandemic reveals a greater concentration of infection within the Western Pacific region.[11]

Outside of the Western Pacific region, where Chinese cases constituted over 95% of the regions total, the number of cases within the Americas was mainly restricted to a single state: Canada, which accounted for 90% of the total. Furthermore, all deaths within the Americas occurred within Canada.[12] The higher figures within Canada, and China, were the result of a pandemic related 'super-spreader event' as described by WHO.

A super-spreader event is, as the term suggests, one person being responsible for multiple transmissions. The term super-spreader 'emphasizes the role of the host (person infected) above that of the agent (nature of the virus) and the environment in accounting for the phenomenon'.[13] Balasegaram contends that 'most of the super-spreading can probably be traced to a chain of transmission that starts with first the super-spreading event in Guangzhou'.[14] Figure one provides an overview of the super-spreading events during the SARS pandemic.

[11] *See* Global Alert and Response, World Health Organization (2003) *Summary of Probable SARS Cases With Onset of Illness From 1 November 2002 to 31 July 2003* [online], available: http://who.int/csr/sars/country/table2004_04_21/wn/index.html [accessed 22 March 2011].
[12] Exposure to the virus in the African and Eastern Mediterranean regions were restricted to one case each in South Africa and Kuwait respectively.
[13] Balasegaram, M. (2006) 'The First Super-Spreading Event', WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.136.
[14] *Ibid.* p.138.

Figure 2: SARS Super-spreading Events[15]



With the benefit of historical analysis, Fidler contests the 'super-spreader event' as the only causative agent in the spread of the pandemic pathogen:

> The main reasons for scepticism involved the lack of scientific evidence for the phenomenon and the existence of alternative, more plausible explanations for high infection rates being associated with individual cases. The most plausible alternative was that the 'super-spreader' phenomenon had less to do with a particular individual shedding virus at especially high rates and more to do with the non-application or misapplication of infection control techniques at critical times.[16]

Traditionally, the application of infection control techniques provides states with the ability to disrupt the spread of an infection, and protect the power of the state. However, the lack of knowledge in regard to the epidemiological nature of SARS led to state authorities failing to execute programs designed to mitigate the spread of the contagion. What is sure in the case of SARS is that the super-spreader event, and

[15] Adapted from Balasegaram, M. (2006), *op. cit.* p.139. Solid lines indicate direct transmission; broken line indicates assumed direct transmission. Whaley (2006) confirms the Metropole Hotel outbreak being directly linked to the Toronto outbreak of SARS. (p.146)
[16] Fidler, D.P. (2004b) *SARS, Governance and the Globalization of Disease*, Hampshire: Palgrave Macmillan, p.89.

the misapplication of controls, both contributed to the cross-regional proliferation of SARS due to the availability of air travel in the 21st century.[17] In this occurrence, the SARS pandemic is fundamentally different to the preceding cases of the Plague and HIV/AIDS pandemics. While the plague and HIV/AIDS utilised their human hosts and the technology of their era to assure spread, the evolution of technology, including ease of access to air travel, has diminished pathogen transportation times across borders to more rapidly threaten additional states. Essentially, the SARS pathogen was able to spread further and faster than any previous pathogen. Furthermore, airplanes have the ability to act as incubators of a virus. The high density of the on-board population presents the perfect opportunity for infectious particle dissemination resulting in multiple cross infections. The behaviour of the virus in the air provides a microcosm for the behaviour of the pandemic on the ground, and serves as an avenue of explanation as to the regional variation of infection for the SARS pandemic. The role of international air travel as a vector for the SARS pandemic was clear – the rapid transport of people also meant the rapid transport of the pandemic.

Table 5.1 (above) also provides the case fatality ratio as an indicator of the severity (PSI), or weight of the pandemic within each WHO region. The PSI illustrates the severity of the pandemic within each WHO region and provides some initial insight into the weight of the SARS pandemic. Globally, the PSI for SARS is significantly higher than the PSI for the AIDS pandemic.[18] The global PSI for AIDS was 5.4%, whereas the SARS PSI was 9.5%. The difference in severity provides greater weight to the probability that SARS was responsible for the change in state behaviour, as states took more aggressive action designed to mitigate the immediate impact of

[17] One example of in-flight transmission took place on China Airlines Flight 112 (CA112), according to Whaley (2006b): 'Flight CA112 on 15 March was a Boeing 737-300 aircraft, which can typically carry up to 126 passengers. On this flight there were 112 passengers and eight crew members. At least 22 passengers and two crew members developed SARS raising the spectre of international spread through air travel'. (p.149-150)

[18] *See* section 4.2.3 *The AIDS Pandemic: Weight.*

SARS. The scope of behavioural change of states during the pandemic, when assessed with regard to the epidemiological characteristics of the SARS pathogen - particularly its communicability - becomes understandable. Furthermore, the regional PSI's for SARS contain some statistical anomalies that deserve exploration.

The anomalies result from the WHO practice of publishing data by region. By definition, a region is made up of multiple states - yet not all states will always be affected by the same pandemic.[19] The experience of an outbreak in one state within a region can determine the PSI for that entire region. For example, the PSI for the African region is a result of one fatal case of SARS within South Africa. In a similar vein, the Western Pacific region accounted for eight of the twenty-five states affected by SARS with the PSI varying between zero,[20] meaning no fatalities, and 40%, meaning those diagnosed with SARS has a 60% likelihood of survival.[21] Similarly, within the region of the Americas only two, Canada and the United States, of the thirty-five states that constitute the region, experienced the SARS pandemic. No deaths were recorded within the United States for the SARS pandemic, making the PSI for the Americas purely representative of deaths occurring within Canada. Such a varied prevalence and mortality highlight the issues with WHO's adopted methodology of defining a pandemic on a regional basis and not isolating the high prevalence among health care workers.

The high number of cases among health care workers is worthy of inclusion in assessing the weight of the SARS pandemic given the integral nature of their work. Health care workers serve two functions – they are the first line of response in matters of pandemic emergency, and they also must maintain the level of general health care demanded by the general population on a daily basis. The SARS assault

[19] *See* Appendix One: WHO Member States by Region.
[20] Including Australia, Mongolia, New Zealand, and Republic of Korea.
[21] Malaysia registered five cases of which two died.

on health care workers illustrated the susceptibility of a state's health infrastructure to a pandemic. The total number of health care workers affected by the SARS pandemic was 1,706 individuals, or roughly 21% of all those infected.[22] When assessing the impact on a country level, Vietnam ranked the highest with 57% of those infected by SARS being health care workers, followed by Canada (43%), and Singapore (41%).[23] The inability of the state to protect its front-line assets from a pandemic assault exposes a fundamental risk to power and response of affected states.

The scale of the economic impact was heightened due to the perceived threat of the pandemic. In no small part the economic impact exceeded expectations. Analysts, such as Fidler, note that the element of fear weighed heavily in economic responses to the short-lived pandemic.[24] In essence, the cost of the SARS pandemic was compounded by a psychologically fearful perception of the pandemic's threat.

Considering the short timeframe from eruption to mitigation, the intensity of the SARS pandemic's effect on the international community is surprising. Abraham illustrates how the element of fear was integral, along with the major ramifications of the SARS pandemic, and exceeded the domestic impact of the virus:

> In a little over three months, SARS touched every continent, and paralysed some of the world's most dynamic cities and regions. The global economy lost about US$30 billion in production, most of it in Asia. Governments clamped quarantines and other restrictions on travellers, reversing a decades-long global trend of loosening travel restrictions. Airports emptied, airlines cancelled flights and it appeared as if the virus had blocked the arteries of a networked, interconnected, globalized twenty-first century world.[25]

The scope of the SARS pandemic was out of proportion to the number of people infected by the disease. As such, the pandemic's impact in the modern era is being

[22] Global Alert and Response, World Health Organization (2003), *op. cit.*
[23] *Ibid.*
[24] Fidler, D.P. (2004b), *op. cit.* p.6.
[25] Abraham, T. (2007), *op. cit.* p.3.

amplified through globalisation and highlights the additional burden placed on the economies of afflicted in any attempt to recover from the pandemic.

The SARS aggressor challenges the state, as the fiscal costs associated with a pandemic accumulate rapidly with little reassurance as to when the financial burden will lessen. There were two main cost areas associated with SARS, initially, the health-related costs to the state for treating those infected by the pandemic and subsequently the post pandemic economic recovery costs. While treatment costs are difficult to determine, Saywell, Fowler, Crispin, Bosurk and Cohen, contend that the sudden and additional cost of treating SARS patients would essentially double the amount already spent on treating patients for seasonal flu. For example, 'the annual cost of flu to the Thai economy…is about $450 million in direct medical costs and an additional $1.6 billion in lost productivity due to time off from work'.[26] When combined with the additional burden of SARS, the Thai Ministry of Finance was forced to trim its GDP forecast a full percentage point, an additional loss of as much as $1.3 billion.[27] This immediate financial burden is just the beginning. Flowing on is the post-pandemic recovery phase, including a responsibility of the state to ensure its economic recovery.

As will be shown, overall the SARS aggressor was extremely effective at exacting a substantial toll on the stability of the globalised international system. The dominance of the SARS aggressor was significantly assisted by the unknown nature of the pathogen. However, the role of the modern state in the proliferation of the virus should not be underestimated. The most disruption, however, was in the domestic environs of specific states. This thesis now turns to assess the impact of SARS on

[26] Saywell, T., Fowler, G.A., Crispin, S.W., Borsuk, R., Cohen, M. (2003) 'The Cost of SARS: $11 Billion and Rising', *Far Eastern Economic Review*, 166(16), p.13.
[27] *Ibid.*

China's national power, and how the Chinese state responded to this impact and sought strategies to mitigate the pandemic threat.

5.2 The Chinese Front[28]

The People's Republic of China constituted the epicentre of the outbreak of the SARS pandemic, with Guangdong province as ground zero for the contagion. The initial responses of the Chinese government were fundamental in the elevation of what was a localised epidemic to a global pandemic. By retelling the SARS outbreak, with an emphasis on realist nature of both the SARS pandemic actor and the response of the Chinese state, the section reaffirms the prominence of Morgenthau's works on modern international relations, and moves beyond the scope of previous investigations.[29]

5.2.1 The Epidemic

The People's Republic of China was the epicentre for the SARS pandemic with the first retrospectively recorded case of SARS taking place in a '45-year-old man in Foshan City, Guangdong' in November of 2002.[30] The origin of the SARS pathogen remains debatable. Originally the virus's introduction was thought to have stemmed from the consumption of palm civet cats, considered a delicacy in Southern China.[31] However, Ohio State University contends that 'Bats harbor a strain of SARS that is

[28] Within this assessment, the Chinese Front against the SARS pandemic incorporates the People's Republic of China, the Special Administrative Regions of Hong Kong and Macao, and Taiwan.
[29] *See* Greenfeld, K.T. (2007) *China Syndrome: The True Story of the 21st Century's First Great Epidemic*, New York: Harper Perennial. Duffin, J. and Sweetman, A., eds. (2006) *SARS in Context: Memory, History, Policy*, Montreal: McGill-Queens University Press. Koh, T., Plant, A., and Lee, E.H., eds. (2003) *The New Global Threat: Severe Acute Respiratory Syndrome and Its Impacts*, Singapore: World Scientific Publishing; Abraham, T. (2007), *op. cit.* Fidler, D.P. (2003) 'SARS: Political Pathology of the First Post-Westphalian Pathogen', *Journal of Law, Medicine & Ethics*, 31, pp.485-505. Fidler, D.P. (2004b) *SARS, Governance and the Globalization of Disease*, Basingstoke Hampshire: Palgrave Macmillan. The SARS Commission (2006) *Spring of Fear*, Commission to Investigate the Introduction and Spread of SARS in Ontario: Toronto, Canada. World Health Organization: Western Pacific Region (2006) *SARS: How a Global Epidemic was Stopped*, Geneva: World Health Organization.
[30] Whaley, F., and Mansoor, O.S. (2006) 'SARS Chronology', WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.3.
[31] Recent research contends that the civet cats contracted SARS from humans. Ohio State University (2008) 'Evolutionary History of SARS Supports BATS as Virus Source', *ScienceDaily* [online], 20 February, available: http://www.sciencedaily.com/releases/2008/02/080219150146.htm [accessed 27 March 2011].

our best example of the virus before it infected humans – but we still see missing links in the history of the transfers of SARS from animals to humans'.[32] For SARS to take hold of the population the virus first needed to move from its animal host to a human host. The susceptibility of Guangdong as the point of cross-infection was based on the urban environmental and trading aspects of the province, as Breiman *et al* explain:

> The province is famous for its "wet markets," where a bewildering variety of live fauna are offered for sale (sometimes illegally) for the medicinal properties or culinary potential. The opportunity for contact, not only with farmed animals but also with a variety of otherwise rare or uncommon wild animals is enormous.[33]

While the presence of the SARS virus within these animals is difficult to confirm, it should be noted that more than one third of early cases, prior to 1 February, 2003, were in local food handlers (people who handle, kill, and sell food animals; or those who prepare and serve food).[34] This high figure illustrates the likely transition from zoonosis to the pandemic being via the wet markets of Guangdong, and a lack of adherence to state regulations regarding food supplies.

The introduction of the disease via the food supply acted as the vanguard for SARS to assault other elements of the state's national power. As increasing numbers of workers contracted the disease, and became increasingly sicker, the inability of the health infrastructure of Guangdong to adequately address an outbreak of an unknown infectious organism became apparent.

Initially, as more persons became infected local health professionals managed the response to the outbreak. As the seriousness of the outbreak was realised, doctors

[32] Ohio State University (2008), *op. cit.*
[33] Breiman, R.F., Evans, M.R., Preiser, W., Maguire, J., Schnur, A., Li, A., Bekedam, H., Mackenzie, J.S. (2003) 'Role of China in the Quest to Define and Control Sever Acute Respiratory Syndrome', *Emerging Infectious Diseases*, 9(9), p.1038.
[34] *Ibid.*

sought guidance from higher authorities. Christopher McNally contends that as the disease spread within Guangdong province,

> Many local doctors became alarmed and reported in early January 2003 strange clusters of pneumonia to Guangdong provincial authorities. Experts sent out concluded that they faced a type of pneumonia of previously unknown cause. Although some effective health measures were taken at the local level the virus spread more and moved on to the provincial capital of Guangzhou.[35]

McNally further contends that while 'provincial officials notified central disease control and health authorities…the content of this information and how central officials reacted is…unknown'.[36] What is known is the inability of the provincial authorities to prevent the transmission of the virus throughout the region. As the virus spread to other areas in China, the response of both provincial and central officials was lacklustre at best. Compounding the Chinese authorities' hesitancy in their response was a misdiagnosis of the initial outbreak.

The diagnosis of SARS victims as having atypical pneumonia caused by Chlamydia,[37] as opposed to an unknown pathogen, prevented any aggressive measures taking place to quarantine the initial patients. The lack of quarantine allowed those exposed to the contagion to move freely throughout China, unwittingly spreading the virus to others.

The Guangdong officials justified their reluctance to share information by contending that central to the Guangdong government was the protection of its economic functions. Abraham contends that, Guangdong officials admitted after the outbreak '…that "they were afraid of the impact of the illness on tourism and investment, because they did not know how to treat the illness"'.[38] Regardless, by seeking to contain the information regarding the outbreak, Chinese authorities

[35] McNally, C. A. (2003) 'Baptism by Storm: The SARS Crisis' Imprint on China's New Leadership' in Koh, T., Plant, A., and Lee, E.H., eds., (2003) *The New Global Threat: Severe Acute Respiratory Syndrome and Its Impacts*, World Scientific Publishing: Singapore, p.71.
[36] *Ibid.*
[37] Whaley, F., and Mansoor, O.S. (2006), *op. cit.* pp.5-7.
[38] Abraham, T. (2007), *op. cit.* p.24.

contributed towards the amplification of the pandemic threat as it permeated the state's geographic border to infect other states.

As Abraham notes in regard to China's response to the outbreak:

> Secrecy…allowed the disease to spread internationally. The health authorities in neighbouring Hong Kong had been alarmed by reports of the new disease and the panic it was causing. But efforts by the Hong Kong Department of Health to find out what was going on from their Guangdong counterparts was met with silence. Later, Hong Kong authorities were told that this was because infectious diseases were a state secret and could not be disclosed to outsiders.[39]

The determination of infectious diseases to be a 'state secret' that cannot be disclosed to international neighbours, highlights China's perception of the pandemic threat. Indeed, China's unwillingness to divulge information to its own Special Autonomous Region (SAR) of Hong Kong reveals the extent to which the threat was perceived by local officials and the state. The government stance of one message for the public, and another message for international responses exemplifies a realist response that places the national interest of the nation at the forefront of all considerations. However, the inability for China to exert authority over its geographic domain contributed to the further dissemination of the virus.

Geographic borders play a vital role in strengthening the power of the state. The ability for the state to control access across its borders is an undeniable asset to national security. As was seen in the instances of the bubonic and AIDS pandemics, securing of physical borders can interrupt the transmission of the pandemic. With SARS we can witness an evolution in the notion of border security to incorporate recent advances in technology; the evolution of the Internet and telecommunications, have contributed toward redefining the traditional notion of access to incorporate what can best be described as a virtual access. This virtual access to a state's geographic territory has allowed the strength of its physical borders to be tested in a way that resulted in a weakening of the power of the state

[39] Abraham, T. (2007), *op. cit.* p.28.

over its national borders. In the nascent months of the pandemic, China adopted a realist position aimed at the preservation of the state's power by exerting a strong amount of control over the dissemination of information.[40]

The international community commonly expresses the notion of pathogens not needing passports. The 21st century, via a combination of advances in technology and the advent of social networking, is increasingly seeing the development of information similarly spreading without passports. The state is finding it more and more difficult to control the flow of information, at all levels of communication. The strength of the state is of paramount importance within realism; therefore, any act or actor that lessens the strength of the state poses a direct threat to the national security of the state.

In China, the citizens felt the government had adopted an ostrich approach to information dissemination, and took matters into their own technological-savvy hands. Frustrated by the lack of official media releases, 'the citizens of Guangzhou began sending each other SMS messages sharing whatever information they had.'[41] The communication between citizens was suddenly internationalised when WHO was made aware of the SMS arrangement via their global influenza surveillance network. One pertinent message, sent on 10 February 2003, 'said that the disease was caused by a mutant influenza virus and that the anti-influenza drug Tamiflu was the best cure'.[42] This message was received with such seriousness that it marks the first time the WHO has taken action based on information not provided by a state authority. Once alerted, the international community made many attempts to gather relevant information about the disease from Chinese authorities.[43] Such

[40] McNally, C.A. (2003), *op. cit.* pp.71-74. Abraham, T. (2007), *op. cit.* pp.17-23.
[41] Abraham, T. (2007), *op. cit.* p.20.
[42] Abraham, T. (2007), *op. cit.* p.22.
[43] *Ibid.*

efforts are important as they establish the foundation of the international response where the seriousness of a pandemic as an international actor is viewed as overriding the traditional authority of a state to control information flow. In the case of SARS, the WHO, for the first time, requested information from a member state with the only evidence being anonymous information provided electronically to the organisation.

The inability of the Chinese state to utilise its natural geographic borders and thus the physical transmission of the pandemic, together with the use of communication technology which ignores geographic borders, resulted in a severe testing of Chinese power. Porous border control experienced within Guangdong exemplifies the relevance of Morgenthau's element. Geography has traditionally been 'the most stable factor on which the power of a nation depends'.[44] But as the Guangdong and China example shows, the advent of the digital age makes the protection of the state significantly more difficult.

5.2.2 The Pandemic

As the SARS virus continued its spread outward from Guangdong province, the effect of the pandemic on the national power of the state became more pronounced. The inability of Chinese authorities not only to control the spread but also the information on the virus compounded the affect of the virus on the daily existence of the population. For example, during the SARS pandemic, text messages throughout Guangzhou urged the use of a medicinal quality of vinegar that should be boiled for disinfecting and to 'stock up on *banlangen*, a Chinese herbal medicine used to treat colds and fevers'.[45] As the advice filtered throughout the community

[44] Morgenthau, H.J. (2006), op. cit. p.122.
[45] Abraham, T. (2007), *op. cit.* p.20.

the panic buying of products spread to incorporate the 'basic food items like rice, salt and oil'.[46]

Such actions reinforce the prominence of self-survival within human nature, with the natural human response to mere rumours of a strain on food supplies being to hoard food.[47] Hoarding behaviour further threatens the ability of the state to ensure its ability to equitably distribute food to their population. Potentially, the hoarding behaviour exhibited within Guangzhou could have been controlled had the information regarding the outbreak been shared with the population. The lack of action taken by Chinese authorities to prevent an increase in demand for food supplies in Guangzhou at the time of the initial outbreak was replicated in other aspects of the Chinese economy, such as the industrial complex.

The need to protect the industrial complex from outside influence appears to have been one of the motivations for Chinese authorities to maintain the silence in regard to the growing epidemic. McNally contends that 'local and provincial officials in China are evaluated on a variety of standards pertaining to the conditions in their localities, most of which emphasize economic development and social stability'.[48] Such an evaluation provides the motivation for officials to ensure, at the very least, the stability of their region's economy: pandemics pose a threat to this stability. For example, the Guangdong province maintains a status of being China's export powerhouse, and provincial leaders withheld information pertaining to SARS as 'reporting openly on the outbreak of SARS…would have affected foreign investment

[46] *Ibid.* p.22.
[47] Modern day food supply is highly susceptible given the reliance placed on distributors or supermarkets for the product. According to Rodrigue, Luke and Osterholm (2009), 'on average supermarkets have between 2 to 5 days of inventory of perishable goods (dairy, produce, meat) and about 1 to 2 weeks for other goods (pasta, canned goods, etc.)…In the case of a pandemic, available food supplies could be exhausted through hoarding behaviour.'
[48] McNally, C.A. (2003), *op. cit.* p72.

and international economic transactions'.[49] The desire to maintain foreign confidence in the region's industrial capacity led to the provincial authorities actively covering up the outbreak to avoid the negative impact on the industrial capacity of both the province and the state.

Furthermore, the government's decision to keep factories and businesses open, as well as schools and universities, was a choice that likely led to the further proliferation of this as then unknown virus. The significant risk of disease-spread directly relates to the nature of the local workforce with the factories and workshops of Guangdong being 'manned largely by 10 million migrant workers from poorer provinces'.[50] Abraham notes, 'there was a real danger that the poorly-ventilated worker dormitories would provide an ideal environment for the explosive spread of the virus, leading to thousands of new cases.'[51] While such an occurrence failed to eventuate, the assessment highlights how modern industrial practices can exacerbate an outbreak. In addition the use of migrant workers increases the probability of further spread of the virus as these workers return to their villages and countries of origin. The potential consequences may have been catastrophic to the industrial capacity of the region. The decision of the Chinese Government to limit information dissemination exemplifies the state working in its own best interest and preservation mode where it prioritises the industrial capacity over the health of the citizens in the name of state security and power.

The SARS outbreak in Guangdong also allows us to witness how other industrial sectors immediately responded to protect their own interest. In short they moved the production of essential products offshore. The USA-based National Intelligence Council contends that,

[49] McNally, C.A. (2003), *op. cit.* p72.
[50] Abraham, T. (2005), *op. cit.* p.26.
[51] Abraham, T. (2005), *op. cit.* p.27.

> Anecdotal evidence suggests that some export-oriented industries, particularly clothing manufacturers, temporarily shifted some orders to Bangladesh, Turkey, India and Pakistan. Foreign electronics manufacturers, including a large Japanese electronics firm, shifted some production to plants in the Philippines and Malaysia with highly specialized sectors and relatively low costs.[52]

Such moves reveal an additional level of risk involved in combating pandemics for investors in a localised industrial complex. This risk prompted some multinational organisations to 'rethink the costs and benefits of concentrating investment in one country or region', namely China and Guangdong.[53] The ramifications of SARS for the industrial complex were minimal, although Abraham contends that 'luck' more so than the virus's inability to take hold, 'appears to have played a part in this'.[54] While SARS failed to embed itself within the industrial complex of Guangdong, the virus continued to spread among the population of China.

Of the WHO regions, the Western Pacific stands out as the most heavily burdened by the SARS pandemic. The geographic density, meaning the closeness of established communities within the region, combined with the level of secrecy accorded to the virus by Chinese health authorities, made a significant contribution to the spread of the pandemic.

Within China the majority of infections occurred within major cities. A 2009 study by Fang *et al.*, traced the diffusion of the SARS virus among various outbreak centres in mainland China. The study revealed a relationship between the presence of SARS in 345 counties of three provinces near Beijing, and the population density within those counties.[55] Essentially, the higher the rate of persons per kilometre squared in

[52] National Intelligence Council (2003) *SARS Down but Still A Threat,* Washington: National Intelligence Council, p.13.
[53] *Ibid.*
[54] Abraham, T. (2005), *op. cit.* p.27.
[55] Fang, L., Vlas, S.J., Feng, D., Liang, S., Xu, Y., Zhou, J., Richardus, J.H., and Cao, W. (2009) 'Geographical Spread of SARS in Mainland China', *Tropical Medicine and International Health*, 14(Suppl.1), p.14.

each county, the higher the likelihood of SARS cases.[56] The high-density population of China simplified the path of infection for the virus. Also, the Chinese authorities initially did not embrace policies such as quarantine, so as to ensure the safety of their population. The lack of mitigation policies ensured an attack on the state's population, thereby undermining the central component to Morgenthau's elements of national power framework.

China's governmental responses during the SARS pandemic also provide an insight into the potential role of the military during a pandemic. In Beijing the provision of health care by the military serves to reinforce the role of city authorities on a regular basis. As the Economist noted at the time,

> Of Beijing's 175 hospitals, 16 are under the control of the armed forces and…are under no obligation to report SARS cases to the city authorities (even though, with their often superior facilities, they are a magnet for military and civilian patients alike).[57]

The secrecy surrounding the number of SARS patients within military facilities was significantly detrimental to the mitigation of the pandemic, and further contributed towards the empowerment of the pandemic. However, it should be noted that it was a prominent surgeon and former director of a military hospital, Dr Jiang Yanyong, who broke this silence to inform international authorities of the prevalence of the virus within military hospitals.[58] Yangyong disputed the official count of nineteen SARS patients citing at least sixty 'undisclosed cases in military hospitals'.[59] Yanyong's leak to the international media was fundamental in exposing the rise of the pandemic across China, and prompted a significant change in the Chinese government's stance on the pandemic.

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[56] *Ibid.*
[57] The Economist (2003) 'The SARS Epidemic: China Wakes Up', *The Economist* [online], 24 April, available: http://www.economist.com/node/1730968 [accessed 29 March 2011].
[58] Balasegaram, M., and Schnur, A. (2006) 'China: From Denial to Mass Mobilization', WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.79. Abraham, T. (2007), *op. cit.* p.46.
[59] Balasegaram, M., and Schnur, A. (2006), *op. cit.* p.79

Recognition of the full extent of the SARS pandemic by the Chinese government provided the impetus for action. The immediate mobilisation of the military in order to confront the SARS pandemic saw the approval by the chairman of the Central Military Commission, Jiang Zemin, for 1,200 military doctors and nurses to be 'transferred from all major units to Beijing's designated SARS hospitals'.[60] Holding true with Morgenthau's element of military participation when a state confronts a threatening actor, the Chinese military were now leading the national defence against the pandemic protagonist. The promotion of the pandemic to a national threat and the associated increased role of the military were outlined in one report from the PLA Daily as SARS being:

> …a top priority for the Communist Party of China and the whole country to fight SARS and that it is an unshirkable duty of the army to provide medical aid to local hospitals. The whole army is required to select capable medical staff to provide sufficient guarantees and complete successfully the task of fighting SARS.[61]

The role of the military in confronting the SARS pandemic would not have been possible without the quantity, as well as the quality, of armed forces being prepared and equipped to do so. China's ability to deploy armed forces made a positive contribution in the battle against SARS. Military personnel were deployed to areas susceptible to infection. For example, McNally contends that in China 'the government deployed 5 million reservists and militia to 50,000 villages in Hebei to educate rural Chinese on SARS'.[62] The mobilisation of the People's Liberation Army (PLA) by the Chinese authorities reinforces Morgenthau's element on the importance of a prepared military. The ability for China's diversified military to both treat patients, and serve as a transmitter of information to inform potential victims of the disease, recognises the role of the modern military in protecting the national power of the state.

[60] PLA Daily (2003) 'Military Medical Staff Transferred to Beijing to Fight SARS', *PLA Daily* [online], 29 April, available: http://www.china.org/cn/English/2003/Apr/63517.htm [access 28 March 2011].
[61] *Ibid.*
[62] McNally, C.A. (2003), *op. cit.* p.77.

Initially, as the Chinese government censored media outlets, the spread of SARS continued unabated. The population of Guangzhou became reliant on 'SMS messages sharing whatever information they had'.[63] Abraham contends that 'had there been greater openness about the disease, those who were at risk might have taken precautions to avoid infection'.[64] Instead, the national character of the Chinese population embraced a notion of self-survival where the individual was responsible for taking action against the unknown pathogen. Even though Morgenthau's element of national morale had taken a psychological beating in the battle against the pandemic, the element of national character rose to ensure the longevity of the general masses. The China Daily News, in a rare rebuke to the government authorities, surmised the role of the Chinese government in constructing an aura of chaos:

> The Chinese Government has not, in the past, been accustomed to public disclosures of its activities. Unfortunately a long-held but outdated conviction among many top public servants dictated that information could also cause possible social panic and disorder. Hence, information was controlled, which was just what happened at the onset of the SARS outbreak.[65]

The initial secrecy with which SARS was treated was an unfortunate consequence of the Chinese party system.[66] However, once the Chinese government chose to acknowledge the SARS pandemic, the mobilisation of the state served to re-energise both the morale and the national character of the population. In short, the recognition of the extent of SARS in China by the government provides evidence of the existence of Morgenthau's elements of national morale and character as qualitative elements of national power.

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[63] Abraham, T. (2007), *op. cit.* p.20.
[64] Abraham, T. (2007), *op. cit.* p.49.
[65] China Daily News (2003) 'SARS, a Valuable Lesson for Chinese Gov't to Learn', *China Daily News* [online], 9 June, available: http://english.peopledaily.com.cn/200306/08/eng20030608_117858.shtml [accessed 29 March 2011].
[66] As McNally reinforces, the Chinese party system evaluates local and provincial officials 'on a variety of standards pertaining to the conditions in their localities, most of which emphasize economic development and social stability' reports of instability would not have been looked positively upon by the party leaders. (p.72)

The authority of the Chinese government was on full display in its attempt to take control of the SARS pandemic. As McNally argues 'as soon as the government decided to come clean, the nation's propaganda apparatus and media organizations sprung into full action.'[67] The use of the media by Chinese authorities saw the comprehensive issuing of medical advice relating to SARS, it 'exhorted the Chinese to rally around the leadership and overcome the national hardship'.[68] Abraham illustrates the abilities of the newly united China in mitigating and treating the SARS pandemic aggressor:

> The speed and scale on which China can operate once mobilized was illustrated by its amazing feat in constructing a fully operational 1000-bed SARS hospital at a cost of US$170 million within a week on the outskirts of Beijing. Construction of the hospital began on April 26, near the site of a former sanatorium, and it was opened to the first patients on May 2. Seven thousand workers completed the buildings in six days and seven nights using prefabricated materials.[69]

Central to China's newfound approach to dealing with the SARS outbreak was the need to look towards greater transparency in the provision of information. However, as is the nature of the pandemic pathogen, the aggressor needed to keep on the move to find new hosts for establishment of colonies of infection. In this way, Hong Kong and Taiwan found themselves in the direct path of the invading protagonist, and from where the virus would continue to proliferate around the world.

The onset of SARS in Hong Kong did not come as a surprise to local health authorities. Abraham highlights that once the disease was present on the mainland 'it was only a matter of time before it reached Hong Kong…over 250,000 people cross the border between Hong Kong and the mainland every day, making it one of

[67] McNally, C.A. (2003), *op. cit.* p.77.
[68] *Ibid.*
[69] Abraham, T. (2007), *op. cit.* p.48.

the busiest land crossings in the world'.[70] Political arrangements since the return of Hong Kong to Chinese sovereignty precluded cooperation between Hong Kong provincial authorities with their neighbouring provinces. Simply Hong Kong authorities must deal directly with Beijing, not their provincial counterparts. Abraham contends that at the time the governmental arrangement was thought to offer Hong Kong some autonomy, but 'as SARS demonstrated, this lack of communication and coordination between adjoining regions is dysfunctional' and costly at a time of threat.[71] Beyond the dysfunction, the lack of cooperation from Beijing would have repercussions in both Hong Kong and the rest of the world. As the pandemic crossed into Hong Kong, confirmation of the suspicions held by Hong Kong health authorities would come from a victim, Professor Liu Jianlun, who, having contracted the virus himself, confirmed the presence of SARS in Guangdong.

Professor Liu 'triggered the epidemic in Hong Kong and globally… All of Vietnam's 63 SARS cases, as well as 238 cases in Singapore and 136 cases in Canada flowed directly or indirectly from this one person.'[72] The Professor has been responsible for treating patients of the initial outbreak within Guangzhou City, and while staying at the Metropole Hotel (refer Figure 1: SARS Super-Spreading Events above) the doctor unknowingly exposed the other residents of the ninth floor to the SARS virus.[73] The Metropole hotel outbreak has been well-documented and thoroughly investigated.[74] Overwhelmingly, the consensus regarding responsibility for the outbreak rests in the lack of communication and refusal of Hong Kong authorities to 'examine

[70] Abraham, T. (2007), *op. cit.* p. 56.
[71] *Ibid.*
[72] Abraham, T. (2007), *op. cit.* p.59.
[73] The SARS Commission (2006), *op. cit.* Whaley F. (2006a) 'Solving the Metropole Hotel Mystery', WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, pp.141-148. Abraham, T. (2007), *op. cit.* pp.54-79.
[74] *Ibid.* Although the mode of transmission between Liu and fellow guests remains a mystery, Abraham (2007) contends that 'between the late evening of February 22 and the morning of February 23, something happened in the passageway between Liu's room, number 911, and the lifts located about 20 metres away that allowed the SARS virus to make the fatal jump'.

anecdotal evidence coming from Southern China' regarding the epidemiology of the disease'.[75]

Once SARS had been introduced into Hong Kong the ramifications for the island's economy, particularly tourism, were significant. The impact of the SARS pandemic on Hong Kong's economy illustrates the susceptible nature of industries, such as tourism, to attack by such non-state actors. In 2002 the Hong Kong SAR 'reaped $8.2 billion from tourism alone…about 5% of its GDP'. Any impact on such a contribution poses a threat to the economic capacity of the state, which contributes to the national power of that state.[76] The WHO first issued a travel advisory regarding atypical pneumonia in Hong Kong on 12 March, 2003.[77] The advisory did not recommend the restriction of travel, although it did offer guidance and provided the first indication of the pending outbreak.[78] The advisory initially had little impact on the tourism sector; however, the same cannot be said for the revised advice on 2 April 2003.

The second advisory called for persons to reconsider all but essential travel to Hong Kong and Guangdong province due to the spread of SARS over such a short period of time.[79] The effect of the new advisory was immediately detrimental to the Hong Kong tourism sector. As Pine and McKercher's 2004 study reveals:

> Passenger traffic at Hong Kong international airport saw a year-on-year decline of nearly 80 per cent - passenger numbers were just 565,000 compared with more than 2.8 million in May 2002…[a] 59 per cent decline in the number of movement of passenger aircraft was recorded in June.[80]

[75] Abraham, T. (2007), *op. cit.* p.58.
[76] Saywell, T., *et. al.* (2003), *op. cit.* p.14.
[77] World Health Organization (2003a) World Health Organization Issues Emergency Travel Advisory [press release], 15 March, available: http://www.who.int/csr/sars/archive/2003_03_15/en/ [accessed 28 March 2011].
[78] *Ibid.*
[79] World Health Organization (2003b) SARS Outbreak: WHO Investigation Team Moves to China, New Travel Advice Announced [press release], 2 April, available: http://www.who.int/csr/sars/archive/2003_04_02a/en/ [accessed 28 March 2011].
[80] Pine, R., and McKercher, B. (2004) 'The Impact of SARS on Hong Kong's Tourism Industry', *International Journal of Contemporary Hospitality Management*, 16(2), p.140. [Brackets Added]

Other aspects of the Hong Kong tourism sector that were affected include hotels[81] and retail.[82] Overall, the impact of the SARS pandemic on the tourism sector was significant. The dramatic toll of the pandemic on the economic coffers of Hong Kong, as well as other affected areas, highlights the short-term ramifications of a pandemic. The outbreak in Hong Kong also revealed the pandemic's penchant for infecting health care workers, and exemplifies how a state is impacted by the non-state actor threat.

The nature of the SARS virus demanded medical assistance with 20%-25% of patients requiring intensive care treatment.[83] The implications for health care workers and other patients were severe. The high rate of infection amongst health care workers in all geographic areas of the pandemic would eventually lead to an increase in the negative impact of the pandemic on the national power of the state.

Within Hong Kong, the SARS pandemic carried two specific threats towards health care workers. The first and immediate effect was to physically impair the health care workers through infection. The second was surprising and speaks to the national character of the citizen of Hong Kong. There was a psychological toll exacted by the pandemic on the health workers. Carmichael notes in relation to conditions at the Prince of Wales Hospital in Hong Kong:

> When the illness of nurses and physicians, and support staff reached a critical mass, compromising the care of patients, senior physicians and administrators became alarmed, imposing aggressive infection-control measures within the hospital. Members of the senior medical staff, however, refused hospital admission and insisted on remaining at home with their families, meanwhile helping themselves to hospital medical supplies.[84]

[81] Pine and McKercher contend that 'overall hotel occupancy figures fell to 20 per cent, with some hotels reporting rates of below 8 per cent in the first two weeks of April.' (p.141).
[82] Saywell *et. al.* (2003) note that 'Hong Kong retailers are reporting that sales have fallen by half since mid-March on the back of a 75%-80% drop in tourist arrivals from mainland China. (p.14)
[83] Merianos, A., and Plant, A. (2006), *op. cit.* p.191.
[84] Carmichael, A.G. (2006) 'SARS and Plagues Past', in Duffin, J. and Sweetman, A., eds. (2006) *SARS in Context: Memory, History, Policy,* Montreal: McGill University Press, p.45.

The loss of human capital through fear of infection is a significant impediment towards the mitigation of any pandemic.[85] Indeed, when seeking to establish the impact of the pandemic on the industrial capacity of the state, the ability of the state to provide healthcare for its population to ensure the strength of its capacity comes to the fore.

As mentioned above, the infection rate among health care workers during the SARS pandemic was abnormally high. This anomaly poses distinct difficulties for the normal operations of a state, as those whose role it is to treat casualties of the pandemic became victims and agents of the virus. The clusters of SARS that transpired around hospitals in Taiwan reinforce the assertion that health care workers played a role in the spread of the virus.

The outbreaks in Taiwanese hospitals generated two of the more significant clusters in northern and southern Taiwan.[86] Chen, Chien and Yang contend that 'the proportion of hospital-acquired infection among SARS cases was around 10% prior to April 22, and 90% afterward.'[87] This high rate of infection challenges the established norm of hospitals being 'perceived as safe havens, and as places that combat and contain disease'.[88] The pandemic places an extraordinary strain on health care systems. In response to an outbreak in the Taipei Municipal Hopin Hospital, in which a 'number of health care workers, hospitalized patients and their relatives and visitors were infected' authorities opted to close the hospital and

[85] The impact of the pandemic on health personnel was experienced in other epicentres of the outbreak, particularly Toronto, which is further elaborated on in section *5.3 The Canadian Front*
[86] Chen, C., Chien, Y., and Yang, H. (2003) 'Epidemiology and Control of Severe Acute Respiratory Syndrome (SARS) Outbreak in Taiwan', in Koh, T., Plant, A., and Lee, E.H. (2003) *The New Global Threat: Severe Acute Respiratory Syndrome and Its Impacts*, World Scientific Publishing: Singapore, p.307.
[87] *Ibid.* p.304.
[88] Affonso, D.D., Andrews, G.J., Jeffs, L. (2004) 'The Urban Geography of SARS: Paradoxes and Dilemmas in Toronto's Health Care', *Journal of Advanced Nursing*, 45(6), p.573.

transfer the patients.[89] The outcome of the sudden closure of the hospital and relocation of patients resulted in the transmission of the pathogen throughout the region.[90] Thereby further straining existing health care systems that are the responsibility of the state.

The advantage of 21st century communications allowed authorities to actively discourage groups of people gathering during the outbreaks, thereby decreasing the likelihood of exposure. Here is where Taiwan utilised communication technologies to mitigate the spread of the disease, in direct contrast to the experience in China. Taiwan, with the benefit of lessons learned in China, had a positive approach to the mitigation of the virus and, as a result, strengthened state power in the face of the pandemic adversary.

The propensity for SARS to infect large numbers of people contributed towards the coining of the term "super-spreader events". The efforts by Taiwan to mitigate super-spreader events incorporated isolation and quarantine measures. Maloney, Olowokure and Roth found that individuals who violated quarantine could be fined up to US$1,800 overall 131,132 persons were quarantined.[91] While quarantine measures are difficult to enforce, particularly on such a large scale, the move by Taiwanese authorities illustrates concerns relating to mass exposure, which is highly likely in high-density populations. Such strategies also speak to the government understanding of the national morale and character. There was an understanding that citizens would, at least initially, accept such draconian initiatives in the name of national defence. Unfortunately, the success of the measures was short-lived. Eventually Taiwan would experience the third largest

[89] Chen, C., *et al.* (2003), *op. cit.* p. 303.
[90] *Ibid.*
[91] Maloney, S., Olowokure, B., and Roth, C. (2006) 'Taiwan, China: From Control to Outbreak', in WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.114.

outbreak of SARS, at an economic cost 'estimated at US$820 million to US$1,300 million'.[92]

The WHO contends that the SARS pandemic 'revealed weaknesses in hospital infection control, disease surveillance, and public health infrastructure in Taiwan'.[93] The Taiwan experience with SARS highlights the susceptibility of state infrastructure to a pandemic threat. Simply put, without the installation of infection control mechanisms within hospitals, the potential for health infrastructure to become a conduit for the further spread of the pandemic actor is high. A weakness in the hospital system also further weakens the control and power of the state, as the government combats the non-traditional invading force; one that cannot be seen nor engaged by traditional military responses. The impact on state power occurs in a different pattern than imagined by Morgenthau, with a realignment of the elements of power to focus on the integrity of the state's health infrastructure, and the provision of health security to ensure the national power of the state is indemnified from non-traditional security threats.

China's response to the SARS pandemic varied from province to province. However, as has been illustrated above, the response was consistent with the state responsibility of protecting the national interest. From the initial cover-up to the deployment of the People's Liberation Army (PLA), the response sought to mitigate the impact of the pandemic on the national power of the state, specifically the state's economic power, which arguably came at the expense of the population. Despite the non-traditional nature of the attacker, evidence of Morgenthau's elements remains constant. This means that Morgenthau's framework remains valid. In addition, the

[92] Malone, S., Olowokure, B., and Roth, C. (2006), *op. cit.* pp.112-113.
[93] *Ibid.*

utility of Morgenthau's elements of national power can also be applied when assessing the actions taken by authorities in the wake of the SARS pandemic.

5.2.3 The Aftermath

As China began to comprehend the need for greater international transparency, its foreign policies relating to SARS fundamentally shifted. The quality of diplomacy conveys the progression of diplomatic activity throughout the SARS pandemic, and provides a clear understanding of the power of this pandemic actor. The relationship between China and WHO, one largely fostered by the latter, offers the first indication of the importance of diplomacy in combating the impact of pandemics.

The Chinese response to the SARS pandemic was initially to cover it up from the international community. Initially, Chinese authorities withheld information 'for fear of causing social instability'.[94] Yet the cover-up was instrumental in the construction of fear pertaining to the risk of SARS, thereby challenging the morale of the citizens. Shen contends that the 'closed-door SARS policy was at once implemented when Zhang Wenkang, the Minister of Health, guaranteed the WHO in March 2003 that SARS was "well under control" and the number of infections was declining' when in reality SARS continued to spread, largely unabated by Chinese efforts.[95]

Regardless of Chinese promises to increase transparency, the provision of information by the Ministry of Health to the organisation was not forthcoming. Expressing their displeasure with the situation, the WHO 'in a highly unusual move

[94] McNally, C.A. (2003), *op. cit.* p.72.
[95] Shen, S. (2004) 'The "SARS Diplomacy" of Beijing and Taipei: Competition between the Chinese and Non-Chinese Orbits', *Asian Perspective*, 28(1), pp.46-47.

for the Organization…publically accused the Chinese government of underreporting SARS cases, and misleading the public' about the spread of SARS.[96] WHO's actions towards China were unprecedented on behalf of the international organisation. While WHO had been able to facilitate cooperation from other states affected by SARS, China's unwillingness to cooperate threatened the ability of the organisation to maintain surveillance of the spread of the pandemic.[97] China's stance would change on the removal of Zhang and Beijing Mayor, Meng Xuenong,for the implementation of the policy of non-cooperation.[98]

Shen contends that the adjustment of China's policy should be seen as a message to the international community that,

> Beijing would no longer protest against its label as the origin of SARS. Instead China would try demonstrating to the world its responsibility in containing "its" epidemic, in the hope of strengthening the inevitability of Greater China's integration.[99]

China's first acts to establish its credentials as a responsible partner in the war against SARS was to 'increase the information it provided, improve its cooperation with the WHO and other countries, and heighten the seriousness of its SARS-control efforts'.[100] China's realisation of the need for a higher quality of diplomacy in order to successfully address the SARS pandemic reinforces the importance of this particular element of power.[101] The interrelated nature of modern globalisation prevents a state, particularly one as economically significant as China, from operating in isolation. The ability to protect other elements of national power, through the effective use of diplomacy, provides states with the ability to maintain their respective national power.

[96] Fidler, D.P. (2003), *op. cit.* p.491.
[97] *Ibid.*
[98] Shen, S. (2004), *op. cit.* p.47.
[99] *Ibid.*
[100] Fidler, D.P. (2003), *op. cit.* p.491.
[101] The strength exhibited by WHO in relation to the situation in China, as well as other member states is further addresses in section *5.4 The SARS Pandemic: The Global Response.*

The post-SARS assessment of Hong Kong also has much to offer here in understanding the fine balance authorities sought to maintain between resources and policy during the SARS outbreak, which also inflicted significant economic losses on Hong Kong. The Hong Kong government's response to the SARS pandemic failed to consider the national morale of the population. An April 2003 survey 'showed that 58 percent of the respondents were dissatisfied with the performance of Chief Executive Tung Chee-hwa in handling SARS, while only 8.7 percent were satisfied'.[102] The government's response to the SARS pandemic was characterised as 'sluggish', with the government failing 'to take drastic measures at the beginning to contain the virus, partly because it did not want to alarm the public'.[103] In essence, and as the hindsight surveys reveal, the response from the Hong Kong authorities did not incorporate the morale of the population into its actions. For example, the government 'agreed to suspend schools only when many classrooms were half empty because parents had refused to let their children go to school'.[104]

The effect of SARS on health care workers provides reinforcement of Morgenthau's contention that 'the national morale of any people will…break at a certain point'.[105] As has been mentioned above, the response of senior medical officers in Hong Kong provided very little assurance to subordinates as to the ability of the state to confront the pandemic. The refusal of senior medical staff to attend to their duties at the hospital constituted a strong example of the morale reaching breaking point.

Furthermore, central to Morgenthau's element of the quality of government is the ability to maintain a balance between the resources possessed and the policy

[102] Ma, N. (2004) 'SARS and the Limits of the Hong Kong Administrative State', *Asian Perspective*, 28(1), p.102.
[103] *Ibid.* pp.102-103.
[104] Ma, N. (2004), *op. cit.* p.103.
[105] Morgenthau, H.J. (2006), *op cit.* p.148.

enacted. The actions of the Hong Kong SAR during the pandemic clearly illustrate a governing authority that was unable to maintain this vital balance. Ma notes:

> The perceived slow response of the SAR government was largely due to the lack of a crisis mentality in preparing for SARS-like epidemics or similar territory-wide crises. The reluctance to acknowledge the SARS crisis has to do with the basic bureaucratic ethos and technocratic rationality of SAR decision makers and political constraints on the SAR state. The lack of crisis mentality also led to institutional unpreparedness, and a perceived slow response to the crisis.[106]

By failing to perceive the risk associated with the SARS pandemic, the Hong Kong SAR were unable to manage the balance between its resources and policy in order to mitigate the pandemic. Assessing the ability of a government to apply its resources during times of a pandemic exposes the susceptibility of the state to the wider effects of the pandemic, that is the effects beyond the human toll.

The ability to utilise Morgenthau's elements not only to assess the impact of the pandemic, but to analyse the response of the provincial authorities, reinforces the centrality of Morgenthau's realism in state behaviour. However, the strength of Morgenthau's theory can only be gauged by assessing the impact and response of other states under the same threat. The SARS outbreak in Toronto, Canada, provides a parallel pandemic-threat experience, and one that reinforces the prominence of Morgenthau's assertions in respect to states and their national power.

5.3 The Canadian Front

The outbreak of the SARS pandemic within Canada was directly linked to the Metropole hotel outbreak in Hong Kong (see Figure 1 above).[107] Before the pathogen burned itself out, the pandemic would infect 251 persons and cause the

[106] Ma, N. (2004), *op. cit.* p.104.

[107] Carmichael (2006) contends that 'two contact victims at the Metropole hotel spread SARS to Canada. One was an older Canadian woman visiting Hong Kong who returned to Toronto… the other a man from Vancouver.' (p.44) SARS failed to transpire in Vancouver due to the additional health infrastructure within the province. Specifically, the British Columbia Centre for Disease Control, who had warned health care workers to 'be on the lookout for a new strain of avian flu.' The warning was enough to prompt one doctor to isolate the man when he presented to the emergency department of Vancouver General Hospital. (*See* Vancouver Sun (2010) 'A Vancouver Doctor and Emergency Department Stopped SARS Cold', *Canada.com* [online], May 15, available: http://www.canada.com/vancouversun/news/westcoastnews/story.html?k=51348&id=1be05c5f-2bd1-402f-8a33-a3940bada2d4 [accessed 14 June 2011].

death of 43 people, mostly in Toronto, Ontario.[108] While the Canadian pandemic did not impact every element of Morgenthau's framework during the outbreak, the effect of the pandemic on the province, and the response of provincial authorities, supports the prominence of Morgenthau's realism in exploring the behaviour of the state.

The foundation of industrial capacity is aimed at obtaining, or preserving, the maximum amount of power from the state's natural resources. The modern state has developed an ability to exploit its natural resources in divergent ways. The experience in Ontario during the SARS pandemic provides the impetus for the inclusion of two other facets of industrial capacity beyond the possession of an industrial complex designed to cultivate the natural resources of the state namely: tourism and health infrastructure.

First, the tourism industry allows states to exploit their natural resources in a way that benefits the state's economy on an ongoing basis. Tourism has taken on an increasingly vital role in reinforcing the traditional cornerstone of a state's economy - its ability to exploit its resources. The impact of the pandemic on Toronto's tourism was closely in line with the impact witnessed in Hong Kong. During the SARS pandemic in Toronto, the pandemic bore a surprising impact on the tourism sector.

Within Toronto this impact was considerable; the Canadian Broadcasting Commissions contend that some of the more significant impacts of the pandemic on the Toronto tourism economy included:

- Cancellations at Greater Toronto Area hotels led to an estimated $39 million in lost revenues during the month of April 2003 alone;
- Audiences at theatres dwindled;

[108] Global Alert and Response, World Health Organization, (2003), *op. cit.* Arguably, the outbreak in Toronto was a further ramification of the Chinese government's secrecy regarding the pandemic.

- More than 800 bus tours were cancelled…with an estimated economic loss of $5 million to $6 million;
- Fewer people were dining at restaurants;
- Conventions were cancelled – the cancellation of one health-care convention probably cost the region about $6 million.[109]

The most affected industries of the SARS outbreak were tourism, transportation and retail trade, which prompted The Conference Board of Canada to contend that the outbreak would 'shave nearly $1 billion off…Toronto's real gross domestic product'.[110] The disproportionate impact on tourism encourages a new consideration of the industrial complex to incorporate the impact on the collective psyche of (non-traditional) threats. What the SARS case shows is that the industrial complex is now comprised of different sectors of productivity than when it was conceptualised initially by Morgenthau. Tourism, in modern economies, can be more influential on the strength of the state than was manufacturing at the time of the development of the realist state power framework. Such a finding does not diminish the importance of the Morgenthau framework; rather it encourages the elements to be re-framed into a modern context. As the case studies have shown, where a state garners its strengths and power have shifted over the extended period of time covered from pre-Westphalian to contemporary and 21st century state constructs. A further modern aspect of state power should also be examined in terms of the SARS outbreak: the rise of inter-governmental international organisations and their ability to amplify the impact of the pandemic actor on the tourism sector.

In the process of monitoring the spread of the SARS pandemic, the WHO 'without any express permission or authority to do so under international law or pursuant to policy action by the World Health Assembly' issued travel advisories informing

[109] CBC News Online (2003a) *The Economic Impact of SARS* [online], available: http://www.cbc.ca/news/background/sars/economicimpact.html [accessed 23 March 2011].
[110] Harris, C. (2003) 'Insight: The Cost of SARS', *Canadian Underwriter* [online], June, available: http://www.canadianunderwriter.ca/news/insight-the-cost-of-sars/1000128298/ [accessed 26 July 2011].

persons of the risks evident in travelling to infected countries.[111] On 23rd April, 2003, five weeks after the first reported case, WHO expanded its previous travel advisories pertaining to Hong Kong and Guangdong, to incorporate the city of Toronto.[112] Canada's inclusion in the advisory prompted an immediate and furious response from all levels of Canadian officials.[113] The officials demanded that the WHO immediately re-evaluate the SARS situation within Toronto, as opposed to the three-week period required for a re-examination to take place.[114] In response to the pressure asserted by its member state, WHO lifted the travel advisory for Toronto merely one-week after issuing it.[115] The organisation justified their lifting of the travel advisory on the grounds that 'in Toronto, the magnitude of probable SARS cases has decreased' it had been twenty days 'since the last cases of community transmission', and that 'no new confirmed exportation of cases has occurred'.[116]

The reversal, however, was too late to save Toronto from the economic impact of the pandemic. Leo Paquin notes, 'the *known burden* of the WHO travel advisory was a severe economic shortage for Toronto's tourist industry. Toronto lost an estimated CAD$1.13 billion due to the advisory'.[117] The protest of government officials to WHO, and the reversal of the advisory, embeds the consideration of the tourism sector within the national power framework. This sequence of events further substantiates the fundamental relevance of Morgenthau's element of industrial

[111] Fidler, D.P. (2004), *op. cit.* p.137.
[112] Media Centre, World Health Organization (2003a) *WHO Extends its SARS-Related Travel Advice to Beijing and Shanxi province in China and to Toronto, Canada* [online], available: http://www.who.int/mediacentre/news/notes/2003/np7/en/ [accessed 23 March 2011].
[113] CTV.ca News Staff (2003) *WHO Travel Advisory Met with Anger, Disbelief* [online], available: http://www.ctv.ca/CTVNews/CTVNewsAt11/20030423/who_sars_travel_toronto_030423/ [accessed 22 March 2011].
[114] The length of time prior to re-examination was determined to be twice the maximum incubation period of the disease. (Media Centre, World Health Organization, 2003a)
[115] Media Centre, World Health Organization (2003b) *World Health Organization lifts Toronto Travel Advisory, Maintains Advice for Areas of China* [online], available: http://www.who.int/mediacentre/news/notes/2003/np9/en/ [accessed 22 March 2011].
[116] *Ibid.*
[117] Paquin1, L.J. (2007) 'Was WHO SARS-Related Travel Advisory for Toronto Ethical?', *The Canadian Journal of Public Health*, 98(3), p.210.

capacity in the modern realist state where all actions must be designed to ensure a state's economic prosperity.

The SARS pandemic also emphasises a shift in the state's industrial capacity to consider health infrastructure, given the whole-of-state responsibility for healthcare in the modern state. Morgenthau's promotion of the contribution and 'know-how of the working man,' in ensuring the 'industrial capacity of a nation,'[118] and the need to protect the ability of the 'working man' makes the provision of health services a priority. Nearly half of the 251 infected with SARS in Toronto were health care workers. The impact on the health infrastructure within the city was substantial, considering the size of the outbreak in Toronto, with the financial impact on the health care system alone being $945 million.[119]

Aside from the financial cost, the health infrastructure of Toronto, along with its ability to provide health care service to Torontonians, also suffered. For example, when the Ontario provincial health officials ordered the closure of the Scarborough Hospital's Grace Division, whose emergency department would typically treat 40,000 people per annum, creating a gap in an already overburdened health care infrastructure. Carolyn Abraham contends that during the closure,

> Ambulances were diverted. Pregnant women were directed elsewhere. All appointments and procedures, including all cancer-related surgeries were cancelled-a catastrophic setback for a public health system already notorious for its dangerous delays and waiting lists.[120]

Decisions made to mitigate the impact of the pandemic can, and in an integrated healthcare system, do have secondary and sometimes unintended consequences for the ability to protect the working population with the industrial capacity of the state. Furthermore, the impact on the Toronto health system brought with it

[118] Morgenthau, H.J. (2006), *op. cit.* p.132.
[119] CBC News Online (2003a), *op. cit.*
[120] Abraham, C., (2006) 'Canada: How a Hospital Coped', in WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.128.

significant mental health issues for the health care workers, which, in turn, impeded the recovery of the state.[121] The reluctance of staff to return to work where they had either become infected, or had seen colleagues become infected and in some instances die, led the SARS Commission to conclude that the pandemic 'had Ontario's health system on the edge of a complete breakdown'.[122] The response of staff, particular senior medical staff at Scarborough Hospital, highlights the integral, and sometimes not so subtle, links between Morgenthau's elements and provides an indication to the relationship with the national morale of the Canadian population.

In stark contrast to the response of senior medical staff in Hong Kong, senior medical staff in Canada adopted an aggressive and pro-active approach to combating the medical, industrial complex and morale issues. Carolyn Abraham tells of the lengths Dr Paul Caulford, Scarborough Hospital's chief of family medicine and community services, undertook to ensure adequate staffing of SARS assessment centres:

> In 48 hours Dr Caulford managed to recruit enough staff members to run a provincially ordered SARS assessment clinic that was hastily built in the General's parking lot on 2 June. The tented structure, outfitted with $500,000 in medical equipment, popped up overnight. The wind blew through it, there was no running water, but nurses and doctors stood guard inside until 31 July 2003, when, at long last, there were no more SARS cases to catch.[123]

Morgenthau's element of national morale seeks to assess a population heading towards its breaking point. The action of Dr Caulford, particularly his ability to recruit fellow health care workers, confirms a resiliency within the segment of the population tasked with confronting the pandemic. The active role of health care workers within Toronto is commensurate with the actions embraced by Chinese authorities - once Chinese officials had come to terms with the state of the outbreak and the need to mitigate the spread of the disease.

[121] Abraham, C., (2006), *op. cit.* p.128.
[122] The SARS Commission (2006) *Spring of Fear*, Commission to Investigate the Introduction and Spread of SARS in Ontario: Toronto, Canada, p.1145.
[123] Abraham, C. (2006), *op. cit.* p.131.

The resiliency of such morale was further evident in efforts embraced by Canadian authorities to restart the Toronto economy. Here is a strong example of a government seeking to ensure a balance among its resources in order to protect its national power. The Ontario and Toronto governments provided reinforcement of one of the central contentions of Morgenthau's element: the quality of government. Pauline Chan illustrates the extent to which the government was involved in the recovery of Toronto:

> Air travellers were greeted with small gift packages containing free items and coupons, some even being handed out by the Mayor himself…Video campaigns were beamed via satellite to the international community. The federal government promised 100 million dollars for the city's SARS recovery efforts, along with 118 million dollars pledged by the provincial government. Politicians including Prime Minister Jean Chrétien, made a point of dining at Chinese restaurants while posing for news cameras…[124]

All of these actions tell of an appreciation by the Canadian government of the importance of rebalancing the elements of its national power and how vital such public relations and morale building activities were to the recovery of the Toronto economy. Indeed, the actions taken by Canadian officials, both provincial and federal, were clearly in line with the realist notion of protecting the national interest and mitigating threats towards national power.

The Canadian front highlights the centrality of Morgenthau's classical realism to a modern democratic state in responding to threats to the national power. The response of various Canadian authorities at all levels of government establishes the notion of national power being defined by Morgenthau's elements, not only at the state level, but also the provincial (regional) and local (city) level as well. While Canada, along with China, constituted the primary fronts for the SARS pandemic,

[124] Chan, P. (2003) 'SARS in Canada: The Story of SARS in Canada is Essentially Toronto's Tale', in Koh, T., Plant, A., and Lee, E.H. (2003) *The New Global Threat: Severe Acute Respiratory Syndrome and Its Impacts*, World Scientific Publishing: Singapore, pp.323-324.

the response of other actors to the pandemic further reinforces the multi-faceted applicability of Morgenthau's classical framework.

5.4 The Global Response

Any assessment of the SARS pandemic would not be complete without a brief account of the effect of the SARS pandemic on actors outside of China and Canada. The purpose behind such a diverse assessment is to provide an indication of the versatility of Morgenthau's realism when dealing with a non-state actor.

Vietnam

While Vietnam's SARS experience was limited to 63 cases, its aggressive actions during the pandemic led to the state being the first country to interrupt the transmission cycle of the virus.[125] Vietnam's success was largely derived from the government making difficult decisions in a timely manner, as opposed to adopting a wait and see approach, which characterised the Chinese response. In essence, the Vietnamese authorities recognised the potential ramifications of the SARS pandemic and enacted policy designed to mitigate the impact. The decisions included:

- The establishment of a SARS Task Force within the Ministry of Health;
- A national intersectoral steering committee for SARS Control;
- The allocation of a special budget to the Ministry of Health;
- The designation of hospitals for suspected SARS cases;
- Establishing quarantine areas and isolation rooms at border crossings, airports and seaports;
- Notification of provincial governments and the creation of provincial steering committees; and

[125] Global Alert and Response: World Health Organization (2003), *op. cit.* Brudon, P. and Cheng, M. (2004) 'Vietnam: Touch Decision Pay Off' in WHO Regional Office for the Western Pacific, *SARS: How a Global Epidemic Was Stopped*, Geneva: World Health Organization, p.99.

- Public information campaigns to help prevent panic in the population.[126]

WHO representative in Vietnam, Mr. Pascale Brudon, argued that in order for Vietnam to successfully confront the SARS pandemic, 'immediate political commitment and leadership at the highest level were vital'.[127] The provision of this commitment and leadership by the Vietnamese government, combined with assistance by WHO, allowed the government to successfully maintain a balance between the resources it possessed and the policy the state was pursuing. Such action is in line with Morgenthau's element of the quality of government, and illustrates a realist government counterbalancing to an external threat in a way that seeks to maintain the national power of the state.

Singapore

The Singaporean government adopted a multi-faceted approach to mitigating the effect of SARS. According to Stella R. Quah, the 'main features of the state's crisis management approach…were: (a) transparency; (b) public education; (c) multi-pronged approach; (d) legislation.'[128] In Singapore, the SARS pandemic highlighted the ability of the government to foster the national morale of the population as an effective, combative weapon. Indeed, the success of Singapore's actions resulted in an April, 2003 poll showing that 'three out of four Singaporeans were confident the government could stop SARS.'[129] This support was in stark contrast to public support offered to leaders in China, Canada, Hong Kong and Taiwan, where governments were criticised 'for failing to grasp the seriousness of the situation, to act quickly to contain the spread, and to accept responsibility for missteps'.[130]

[126] Brudon, P. and Cheng, M. (2004), *op. cit.* p.99.
[127] *Ibid.*
[128] Quah, S.R. (2007) 'Public Image and Governance of Epidemics: Comparing HIV/AIDS and SARS', *Health Policy*, 80, p.264.
[129] National Intelligence Council (2003), *op. cit.* p.15.
[130] *Ibid.*

The central motivation behind Singapore's policy was to harness the national morale of Singaporeans in order to counter the pandemic. Quah notes:

> The SARS situation in Singapore was characterized throughout by transparency on the part of the health authorities in their reporting and distribution of a continuous flow of information to the public on new infections and deaths, locations, and contact-tracing efforts and approaches. It was believed that an informed public can collaborate better and participate more effectively in containing the spread of the disease than a public kept ignorant of the seriousness of the situation.[131]

The openness of the Singaporean government contributed towards the fostering a national morale conducive to appropriately dealing with the SARS pandemic. This method of open transparency was also extended to the international domain, 'Singapore's success in controlling the outbreak during May was evident when WHO removed Singapore, on 31st May, from the list of areas with recent local transmission of SARS. Singapore was initially scheduled to be removed from the list of SARS-affected areas on 11th May but, on that date, Singapore reported a new case of SARS to WHO, an indication of Singapore's commitment to open reporting and cooperation with WHO.[132] The ability of the Singaporean government to adopt a more transparent and cooperative approach to the SARS pandemic mitigated the overall impact of the pandemic.[133]

The United States of America

Morgenthau notes that the military and their preparedness is an important element of securing state power. This includes cooperation with non-military institutions as required. The most striking example of a state's military being capable of cooperating with civilian institutions on technical issues with the SARS pandemic was the role of the United States Army Medical Research Institute of Infectious

[131] Quah (2007), *op. cit.* p.264.
[132] *Ibid.*
[133] The pandemic in Singapore did infect 161 individuals, taking the lives of thirty-three of them. Such figures may indicate a failure in Singaporean authorities to protect their population from the pandemic. However, the response by Singaporean authorities once the pandemic was established highlights the potential success a state can have when it seeks to maintain a balance among its resources, specifically the maintenance of the national morale of the population.

Disease (USAMRIID). While USAMRIID's mission specifies its role in protecting the war fighter,[134] their inclusion into the fight against the SARS pandemic was validated on the grounds that US personnel may operate 'in an area where the SARS virus was in fact transmitting', which might ultimately result in 'a significant military problem' for America.[135] USAMRIID's efforts were vigorous, even though no US military personnel had been infected with the virus. These efforts were aimed at testing possible treatment(s) for SARS.[136] In essence, the mere potential infection of US military personnel demanded USAMRIID take pre-emptive action in order to preserve the state's power derived from the military. The involvement of USAMRIID serves to indicate the perceived seriousness that the threat of the SARS pandemic posed to the USA government. USAMRIID sought to protect the state of the USA against the threat of the SARS pandemic, as a traditional military would against a traditional enemy. USAMRIID thereby becomes a clear example of a military undertaking action against a threat to the power of the state. By the time of the pandemics end, the USA remained hopeful that a cure could be found.[137]

Organization of the Petroleum Exporting Countries (OPEC)

The impact of SARS transcends the borders of the countries actually infected to have a global impact regarding the access to natural resources, which as Morgenthau points out, effects state power accumulation. Here, access to natural resources throws up an interesting example. In short, the effect of SARS on the tourism industry resulted in a downturn in the global demand for oil.[138] The reduction in

[134] USAMRIID (2010) *About USAMRIID* [online], available: http://www.usamriid.army.mil/aboutpage.cfm [accessed 28 March 2011].
[135] Sample, D. (2003) 'Top Military Research Lab Part of Worldwide Search for SARS Cure', *DefenseLINK News* [online], available: http://www.globalsecurity.org/military/library/news/2003/05/mil-030529-afps02.htm [accessed 27 March 2011].
[136] *Ibid.*
[137] *Ibid.*
[138] Bradsher, K. (2004) 'The SARS Epidemic: Economy, Epidemic Spurs Plan to Revive Hong Kong', *New York Times* [online], available:

flights, and other tourist related activities, throughout Asia prompted OPEC to hold an emergency meeting where leaders concluded that 'SARS had worsened a global economic slowdown', and prompted member states to then decrease oil output.[139] The national interest of the OPEC states was thereby threatened, and the states acted in the realist fashion to secure their wealth generation and power. The move by the OPEC organisation serves to highlight the realist consequences of pandemics in the 21st century beyond the borders of the countries experiencing the pandemic.

The World Health Organization

The emergence of the SARS virus tested the diplomatic environment of the 21st century. With the increased presence of international organisations, particularly those with a mandate in the field of global health, the SARS pandemic would serve to assess the ability of states to preserve their national power while negotiating a significantly different political landscape. The increased attention paid to the actions of governments has made it difficult for governments to circumvent their responsibilities on matters of public health. The example set by China clearly indicates the advantages of utilising international health diplomacy to enhance the national power of the state. Furthermore, the SARS pandemic provided WHO with an opportunity to display its potential as an international actor. The ability of WHO to influence the actions of states provides the strongest indication of the progression of the international system towards what Fidler refers to as the 'Post-Westphalian system'.[140]

The role of WHO during the SARS pandemic expanded from one of a coordinator for member states, to a significant actor in the international community. WHO's

http://select.nytimes.com/gst/abstract.html?res=F20A1EFD345E0C778EDDAD0894DB404482 [accessed 27 March 2011].

[139] Guarino, D.R. (2003, April 25) 'Outbreak of Fear; SARS Scare Grips Region and World', *Boston Herald*, Retrieved 27 March 2011, from Factiva Database.

[140] Fidler, D.P (2004b), *op. cit.,* p.7.

strength as an actor was best exemplified through its issuing of travel warnings. As David P. Fidler notes,

> In issuing alerts and advisories, WHO exercised significant power in the absence of any agreed policy or legal framework and without deference to the sovereignty of affected states. These actions revealed WHO as an autonomous actor influencing events directly rather than just acting as a convenient device for coordinating the sovereign behaviour of its member states. Without any express policy or legal basis for its actions, WHO took steps with serious political and economic consequences for states affected by SARS…WHO actions signal the emergence of a radically transformed governance context for infectious disease control.[141]

The elevation of WHO's role during the SARS pandemic forced those states effected by its actions to take diplomatic action in order to mitigate the impact of the newly powerful organisation. The issuing of a travel advisory against Toronto is a powerful example of WHO's newfound place in the international community. The advisory was issued 'without consulting the Canadian government' provoking a stern diplomatic objection from Canadian authorities.[142] WHO's actions were, according to Fidler, a display of real power 'as a general matter, international organizations do not exercise independent power because their member states tightly constrain what the organization can and cannot do.'[143] The success of WHO's role in the SARS pandemic is reinforced by the World Health Assembly's formal approval of WHO issuing advisories for future pandemics.[144]

The Global Media

The global media has the ability to frame the perception of the risk associated with a pandemic, and manages to do so over two phases. Smith contends that the media's reporting of SARS mimicked that of other infectious disease outbreaks in that it first

[141] Fidler, D. P. (2004b), *op. cit.* p.142.
[142] Fidler, D. P. (2004b), *op. cit.* p.141. Fidler (2004) further contends that the eventual 'acquiescence of member states affected by the alerts and advisories to their issuance by WHO' served as a sea change in the transformation of governance for 'infectious disease control'. (p.142)
[143] *Ibid.* p.142.
[144] *Ibid.* p.143.

characterised 'the outbreak as a frightening threat,'[145] and would then eventually contend that the threat 'is happening in a geographically and/or culturally distant population'.[146] Such reporting makes a negative contribution to the national character of a population as it seeks to apportion blame for the outbreak taking place.

The effect of the SARS pandemic on the national character of effected populations was surprising 'while SARS posed some medical risk, it exerted a disproportionately large psychological impact on people in relation to its relatively low morbidity and mortality.'[147] As the first pandemic of the 21st century, the SARS virus clarified the hazards involved with the abundance of mass media. Smith contends the psychological impact on the population is derived from two factors regarding the information about SARS:

> First, the almost costless and rapid transmission of information through modern media and communication technologies, not only maintained attention on the development and spread of disease but also meant that conflicting and confusing information was disseminated in 'real time'. Second, the lack of sufficient medical information on SARS meant that, although there was a rapid flow of information often this was not robust scientific information. Rather, much of the information presented during the outbreak was based on opinion, guesswork and preliminary results.[148]

The role of the media in framing the national character of a population has become increasingly important in the modern world.

The isolation of the disease to a specific culture, or demographic of society can have serious consequences for the longevity of the pandemic. For example, the longevity of the AIDS pandemic is a result from the misinformation relating to the genesis and behaviour of HIV. This was replicated, to a somewhat lesser extent, during the SARS pandemic, for example attitudes displayed to the Scarborough Grace Hospital in

[145] Smith, R.D. 'Responding to Global Infectious Disease Outbreaks: Lessons from SARS on the Role of Risk Perception, Communication and Management', *Social Science and Medicine*, 63, p.3117.
[146] *Ibid.* p.3118.
[147] Smith, R.D. (2006) 'Responding to Global Infectious Disease Outbreaks: Lessons from SARS on the Role of Risk Perception, Communication and Management', *Social Science and Medicine*, 63, p.3117.
[148] Smith, R.D. (2006), *op. cit.* p.3117.

Toronto, which was erroneously viewed 'with suspicion, and outright accusation' of complacency in the spread of the virus.[149] Similarly, in other areas of Toronto 'on hearing in the media of a putative relationship between the infection and the Chinese community, many stopped going to Chinese restaurants'.[150] Fortunately, the misinformation campaign surrounding the cultural aspects of the SARS pandemic had minimal effect. This is more likely a result of the length of the pandemic, as opposed to the weakening of the media's influence over the national character.

In providing an account of the global response to the SARS pandemic, Morgenthau's framework provides an insight into the complexities of contemporary society. The former case studies were historical, and government responses were a reflection of the state system of the time, and the lack of a robust IGO sector. The timing of SARS brought with it a more complex inter-relationship of Morgenthau's elements of national power. The ability to utilise the framework to investigate the influencing factors of national character, for example, constitutes a strong example of the versatility of Morgenthau's classical realism.

5.5 Conclusion

By using Morgenthau's elements of national power to assess the effect of the SARS pandemic on various states, the intricacies of the 21st century international system are revealed. The evolution of technology has seen the element of geography take on two new and diverse interpretations. The notion of hard geography, incorporating the physical aspects of the geographic element, remains as important as it was in Morgenthau's original assessment. However, the introduction of soft geography has exposed the vulnerability of this fundamental element and made it difficult for states to protect their sovereign territory. The proliferation of communication technology

[149] Abraham, C. (2006), *op. cit.* p.131.
[150] Sweetman, A. (2006) 'Introduction to Economic Issues in Epidemiology and Public Policy', in Duffin, J. and Sweetman, A., eds., (2006) *SARS in Context: Memory, History, Policy,* Montreal: McGill University Press p.134.

has made the ability for states to exert authority over information more difficult. The ease with which modern technology is capable of disseminating information has complicated the state's ability to control the flow of information. In essence, the state's duty to secure its hard borders has expanded to incorporate the securing of its digital, or soft borders, in order to prevent assaults on its national power.

Morgenthau's element of industrial capacity provides the foundation for moving the assessment of national power towards the maintenance of a vibrant and diversified economy. The inclusion of the travel and tourism industry into the element of industrial capacity serves to highlight the increased interdependence on the population of other states for national power. The contribution made by the travel and tourism industry is both direct and indirect. Directly, the travel and tourism industry makes a significant contribution towards the state economy strengthening the national power of the state. Indirectly, the industry serves to enhance the image of the state thus adding to the diplomatic capacity of the state.

Morgenthau's elements also revealed the increased prominence of other actors within the international system. The role of WHO during the SARS pandemic saw the organisation's evolution from a simple international organisation seeking to assist member states on matters of public health, to an international actor that wielded considerable power throughout the crisis, and enshrined its political weight. Remarkably, the evolution of WHO went seemingly unchallenged, even though the ramifications of WHO actions were at a considerable cost to some state's economies. Morgenthau's framework proved its relevance in the 21st century here, by highlighting that the realist response of states to non-traditional security threats echoes the states' response to traditional threats. That is, states will seek to maintain their national power. Furthermore, the framework reveals that when states fail to

protect their elements of national power from the impact of a pandemic, the effect of the pandemic is magnified to be far greater than it otherwise would be.

Overall, the SARS pandemic revealed that Morgenthau's elements of national power make a valuable contribution towards the assessment of both power and national interest. While the elements have evolved since their first incarnation, the framework of assessment, which Morgenthau had hoped would 'impose intellectual discipline on the observer' and 'make a theoretical understanding of politics possible', still remains.[151] Furthermore, the diversity of Morgenthau's framework allows for the observer to comprehend the implications for both state and non-state actors involved in conflict.

[151] Morgenthau, H.J. (2006), *op. cit.* p.5.

Chapter Six: The Pandemic Threat

6.0 Introduction

Morgenthau's classical realism provides the scaffold for the assessment of a diversity of traditional threats toward any state's national power. Orthodox assessments of state behaviour have confirmed the insight Morgenthau provided in the theory of realism, and the ability of the theory to adequately understand the complex interplay of state attributes[1] and power in response to a threat. In most cases the assessment was reserved to assess the behaviour of one state toward the other. This thesis has used the realist framework provided by Morgenthau, to assess a non-traditional state threat. Pandemics are a non-traditional state threat to the very power of any state when these epidemiological events occur. This being the case, this thesis has accepted the responsibility to evaluate the strength of Morgenthau's work in regard to pandemics as an actor and threat to the state.

The thesis asserts that pandemics constitute a realist actor. The pandemic's sole interest is survival and domination, and it does so unencumbered by the typical constraints applied to states through the foundation of global norms. While established norms deter states from attacking other state's borders, pandemics do not attack borders in any traditional sense. Rather a pandemic will utilise its medical victims to facilitate its challenge to the state's power; the same state power that seeks to protect its citizens against the invading threat. Should a state fail in its strength against the pandemic actor, the ultimate outcome would remain the dominance of society by the confronting actor, and the collapse of the existing state. The role of

[1] The attributes of the state are the elements of national power that the state possesses. While states would usually seek to maximise their national power, under threat, the state's priority must be the preservation of national power. By understanding how one element is able to compensate for a decline in another element, the state is better positioned to protect its national power. For example, the possession of a military that is prepared to supplant the domestic infrastructure of the state, be it industrial or even medical, is able to compensate the state's national power if there is an assault on the state's industrial capacity.

the realist state is to either preserve or enhance the power it possesses in order to guarantee the survival of the state. Any actor that prevents the state from achieving that role is a threat to the national power of the state. In other words, Realism's theoretical grounding exists within the notion of power and the prominence of the state in international relations.

When tasked with countering a threat to the state, the governing authorities tend to respond in one of two ways. First, they may seek to deter, or prevent, a threat by acting unaided. The state that does so assesses its own power as being sufficient to counter the prevailing attack. Therefore, the state takes action in line with traditional realism; that is, action designed to reinforce the integrity of the state's national security. Alternatively, the state may marshal cross-border resources. The nature of pandemics, more often than not, requires increased collaboration among states in order to ensure a reduction in the spread of the contagion. Such collaborations have increased in popularity during the 20th and early 21st centuries, with the establishment of international health organisations such as the WHO. Indeed, modern pandemic events witnessed intergovernmental organisations, such as WHO, explicitly and somewhat forcefully, encouraging cooperation and collaboration in order to counter pandemics. However, state compliance with externally enforced policies to counter pandemic outbreaks has been low, as this thesis has shown. The likelihood of states adhering to externally enforced policy is also low; especially wherever compliance will result in additional and enhanced threats to national power and security. Realist responses to pandemics are centred on the preservation of national power. However, in order to preserve the national power from the effects of a pandemic, a stronger understanding of the pandemic actor is required.

Pandemics are a unique actor given their inability to discriminate. This unique aspect of the pandemic actor provides the foundation of a formidable opponent for the state. Overwhelmingly, a pandemic is more likely to erupt when individuals become exposed to an unknown pathogen. Despite the actions of modern scientists, a number of known microbes and pathogens still pose a significant threat to the human population.

The threat of a pandemic event, therefore, is an attack equal in threat value as any traditional form of assault. Only the method of assault varies. While a state may prepare itself to counter an attack by fellow states, preparations to counter infectious disease pose difficulties rarely encountered previously. For instance, the diversity of infectious diseases that evolve into pandemics prevents states from adopting a pre-determined medical response to the new pathogen. In the early stages of a pandemic, the state's role is typically reduced to the adoption of unambiguous protocols designed to reduce the spread of the disease. The primary role of the state is to protect its national power from the effects of the pandemic, which constitutes far more than merely placating a susceptible population. Meanwhile, the science and medical world pursue ways to restore the health and well-being of the population in support of the continuance of the state; much akin to the traditional role of the military in times of national threat.

The multifaceted effect of a pandemic on a state's national power transcends the quantitative toll a pandemic takes from the state's population. The focus by states on the preservation of the human population can impede the traditional role of the state, that is, protecting its national power. In preparing to counter a pandemic, the state must look to preserving the national power of the state in a fashion that reduces the impact of the pandemic on the various elements of national power, that has been described by Morgenthau. This preservation establishes a dilemma for state

authorities as they determine the actions required to counter the pandemic threat. Finally, all actions by the state are typically determined so as to strengthen its infrastructure to counter the recurring nature of the pandemic threat.

This thesis serves to validate the assertion that Morgenthau's classical realism is a relevant theory in the 21st century. The thesis has proposed that the utility of this theory has been overlooked in the modern era by restricting its application to state actors.

6.1 Actors in the Modern Era

Central to the theory of realism is the prominence of the state as the central actor in the international system. The basis of this centrality stems from the pre-eminent role the state plays in protecting its national power from other states, and asserting its own power in the international system. However, the modern era has seen a proliferation of non-state actors that impede the ability of the state to protect its national power. Essentially, the state is no longer solely threatened by other states as political actors. The evolution of non-state actors has led to an international society where an actor; such as, a multi-national corporation, a terrorist organisation, and, as this thesis has established, a pandemic, can increasingly threaten the national power of the state. Assessing the relationship between the two actors, being the traditional state actor, and the non-traditional pandemic actor, illuminates the scale of this threat.

Gauging the power of one state actor over another is relatively straightforward. Baldwin's dimensions of power being scope, domain, weight and cost, possess a flexibility that allow for the analysis of the relationship between the non-state actor, and the state. The flexibility of Baldwin's dimensions establishes the power of the non-state actor over the state in a way that clearly indicates not just the effect of the

non-state actor but also the cost of the non-state actor. In essence, the broadness of Baldwin's dimensions allow some liberty in analysing international actors, moving beyond a focus on the state actor, to incorporate non-state actors as well.

An investigation into the threat posed by various non-state actors on national power can only be justified if there is a high level of certainty regarding the non-state actor to be the causative agent. Such certainty is possible through the use of the framework of relational power created by Baldwin. Within this thesis, Baldwin's dimensions of relational power have provided the avenue to establish the specific pandemics of plague, AIDS and SARS, as actors in the international arena, a summary of which is provided in Table 6.1: Pandemic Actor Summary, below. The dimensions clearly establish the attributes inherent in an actor, demanding a level of analysis that not only charts the scope or effect of the actor but the domain, weight, and cost of the actor as well.

Baldwin's four dimensions provide a clear indication of the power of the pandemic actor. The value of the case studies in this thesis has been their three distinct periods of time, assessing three different pathogens, thereby reinforcing the applicability of the dimensions.

Table 6.1: Pandemic Actor Summary

	Pandemic		
Dimension	*Plague*	*AIDS*	*SARS*
Scope Establishes how the pandemic affected the state *i.e.* the power the pandemic had over the state.	An indiscriminate assault on humanity; Segregation of infected and uninfected; psychological impact of plague still exists in the modern era.	Lost productivity; loss of skilled labour; reduced business investment; extra strain on over burdened health care infrastructure; loss of professional, political, and military institutional knowledge; impacts into the future of heavily affected states through social erosion.	Significant impact on the global economy. Institution of strict quarantine measures, in some regions. Decrease in travel and tourism.
Domain Indicates the spread of the pandemic, in large part based on WHO regions.	Over the three pandemics: Justinian, The Black Death, and the Third Pandemic, plague has established a truly global domain. Currently, plague is only absent from the European (WHO) region, as well as Australia.	The HIV/AIDS pandemic is global with not one region of the WHO, or (UNAIDS), remaining unaffected. The prevalence rate of HIV varies from as low as 0.1% in the Western Pacific (East Asia), to as high as 5.0% in the African Region (Sub-Saharan Africa). The global prevalence of HIV/AIDS pandemic is 0.8%.	SARS touched every region of the world. However, only 28 countries are indicated to have experienced SARS infections.
Weight Indicated by Mortality or Pandemic Severity (PSI)	Based on estimated mortality rates: • *Justinian Plague* - 50-60% of the population • *The Black Death* - 25-70% mortality in various areas • *The Third Pandemic* – PSI between 48.2% (African Region) and 88.9% (Western Pacific)	The PSI of the AIDS pandemic varies, and provides a strong indication of the access HIV positive individuals have to treatment. The lowest PSI exists in Western and Central Europe (1%) and the highest in South and South-East Asia (6.3%). The severity of the AIDS pandemic is in contrast to its prevalence where Sub-Saharan Africa is the highest (5%) and the lowest, is East Asia (0.1%).	The global PSI was 9.5%, with a range as high as 100% in the African region (based on the one infection and death in South Africa) to 0% in the Eastern Mediterranean (Based on the one infection in Kuwait.
Cost Financial cost to the state actor.	Latest outbreak in India (1994) estimated to have cost $2 billion in sales and losses on the Bombay stock market.	The international community contributed US$15.9 billion towards the global response in 2009. The cost to individual states with high prevalence is estimated to be 52% of domestic expenditure.	Estimated to have cost the global economy about $30 billion in production alone. Individual states were affected as well, particularly Toronto (Canada) and Hong Kong (China) as tourism took a dramatic downturn.

6.1.1 Scope

The initial impact of a pandemic is the ability of a pathogen to rapidly escalate the population of sick and dying in a state. When seeking to assess the level of behavioural change affected by the pandemic actor, a large proportion of the change is a result of the psychological aspects. All the case studies presented showed the changes at the domestic, state, and international level. Considered altogether, the scope highlighted the comprehensive volatility of any pandemic, especially given its ability to transcend traditional borders. With the three cases examined, the dimension of scope is remarkably similar.

At the domestic level, regardless of the period being examined, the fear of contagion immediately created overt discrimination directed towards those thought responsible for the pandemic. The discrimination was mostly fuelled by a fear of the unknown pathogen, and was unfounded. During the Black Death, the discrimination was directed towards the Jews; in the AIDS pandemic homosexuals were targeted, and the Chinese population was cast as the protagonist in the SARS pandemic. Misdirected discrimination perpetuates a cycle that serves to intensify the scope of the threat - meaning, individuals are likely to withhold medical information if they consider the personal cost of divulging that information as detrimental. Similar actions are replicated at the state level, where the state withholds information from other members of the international community in order to assure its national interest.

Scope also considers the pandemic's impact on the state infrastructure. While such an issue was minimal during the pre-Westphalian Black Death, the strain is apparent in any assessment of the AIDS and SARS pandemics. Pandemics force states to take action designed at mitigating the pandemic threat. For example; such can be the impost on states that they are forced to seek assistance from the international community. This in

itself indicates a significant behavioural shift caused by pandemics as state's sacrifice their sovereignty in order to protect their national interest.

The maturity of the international community is apparent within the SARS case study.[1] Without the banding together of the international community during these outbreaks, the AIDS and SARS pathogens would have elicited far more fatalities. To be effective, however, the work of the international community could prevail in an unfocussed fashion. Organisational behaviour needed to change. The increased role of WHO during the SARS pandemic is a strong indicator of changes in the traditional state-centric realm of international politics. Moreover, the sovereignty of the state needed to take a back seat to the health and well being of the domestic and wider international community. The insistent action by WHO in issuing travel advisories, which at that time the organisation had no authority to do, validates the changing role of the organisation in the face of the pandemic threat.

In sum, the dimension of scope facilitates an initial exploration of the effect of the actor. In the case of pandemics the change brought about by the pandemic actor is seen at three levels: the domestic, the state, and the international level. A response by the state at each level validates the notion of pandemics as a political actor. As significant as the scope of the pandemic threat is in informing us about the changing profile of political actors and political threats, it is Baldwin's dimension of domain that indicates the scale of political behavioural changes wrought by the actor.

6.1.2 Domain

The dimension of domain provides the avenue for comprehending the size and implications of the now-established political actor. By design, this thesis has embraced a regional approach of analysis to establish the domain, thereby confirming the global

[1] Arguably, efforts to combat the AIDS pandemic in the 21st century provide a further indication as to the maturity of the international community.

phenomenon of pandemics. In relation to domain, the disparity for WHO regions between developed and developing countries indicated the ability of the state, if not the region, to respond to the threat posed by pandemics. For example, the difference in prevalence of HIV/AIDS between Western Europe and Eastern Europe, as outlined in Chapter Four, clearly indicates the ability for Western Europe to mitigate the pandemic, as opposed to Eastern Europe. The dimension of domain substantiates the actor as being responsible for the scope of (inter- and intra-state) behaviour change.

The WHO definition of a pandemic is designed to explore the spread of the infectious agent, as opposed to its lethality, and is utilised to assist the regionalised approach of this thesis in reviewing each pandemic. In essence, WHO has adopted a definition for pandemics that solely evaluates the domain of the infectious disease outbreak. The WHO domain approach coincides with the necessary geographic political assessment. The alignment facilitates a compartmentalised medical and political evaluation of the effect of the actor, potentially narrowing the scope of the threat. A regional level of focus also provides the ability for other regions to compare and enhance their political and medical responses to mitigate the effect of the actor within their respective region. However, the increasingly globalised nature of modern society has made mitigation efforts substantially more difficult, and broadened the scope of the pandemic impact.

The dissemination of information within modern society has effectively reduced the traditional interpretation of global domain. This means that if an epidemic erupts within one region of the world, the impact of that epidemic can transcend regional boundaries to affect other regions, relatively simply becoming a pandemic. For example; as outlined in Chapter Three, the response of the international community to the outbreak of plague in Surat, India in 1994 in suspending trade with India, even though only one region in the country was afflicted by plague. Such an impact is derived from a lack of general

knowledge regarding the uncertainty of the pandemic threat, as well as how a disease outbreak becomes classified, by the international community, as a pandemic.

The one short coming to WHO's adoption of the region-based definition for pandemics is that it can result in unfair discrimination against states within the region that remain infection-free. For example, during the SARS pandemic within the Americas region, only two of the thirty-five countries within the region were exposed to the virus. The whole of the Americas, however, were swept into the regional assessment. The problem with a regionally-based definition was further reinforced during the low-mortality Swine Flu pandemic of 2009.[2] Confusion surrounds the general population's understanding of a pandemic. While WHO has adopted a definition based solely on the spread of contagion, the global population still associated pandemic with the high mortality associated with past pandemics.

The dimension of domain, then, facilitates an appreciation of the field of influence the actor has embraced. Domain also provides a quantitative opportunity to comprehend how widespread the scope of the actor is. In order to remove any doubt of the role the actor has played in generating the behavioural change of another actor, Baldwin's third dimension of weight explores the probability of responsibility.

6.1.3 Weight

This thesis utilised the PSI developed by the CDC as a way of determining the weight of the pandemic actor. The primary indicator of the PSI was mortality, as opposed to infection. Weight seeks to provide an assurance of the probability that the actor is responsible for the scope of behavioural change. In doing so the dimension reinforces the strength of the actor's relational power and builds on the preceding dimension of

[2] *See* Section *1.3.2 Power and Pandemic: Domain*

domain. In short, the dimension seeks to validate the actor's role as the cause of the behavioural change.

The use of a mortality ratio really only provides an initial indication of the possible weight of the pandemic actor. A stronger indication of the weight of the pandemic actor combines both the prevalence, and the PSI of the pandemic. Weight can be supported by both an indication of the prevalence of infection, as well as the mortality of the disease.

The PSI for the AIDS pandemic adopted in this thesis illustrated the advantages of not just looking towards the prevalence of HIV infection, but the mortality rate of those who die from AIDS related illness. Based on prevalence alone, the Sub-Saharan Africa region bears the greatest burden of HIV infection; yet, when looking to mortality alone, a regional shift of burden takes place to the South and South East Asia region. Moreover, those within regions with greater access to medication saw a lower severity index than those without access. The PSI contained within the AIDS case study illustrates a pandemic where the disparity in access to treatment is increasing mortality, confirming the utility of the PSI, in combination with prevalence, as opposed to only prevalence. Given the long-term nature of the AIDS pandemic, the utilisation of constant PS's provides the ability to monitor the change in the weight of the pandemic across various regions. Evolutionary information provided by a series of PSI reports focuses the political and medical attention on the scope of required changes in state behaviour.

The dimension of weight seeks to confirm the role of the actor in generating the scope of behavioural change. The importance of such confirmation is vital in qualifying the power of the actor being analysed, prior to assessing the threat the actor poses. The use of the PSI in this thesis establishes the close connection between the power of pandemics, and the mortality rate of the contagion. Furthermore, the use of the PSI in this thesis was validated through the case-studies of contemporary pandemics; in

particular, where the connection between the power of the pandemic and the mortality of the contagion contributed to the weight of the pandemic actor.

6.1.4 Cost

The dimension of cost seeks to assess the financial ramifications of the confrontation between the actors. In the case of pandemics, the outcome is unique in that the financial cost to the pandemic actor is zero in comparison to the financial costs incurred by its human opponent. That is not to say that the pandemic suffers no cost at all, increased exposure to pathogens does allow the human body to build up its own immune defences to decrease the effect of the virus. Additionally, technology is likely to evolve in the form of vaccines and medication designed to further reduce the pandemic's impact. However, such efforts to combat pandemics come at considerable cost to the responding actor. When looking to assess the cost of the pandemic actor to the state, three main components of assessment should be considered: the cost of treatment during the pandemic, the cost of pandemic recovery, and the opportunity cost resulting from the pandemic.

The initial costs of a pandemic are unpredictable and substantial. As the pandemic expands and more people become victims, the increased strain on state infrastructure, particularly existing health infrastructure, exacts a toll on the treasuries of the state. The increase in expense is twofold - the cost to treat patients, and the forfeited state income via income taxes and other human contributions to the wealth of the state.

Increasingly, the interconnected nature of globalisation has increased the financial burden of pandemics. This was clearly seen in the cost analysis of the SARS pandemic in Chapter Five. In order to recover the initial cost of the pandemic, states were, post-pandemic, forced to purposely stimulate their economies to restart national growth.

Unlike any traditional threat actor in a conflict between states, in a pandemic, there is no financial cost to the protagonist – in this case, the SARS pandemic actor.

As the state is forced to confront the pandemic actor, the state is forced to divert its resources away from strengthening its national power. For example, if the industrial capacity of the state is diminished as a result of illness and fatalities in the workforce, the state's economy suffers. Additionally, if the state is forced to utilise its military to fill the void left within the ranks of police or medical personnel, the military preparedness of the state may become vulnerable to other threats. The opportunity cost derived from a state's conflict with the non-traditional state actor is unique in comparison to the mutual opportunity cost, when the conflict is between two state actors. In short, Baldwin's dimension of cost seeks to reveal the fiscal nature of the relationship between two actors. For this thesis, the dimension clearly illustrates the dominant advantage of the pandemic actor.

Considered together, Baldwin's four dimensions facilitate an examination of pandemics to establish their legitimacy as actors in international relations, and their ability to wield considerable influence over the state's ability to maintain its national power. However, in isolation, Baldwin's dimensions are insufficient to authoritatively establish the impact of pandemics on a state's national power.

6.2 The Utility of Morgenthau's Classical Realism

Morgenthau's classical realism utilises an elements of national power framework to allow the analyst to evaluate the existing and potential national power of the state. Likewise the framework can be simultaneously applied to any actor that poses a threat to, or detracts from, the state. This thesis has proposed that by adopting Morgenthau's realism, it becomes possible to explore the power relationship between non-state actors and the state. The thesis then assumes the responsibility to show how the traditional

elements, as proposed by Morgenthau, remain valid in a confrontation between state and non-state actors i.e. between states and pandemic. Ultimately, this thesis has provided an adaptation, or update, devised to assess the relationship between the non-state pandemic actor and the state, and which allows for modern advancements that affect both the state and power relationships.

6.2.1 Geography

Morgenthau's element of geography, and its pre-eminent stability, reinforces the validity of geography as the first element of national power. Yet, as the pandemic case studies within this thesis have illustrated, modernity has served to reduce the stability and expose vulnerabilities within the contemporary interpretation of the geographic element. As the cases have shown, the innovations of humankind to facilitate trade have, at the same time, facilitated the ease with which infectious disease can proliferate. Such an outcome highlights the susceptibility of modern trading systems to non-state actors, and the potential diminishing of national power. Advances in technology have further contributed to an understanding of soft geography. Soft geography has elevated the importance of considering this element when seeking to protect or promote the national power of the state. The element of geography has expanded beyond the location and terrain of the state. Specifically, the element of geography incorporates the ability of the state to protect the integrity of its geographic borders, and maintain control of the territory within those borders.

Geographic landscape has the ability to help or hinder the state's ability to counter a non-state actor. Geographic isolation from disease epicentres may provide some short-term benefits; however, once the disease becomes endemic within the geography of the state any benefits are quickly eroded. This was clearly illustrated within the AIDS pandemic case, where isolation from city-centres complicates access to medical infrastructure, preventing the state from protecting its national power. Modern

application of the geography element remains as relevant as its application was for Morgenthau: a state is still required to combat the threat with a constant physical geography however, the state must take into account the internal geography of the state as well as its territorial integrity.

The notion of soft geography assists an understanding of specific outcomes observed; for example, during the SARS pandemic. The use of technology to rapidly access information from across borders encourages a rethinking of the geographic element of national power in light of technological advancements. The control of information has become a vital component of national power: if a state is unable to execute the control of information both within its borders, and across its borders, the stability of this element is exposed to outside influence.

Morgenthau's first element establishes the foundation for a broader assessment of threats to national security by incorporating elements beyond the territorial integrity of the state. Whilst the strength of Morgenthau's element of geography remains consistent, an understanding of its functionality in light of technology and soft-geography notions has become one of the findings of this thesis. Through all three case studies, technological advances continually eroded the power derived from the geographic element. Indeed, the role of mobile telecommunications in transmitting information across borders during the SARS pandemic substantiates the need for states to consider soft geography as a dimension of this specific element of national power. A state's responsibility to preserve its national power not only includes the reinforcing of its geographical borders, but also the utilisation of its natural resources to further enhance its national power as well.

6.2.2 Natural Resources

The possession of natural resources ensures the building blocks for a state's economy. The primary implication of the pandemics assessed within this thesis indicates that while the possession of natural resources benefit the state, the inability of the state to capitalise on those resources takes away from the element's contribution to national power. Morgenthau's sub-elements of food and raw materials reinforce this finding.

6.2.2.1 Food

Access to adequate food can provide a basic contribution health and well-being for a population. A well-fed and healthy population makes a positive contribution to the national power of the state. Conversely, food insecurity creates a burden for the state and risks national stability. The impact of pandemics on agricultural production serves as a good example of the fragility of food insecurity on national power. Certainly with the ongoing AIDS pandemic, the inability to maintain healthy food supplies contributes to the inability of the state to ensure security for its citizens against the medical implications of the disease. During the time of SARS, the Chinese experienced a high demand for specific food products rumoured to protect the individual from the disease. Simply put, the need for food security during any pandemic (or even an epidemic), places an even greater importance on the element of natural resources, and the contribution this element makes toward national power.

The effect of pandemics on crop cultivation was clearly illustrated within the AIDS pandemic. The notion of cash crops ceased to exist, as some individuals afflicted by the pandemic were only able to cultivate crops at a subsistence level. As Chapter Four showed, in Africa the GDP decreased by 15% in 2000 resulting from the morbidity and mortality as a consequence of the AIDS pandemic. Indeed, the economic consequences of a downturn in production illustrate a "trickle-up" effect, where the individual's inability to provide the most basic of resources begins to erode the net national power of

the state to provide for its citizens. Similar outcomes are accorded to the second sub-element of raw materials.

6.2.2.2 Raw Materials

Raw materials contribute to a state's self-sufficiency, and its ability to participate in the global economy. However, possessing raw materials can only serve to benefit the state if it is capable of exploiting them. Wherever a state utilises raw materials for economic gain, as opposed to domestic use, a drop in supply will have further negative consequences for the state's accumulation of national power. Indeed, as the SARS pandemic reinforced, the interconnected nature of the modern world ensures that even a pandemic that is relatively minor in mortality can affect the supply of raw materials, such as oil.

In sum, Morgenthau's element of natural resources allows an appreciation of the impact on the economic potential of the state when threats occur. Pandemics, as a non-state actor, elicited impacts commensurate with impacts expected with traditional security threats. Natural resources, particularly food and raw materials, remain vital to the survival of the modern state, and its economy. However, these elements alone do not convey the full impact of a threat to state power. Industrial capacity seeks to build on a state's possession of natural resources and their potential contribution to the national power of the state.

6.2.3 Industrial Capacity

The element of industrial capacity seeks to assess the ability of the state to capitalise on its natural resources, and utilise them in a way that provides the maximum benefit for the national power of the state. The industrial capacity of a state is determined by human capacity and industrial infrastructure. For a state to maximise the potential power of industrial capacity it must protect this element from protagonists, such as

hostile non-state actors. Within this thesis, the evidence available regarding the impact of both the AIDS and SARS pandemics on the industrial capacity provided exceptional examples of how the state's fortunes were reversed. The impact on human resources during a pandemic reduces the labour force available to the state, which provides the state with vital revenue. Simply put, in order for an industrial capacity to thrive, the state must have a viable workforce.

The pandemic actor threatens the industrial infrastructure by assaulting one of its most precious commodities, the human worker. Typically national workers man the industrial capacity of a state. However, whenever there is a shortfall of domestic employees, states look toward the populations of other states to fill the void, as Chapter Four has shown, occurred with the AIDS pandemic. Such actions increase the probability of further exposing individuals to the pandemic. One solution has been multinational corporations providing health care to their employees to ensure optimum productive capacity of their infrastructure investment. In this way, the corporations are supplanting the traditional role of the state. This too is a modern evolution that now has currency within Morgenthau's element of industrial capacity. Industrial infrastructure is largely the domain of private industrialists, and they too will act in a realist manner to protect and maximise the return on their investment in the face of a threat.

As a general rule, states seek to assure their population remains productive with the provision of health care. However, the risk of exposing health care workers to infection has, in modern times, become a primary concern for the state. Both the AIDS and SARS pandemics took a notable, and immediate, toll on health care workers. The medical fraternity was not well established during the plague. The AIDS pandemic has witnessed a protracted and constant loss of health care workers to the disease, which has lead to a significant decrease in institutional knowledge. But the medical sector is not unique. Importantly, knowledge loss was also experienced in other sectors, such as education

and government - all of which make a significant contribution to the state's industrial capacity. The combined impact is an inability of a state to sustain development. SARS in Toronto also witnessed echoes of the loss-of-knowledge phenomenon, but the impact was mitigated as a result of Canada's developed state status. The case studies in this thesis have investigated the impact of pandemics on both developing and developed states. Each case has reinforced a finding that developing states are far more vulnerable when confronted with the pandemic threat. Developing states have fragile industrial capacities and are often supplanted by international multinationals. As Chapter Four (*The AIDS Pandemic)* showed, in these instances, even the multinational response to the pandemic threat is an identical method as originally outlined by Morgenthau about the behaviour of the realist state.

Morgenthau's element of industrial capacity has always incorporated the ability of the state to facilitate an industrial infrastructure that will capitalise on existing natural resources, thereby ensuring the population may utilise that infrastructure. Morgenthau's essence has remained constant throughout this assessment. The ability of a state's industrial capacity to impact on state power remains constant. Modernity has facilitated, however, an adaptation within the element and allowed a significantly broader interpretation of the state's industrial capacity, and its contribution to national power. If the industrial capacity of the state is derived from both its natural resources, and its workers, then the protection of both during pandemics is vital. The modern industrial capacity has, therefore, expanded to incorporate the health infrastructure of the state, which is designed to protect the industrial worker; and the tourism sector, which arguably is aimed at the exploitation of the natural resources of the state. By adopting this broader interpretation, the analyst is capable of not only assessing the national power of the state, but also the state's ability to protect its industrial capacity from non-state actors. Traditionally, this role has been relegated towards the military of the state.

6.2.4 Military Preparedness

The contribution of a state's military to its national power is straightforward: the military serves to protect. Therefore, its preparedness to protect the state's national power against hostile actors becomes an area of valid enquiry in the face of a pandemic protagonist. Morgenthau has traditionally delved into this investigation with the sub-elements of technology, leadership, and the quality and quantity of armed forces. This thesis has again returned to these elements to test their applicability in the modern state, with the non-traditional threat of the pandemic to test the impact.

6.2.4.1 Technology

In order to successfully counter the abilities of other actors, a state's military must possess technical capabilities superior to that of its opponents. In regard to the pandemic actor, the cases examined within this thesis illustrate the ability of state military units to investigate the actor - as was the case with the SARS pandemic - as well as treat the victims of the pandemic. The ability of military technology to complement that of civilian technology offers the state the opportunity to utilise the military to support, if not replace, the domestic elements of the state that have been affected by the non-state actor. The belated Chinese response to the SARS pandemic, as outlined in Chapter Five, provides a strong example of the benefits a military can have on the domestic front during a pandemic. However, in order for such an act to be successful the military, as well as the state, requires tenacious leadership to provide for such a need.

6.2.4.2 Leadership

Leadership is vital to the successful use of the military in times of a pandemic. However, as the case study on the AIDS pandemic in Chapter Four has illustrated, the institutional knowledge of the military is just as susceptible to a pandemic as are the domestic

elements of the state. The loss of military leadership to the AIDS pandemic poses significant national security issues. As the case studies have highlighted, this was certainly the case for a number of states in the hardest-hit regions. The loss of military leadership due to the AIDS pandemic has seen an erosion of knowledge within African military institutions, as generals and technical officers were also afflicted by the pandemic. Without a strong leadership base, the quality of the armed forces is likely to suffer. Once again, the AIDS pandemic validates the need for strong leadership, specifically in the recognition of the pandemic. The failure for military leadership to acknowledge the ramifications of pandemics for their forces exposes troops to the impact of the pandemic, further burdening the national power of the state.

6.2.4.3 Quality and Quantity of Armed Forces

Intertwined with leadership is the importance of maintaining a troop contingent of high quality and quantity. To do so makes a significant contribution to the national power of the state. It is here where the impact of the pandemic actor is most severe regarding the state's military preparedness. The pandemic actor affects troop quality in a number of ways. First, the armed forces are equally, if not more, susceptible to infection as civilians; this directly affects the quality and quantity of troops. Second, the morale of the troops is diminished through the loss of their comrades to the disease, along with the loss of loved ones outside of the military. In the long term, the infection and subsequent erosion of the recruitment base for military personnel poses significant quality problems for the state and military leadership as they attempt to maintain an effective military.

Morgenthau's element of military preparedness has always been considered relatively straightforward. The ability of the analyst to conceptualise the power of the nation in terms of quantity of military, and quality of its leadership and technology, provides an insight into the state's ability to counter threats to its national power. Any threat that diminishes the quantity and quality of the military directly impact state defences.

Pandemics affect both, and thereby impact the ability of the state to maintain power during periods of crisis. Extending Morgenthau's element to incorporate the impact on the recruitment base for the military, reveals that at the heart of this element is the notion of an ongoing and viable population. It is here where the interaction between Morgenthau's elements becomes evident, and remains pertinent in the modern threat scenario. Pandemics attack the human population in the first instance.

6.2.5 Population

The element of population presents the opportunity to assess the quantitative human element and its contribution toward the national power of the state. In order to make such an assessment, the element encompasses population distribution and trends. Both sub-elements provide the analyst with the ability to quantify the impact of the non-state actor on the population of the state. Throughout the case studies of this thesis, the element of population has provided the ultimate framework for gauging the quantitative impact of the pandemic actor; that is, the mortality of the pandemic on a state's population, in both the short- and long-term. All the cases support a conclusion that the impact of a pandemic on a state's population transcends the total amount of persons killed, to incorporate other demographic factors that contribute to the national power of the state.

6.2.5.1 Distribution

A population's distribution provides the state with the capacity required to guarantee its national power. In order to present a strong appreciation for the importance of population distribution, the cases within this thesis expanded on the sub-element to incorporate the more specific demographic notions of population size, age, geographical distribution; as well as the level and distribution of human capital. By incorporating these attributes into the assessment of the population's distribution, the impact of the pandemic on the population's distribution thereby enhances the utility of this sub-

element. Such an assessment provides an indication of the potential contribution of population in the wake of a pandemic, or other non-traditional threats. Without a population of maximum potential usefulness, the national power of the state begins to wane.

6.2.5.2 Trends

Trends assess the long-term capabilities of the state's population. Therefore, the impact of a non-state actor on the trends of the population provides a useful tool of assessment to understand the threat posed to not just the population of the state, but the threat to the national power of the state. As evidenced within the three cases, the impact of pandemics on population trends is significant in that they decrease the population growth rate. A strong growth rate is vital to the state in order to fulfil the human component of the other elements of national power; such as industrial capacity, and military preparedness.

In order for a state to overcome the effect of the pandemic on its population it must look towards its more qualitative aspects of national power; such as national morale, and national character. As Morgenthau's framework moves towards the more qualitative elements of national power, the scope of assessment moves beyond statistics to offer a larger picture of the impact of the pandemic.

6.2.6 National Character

A population's national character is formulated by the population's intellect and character. While such notions are difficult to measure, they make a valuable contribution to the national power of the state. This thesis contends that those individuals who possess a higher level of authority within the community largely influence a population's intellect and character. There are four main types of authority that influence a state's national character: political, religious, intellectual, and

professional. The cases presented within this thesis seek to illustrate the influence of all four levels of authority in framing the national character during the period of confrontation, and which determines the ability of the state to effectively counter the pandemic actor.

The political authority of the state provides the population with a reassurance as to the stability of the state. If the political authority is perceived as weak or unable to provide such assurances, the population is likely to be disrespectful to its directives. Disrespecting directives can result in significant medical and political difficulties for the state countering a pandemic. Both the AIDS and SARS case studies provide examples of the power of political authority. The role of President Mbeki of South Africa in leading the HIV/AIDS denialist movement prevented the treatment of thousands of South Africans. More broadly, the international political community at the commencement of the AIDS pandemic contributed towards the considerable length of the disease, by focusing on the social factors of transmission, as opposed to the science. But perhaps it is the response of Chinese authorities during the SARS pandemic that best highlights the pivotal role of political authority. The reluctance of the Chinese government to come to terms with the outbreak of SARS directly contributed towards the spread of the contagion, and forced the population to rely on other avenues of authority for information regarding the medical risk to themselves, and the counter-measures being sought by government. As the case study showed, Chinese citizens bypassed government information in preference for rumours conveyed to them electronically.

The influence of religion in framing the national character of society became a clear element for consideration in this thesis, in regard to the impact of pandemics in political authority. Religious leaders have the ability to exert considerable influence over their congregations. As Chapter Three presented, religious movements during the Black Death saw a concerted effort to eradicate any Jewish population, based on the belief that

they alone were responsible for the spread of plague. Again in the AIDS pandemic, the actions of religious leaders in the proliferation of myths; such as gaining immunity to AIDS through marriage, and that female beauty is protection against AIDS, significantly impaired efforts by other authorities to combat the pandemic. Such human endeavours highlight the importance of intellectual and professional authority during threats to the state

In general terms, intellectual and professional authority have an ability to frame the national character; most often with the support of either political or religious authorities. In the contemporary state, a new actor has emerged: the multinational corporation. As the case-studies have shown, multinational corporations have established such depth and breadth in communities that they also see the need for measures to ensure the health and well-being of their employees. In doing, so the corporations, seeking to protect their workers, have developed an unexpected level of authority. For example; mining companies within Africa provide health care to workers and their families, to ensure the ongoing contribution of that worker to the profit of the company. Such actions make a contribution to the formulation of the national character, and further reinforce the state's national power.

Morgenthau argued that the national character of a state was difficult to measure.[3] This thesis agrees with that general statement. However, as a result of the case studies presented, the thesis would also now assert that it is possible to divine the origins of national character. The thesis suggests that the utility of the national character is being able to assess those who are influencing the behaviour of the population. The influence and impact of authority has become multifaceted in contemporary society, especially in response to the non-state actor. As Morgenthau suggested, national character does not

[3] Morgenthau, H.J. (2006), *op. cit.* p. 140.

operate alone. The level of support offered by the population, particularly towards the political authority of the state, also relies on the national morale of the state.

6.2.7 National Morale

National morale seeks to understand the level of support the population maintains for the policies enacted by the state, and the likelihood of the states' response being effective. In a similar fashion to national character, the element of national morale is difficult to predict. When faced with countering the pandemic threat, the state has two options readily available to it: the traditional quarantinist approach, or the wait-and-see approach. These opposing approaches to countering pandemics have similarly opposing effects on the national morale of the population. In the short-term, quarantine policies are usually condemned and considered a violation of human rights. Over the long term, these policies have incidentally proven to be the most effective when combating infectious disease outbreaks. Cuba's response to the AIDS pandemic, outlined in Chapter Four, reinforces this notion.

The wait-and-see approach, adopted by a number of states in response to the AIDS pandemic, enshrines the human rights of the infected minority, while exposing the majority to potential infection. As the AIDS pandemic case study has illustrated, this approach also made a significant contribution to the longevity of the pandemic. A revisionist history of the case may also offer some answers as to why the pandemic is still ongoing. More recently, the ability to foster the support of the population for the policies enacted has come down to one simple element: transparency.

The more transparent the governments have been in response to public health concerns, the more effective has been the response by the population. The SARS pandemic provides the clearest example of the impact of transparency. Prior to public acknowledgement of the SARS outbreak, the Chinese government lacked authority on

the pandemic. However, once the Chinese authorities admitted the seriousness of the epidemic, the national morale of the Chinese population increased, and the country was able to effectively combat the outbreak. Transparency brought legitimacy and power to the Chinese state. Similarly, within Singapore, the initial and primary key to success in combating the SARS outbreak was transparency. By conveying to the population the risks to themselves, and justifying the need for specific measures, the Singaporean government was able to heighten the national morale, and mitigate the impact of the pandemic. In essence, through transparency, particularly in matters of public health, the support of the population can be maintained, thereby strengthening mitigation efforts.

The utility of this element of national power is derived from the need to comprehend the response of the population. In essence, if a state is going to enforce quarantine measures, the effectiveness of these measures is reliant on the population's willingness to comply. If a state is able to execute policy with the support of the population, the likelihood of success for the state is substantially stronger. Indeed, harnessing the national morale of the population is also replicated on a larger scale through the diplomatic efforts of the government.

6.2.8 Quality of Diplomacy

The quality of state diplomacy raises the discussion of power, and the impact of Morgenthau's elements from the domestic location to the international arena. Quality of diplomacy assesses the ability of the state to leverage its national power for potential gain in the international arena. If a state maintains a high quality of diplomacy, its ability to mitigate the effects of a non-state actor is much higher; as opposed to that of the state that opts to not engage with other actors. Essentially, the multifaceted threats of the modern era demand a multifaceted approach to diplomacy. When confronting a threat, such as pandemics, the state is now required to engage with a number of other

non-state actors diplomatically in an effort to assure its national power; for example, IGO's, NGO's and MNC's. Threats to the state posed by non-state actors, such as pandemics, demand a collaborative response in order to diminish the impact of the actor.

The reliance of states on IGO's as one means of diplomatic activity has seen the elevation of these organisations in the modern era. As the case of the SARS pandemic has illustrated, the increased prominence of WHO during the outbreak of SARS, which has been consolidated in the aftermath, is testament to the power position attained by WHO specifically, and indicative of the general rise in power potential of all IGOs. The WHO, during the SARS pandemic, was a significant actor with considerable power. For example, the issuance of WHO travel advisories correlated to a significant (negative) impact on the economies of their recipients; for example, Hong Kong and Toronto, which is outlined in Chapter Five. These recipients were forced to go on a diplomatic offensive in order to have the advisories rescinded. The impact on a state's national power, should it not maintain a high quality of diplomacy, may be mitigated by the increased presence of IGO's and NGO's. However, diplomatic engagement with these organisations requires just as much tact as traditional diplomatic engagement. Therefore, the ability to execute a high quality of diplomacy constitutes one small responsibility for the government of the state.

Especially during the period of a pandemic, a number of states become reliant on the assistance of NGO's in matters of health diplomacy. The strongest example of this relates to the AIDS pandemic and the role of the Clinton Global Initiative (CGI) in negotiating medication pricing with pharmaceutical companies. However, it should be noted that this particular diplomatic cooperation eventuated in 2005, twenty years after the onset of the pandemic. The traditional role of the state, ensuring the health, or potential usefulness, of its population, has been adopted by the CGI as it undertakes negotiations,

which can ultimately maximise the national power of the state. In essence, the role of the CGI reduces a burden on the state which is heavily weighed down with responding to other aspects of a pandemic. The IGO, therefore, holds the potential to elevate the power of the state by adopting a diplomatic role that the state may not be in a position to fulfil. In terms of impact, the IGO assists the state to maximise their impact on the threat at hand, and bolster national power simultaneously. Morgenthau's final element of national power is as fitting as it is summative, as it is seeks to assess the quality of the government in managing the precarious balance between all elements of their national power.

6.2.9 Quality of Government

Morgenthau's final element, the quality of government, seeks to assess the state's ability to manage all the resources in its possession in order to protect and/or promote the state's national power. In other words, the ability of government to balance all the quantitative and qualitative elements in regard to the resources it possesses, and the policy it is attempting to pursue. Whenever there is a challenge to a state, be it from a fellow state or non-state actor, the role adopted by government becomes vital in ensuring the national power of the state. The adoption of passive and/or assertive policies during a pandemic outbreak has tested the ability of a government to balance resources with policy, and its ability to maintain support.

Balance between Resources and Policy

A state with a high quality of government will seek to enact policies that are in line with the resources in its possession. While such a statement seems generic and simplistic for a state of stable power relations, this is not always sustainable at times of confrontation. When confronting a national crisis, the temptation to adopt policies that the state is

unable to enforce is high. Indeed, if the government refuses to accept the nature of the threat and fails to execute any policy to mitigate the pandemic, such as the Hong Kong SAR during the SARS pandemic, the ability to manage the balance disappears completely. Understanding and balancing national resources is the role of the state, and the ultimate outcome will arise from the government's ability to do so. Resources are more than the natural resources found within the borders of state. Indeed, the ability of the government to comprehend a deficiency within the resources of the state, and seek international assistance to overcome those deficiencies is vital for a state to effectively combat a pandemic. However, international assistance may not be required if the government is able to rebalance its own resources, for example, reassigning its military assets to supplement civilian resources.

Balance among Resources

The maintenance of a balance among resources by a government allows the state to respond more effectively to any threat towards the national power of the state. In order to adequately respond though, the government must comprehend the nature of the threat. Such comprehension poses difficulties for governments, particularly when confronting a pandemic, as each pandemic possesses unique attributes. An effective government must seek to maintain a balance among its resources of national power, as the threat to national power continues to unfold. For example, if a pandemic reduces the capacity of a state's industrial complex, a government of high quality will maintain a balance by utilising other resources to fill the void (for example, the military). The maintaining of a balance among resources demands a government that is capable of perceiving threats to the national power, and executing policy specifically designed to counter and repair any damage from that threat. A strong example of the importance of maintaining this balance can be seen in the role of health care workers within the AIDS and SARS pandemics. The ability of some governments to reinforce and complement civilian workers with military ones was an action designed to balance the resources.

Even when a government possesses the resources to enact policies, and the ability to maintain a balance among those resources, its capability may be reduced if it fails to accommodate the popular support of the population.

Popular Support

A government that is able to mobilise a population by appealing to that national character, and the national morale of the state, maintains significant popular support. While the maintenance of popular support bears significant importance within democratic countries, even authoritarian states require some level of popular support in order to mitigate threats to the state. The notion of popular support builds on the element of national morale; however, it also plays an important role in ensuring the survival of some governments; particularly democratic ones. A government that maintains the support of its constituency is able to foster this support in order to enhance the national power of the state as a whole. As the SARS pandemic clearly illustrated, the popular support garnered by the Canadian and Singaporean governments, and eventually the Chinese government, was instrumental in overcoming the effects of the pandemic. Such an outcome serves to reinforce the quality of a government. That ultimately all the major infected states called on the quality of government element to quell the impact of the infection shows the importance of this Morgenthau element.

6.3 Conclusion

By reframing the realist framework in order to provide an assessment of pandemics, this thesis has established not just the pandemic threat, but reaffirmed the centrality of realism as being at the heart of international relations theory. While other theoretical perspectives may provide an avenue of understanding of how relationships between states evolve, or even an explanation of global events, the focus of realism on self-

interest provides the foundation to study threats to that interest. Specifically, Hans Morgenthau's conception of the power of the state being defined by the elements that make up that power, has proven its utility to assess the implications of non-state actors on the power of the state. Furthermore, by using Morgenthau's concept to assess pandemics, which continue to be a significant threat to the states, the thesis has reinforced the relevance of Morgenthau's work in the 21st century.

Morgenthau's nine elements of national power were originally conceived to provide a framework in order to assess the power of nations relative to one another. This thesis has shown the relevance of Morgenthau's elements when assessing the threat posed by any actor towards the state's national power. Furthermore, the thesis has expanded on Morgenthau's original elements to allow for a modern interpretation of the elements that constitute the power of the modern state. In doing so, the thesis has confirmed the longevity of Morgenthau's classical realism as a pertinent theory of 21st century international relations.

By assessing the pandemic actor, this thesis has found that, in the modern context, there are further implications from ancillary, non-traditional, non-state actors for a state's national power. Non-state actors, such as IGO's, NGO's and MNC's, are embracing a far more influential role in the 21st century than ever before. The ability for this role to erode or enhance the traditional aspects of national power was a surprising finding in this thesis. The emergence and incorporation of their importance in the case studies, however, verifies the adaptability of Morgenthau's original framework.

Hans Morgenthau's framework not only makes it possible to assess the national power possessed by states, but it also provides an indicator of various elements of national power that a state must protect from threats. Traditionally, such an assessment would be limited to states, and the ramifications of state versus state conflict. However, the

adaptability of Morgenthau's framework has also allowed the evaluation of the threat posed to the nation state by non-state entities, such as pandemics. The use of Morgenthau's framework in assessing the pandemic threat has advanced the implications of a pandemic for the state beyond a mere public health concern to reveal the multitude of implications for a state's national power. Such an outcome confirms the usefulness of Morgenthau's classical realism in 21st century international relations.

Appendices

Appendix One: WHO Member States by Region

African	European	Eastern Mediterranean	The Americas	South-East Asia	Western Pacific
Algeria Angola Benin Botswana Burkina Faso Burundi Cameroon Cape Verde Central African Republic Chad Comoros Congo Côte d'Ivoire Democratic Republic of Congo Equatorial Guinea Eritrea Ethiopia Gabon Gambia Ghana Guinea Guinea-Bissau Kenya Lesotho Liberia Madagascar Malawi Mali Mauritania Mauritius Mozambique Namibia Niger Nigeria Rwanda Sao Tome and Principe Senegal Seychelles Sierra Leone South Africa Swaziland Togo Uganda United Republic of Tanzania Zambia Zimbabwe	Albania Andorra Armenia Austria Azerbaijan Belarus Belgium Bosnia and Herzegovina Bulgaria Croatia Cyprus Czech Republic Denmark Estonia Finland France Georgia Germany Greece Hungary Iceland Ireland Israel Italy Kazakhstan Kyrgyzstan Latvia Lithuania Luxembourg Malta Monaco Montenegro Netherlands Norway Poland Portugal Republic of Moldova Romania Russian Federation San Marino Serbia Slovakia Slovenia Spain Sweden Switzerland Tajikistan The former Yugoslav Republic of Macedonia Turkey Turkmenistan Ukraine United Kingdom Uzbekistan	Afghanistan Bahrain Djibouti Egypt Iran Iraq Jordan Kuwait Lebanon Libyan Arab Jamahiriya Morocco Oman Pakistan Qatar Saudi Arabia Somalia Sudan Syrian Arab Republic Tunisia United Arab Emirates Yemen	Antigua and Barbuda Argentina Bahamas Barbados Belize Bolivia Brazil Canada Chile Colombia Costa Rica Cuba Dominica Dominican Republic Ecuador El Salvador Grenada Guatemala Guyana Haiti Honduras Jamaica Mexico Nicaragua Panama Paraguay Peru Saint Kitts and Nevis Saint Lucia Saint Vincent and Grenadines Suriname Trinidad and Tobago United States of America Uruguay Venezuela	Bangladesh Bhutan Democratic People's Republic of Korea India Indonesia Maldives Myanmar Nepal Sri Lanka Thailand Timor-Leste	Australia Brunei Darussalam Cambodia China Cook Islands Fiji Japan Kiribati Lao People's Democratic Republic Malaysia Micronesia Mongolia Nauru New Zealand Niue Palau Papua New Guinea Philippines Republic of Korea Samoa Singapore Solomon Islands Tonga Tuvalu Vanuatu Viet Nam

Appendix Two: UNAIDS Regional Breakdown

African	Eastern Mediterranean	South East Asia	Western Pacific		Americas			European	
Sub-Saharan Africa	*Middle East and North Africa*	*South and South-East Asia*	*East Asia*	*Oceania*	*Central and South America*	*Caribbean*	*North America*	*Eastern Europe and Central Asia*	*Western and Central Europe*
Angola Benin Botswana Burkina Faso Burundi Cameroon Central African Republic Chad Comoros Congo Côte d'Ivoire Democratic People's Republic of the Congo Djibouti Equatorial Guinea Eritrea Ethiopia Gabon Gambia Ghana Guinea Guinea-Bissau Kenya Lesotho Liberia Madagascar Malawi Mali Mauritania Mauritius Mozambique Namibia Niger Nigeria Rwanda Sao Tome and Principe Senegal Seychelles Sierra Leone South Africa Swaziland Togo Uganda United Republic of Tanzania Zambia Zimbabwe	Algeria Bahrain Cyprus Egypt Iraq Israel Jordan Kuwait Lebanon Libyan Arab Jamahiriya Morocco Oman Qatar Saudi Arabia Sudan Syrian Arab Republic Tunisia Turkey United Arab Emirates Yemen	Afghanistan Bangladesh Bhutan Brunei Darussalam Cambodia India Indonesia Iran Lao People's Democratic Republic Malaysia Maldives Myanmar Nepal Pakistan Philippines Singapore Sri Lanka Thailand Timor-Leste Viet Nam	China Democratic People's Republic of Korea Japan Mongolia Republic of Korea	Australia Fiji New Zealand Papua New Guinea	Argentina Belize Bolivia Brazil Chile Colombia Costa Rica Ecuador El Salvador Guatemala Guyana Honduras Mexico Nicaragua Panama Paraguay Peru Suriname Uruguay Venezuela	Bahamas Barbados Cuba Dominican Republic Haiti Jamaica Trinidad and Tobago	Canada United States of America	Armenia Azerbaijan Belarus Bosnia and Herzegovina Bulgaria Croatia Estonia Georgia Kazakhstan Kyrgyzstan Latvia Lithuania Republic of Moldova Romania Russian Federation Tajikistan Turkmenistan Ukraine Uzbekistan	Albania Austria Belgium Czech Republic Denmark Finland France Germany Greece Hungary Iceland Ireland Italy Luxembourg Malta Netherlands Norway Poland Portugal Serbia and Montenegro Slovakia Slovenia Spain Sweden Switzerland The former Yugoslav Republic of Macedonia United Kingdom of Great Britain and Northern Ireland

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