

Oil, Power, and Global Hegemony

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Declaration

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Abstract

This study explores the impact of primary energy on the measurement of state power and hegemony. Through an examination of British and American hegemonies, the role of coal, oil and petroleum on the hegemonic cycle is assessed, and the argument is presented for the inclusion of energy as a primary element underpinning the state power base.

Utilising the Hegemonic Stability Theory approach to the study of global hegemony, a framework for the assessment of the role of energy on international hegemony is constructed. The Hegemonic Stability Theory approach employed in this study is augmented through the incorporation of several complimentary theoretical approaches, in order to improve the theory's applicability to multiple cases.

Through an examination of the economic, financial, and military/naval 'pillars' of the respective hegemonic powers, the study determines that energy has had a marked impact on both British and American hegemonies. Technological developments, notably the steam engine, and the subsequent conversion of the Royal Navy, the cornerstone of British hegemony, from sail to steam, made coal vital to the British Empire. In contrast, the use of oil and petroleum during the United States hegemonic reign indicate that access to oil and petroleum not only benefitted the United States material power base, but has become vital to sustaining American hegemony.

This study makes a plausible case for the inclusion of energy as a factor in the assessment of state power, and draws attention to the importance of ensuring energy security and maintaining technological leads.

Opsomming

Hierdie verhandeling ondersoek die impak wat grond-energie het as maatstaf op staatsmag en hegemonie. Na afleiding van 'n gevalle studie van beide Britse en Amerikaanse hegemonies - die rol wat steenkool, olie en petroleum speel op die hegemoniese siklus – stel hierdie navorsingstuk voor dat grond-energie ingesluit moet word as 'n kriterium van hoe staatsmag gemeet word.

Hierdie tesis wend Hegemoniese Stabiliteitsteorie aan om internasionale hegemonie te ondersoek. 'n Raamwerk om die belang van energie te meet in internasionale hegemonie word opgestel. Die Hegemoniese Stabiliteitsteorie aanslag word aangepas deur verskeie komplimentêre teoretiese benaderings te inkorporeer en sodoende die teorie meer toepaslik te maak op verskeie gevallestudies.

Deur die ekonomiese, finansiële en militêre/vloot 'pilare' van die onderskeie hegemoniese magte te ondersoek, bevind hierdie verhandeling dat energie 'n bepalende invloed gehad het op beide Britse en Amerikaanse hegemonies. Tegnologiese ontwikkelings, mees opmerklik die stoomenjins en die gevolglike oorgang van die Koninklike Vloot (die hoeksteun van Britse hegemonie) van seil- na stoomenjins, was die gevolg dat steenkool van uiterse belang geword het vir die Britse Ryk. In kontras word aangedui dat die gebruik van en toegang tot olie en petroleum tydens die hegemoniese bewind van die Verenigde State van Amerika nie net die materiële magsbasis bevoordeel het nie, maar asook bepalend geword het om Amerikaanse hegemonie te handhaaf.

Hierdie verhandeling maak die aanneemlike voorstelling dat energie ingesluit moet word as 'n faktor om staatsmag te meet, en dui die belang daarvan aan om tegnologiese vooruitgang te onderhou en sodoende energie sekuriteit te verseker.

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Chapter 1: Introduction

1.1 Background and Motivation

According to realist interpretations, the international state system is inherently anarchic. This implies that states are forced into a perpetual cycle of power accumulation and dispersion in order to protect themselves and to further their national interests unobstructed. In turn, cycles of power accumulation and dispersion determines the world order and reflects in the hierarchy of states (Gilpin, 1981:7; Mearsheimer, 2001:38). The distribution of power between core states in the world system can best be illustrated by means of a continuum (Wallerstein, 2000). Over the decades, “these [power distributions] have ranged from highly concentrated power on one end of the continuum to highly dispersed distributions on the other...[evolving] in a cyclical fashion” to reflect changes in the distribution of capabilities and the expansion and contraction of state power bases (Kegley and Blanton, 2011:327-328). Essentially, three types of power distribution have occurred in the international system. At one end of the spectrum a multi-centric pattern emerges, in which multiple core states possess roughly equal distributions of power. In the middle of the spectrum, a bi-polar pattern emerges when two states possess roughly even amounts of power, although neither state can definitively ‘declare superiority over the other’ (Siebrits, 2010:1). Lastly, and most infrequently, a uni-centric distribution of power occurs in which a singular, dominant state emerges – a hegemon - who has the power to both structure the international system, and as a result of its ability to ‘impose its will on others,¹’ determine ‘the rules’ by which interstate relations are conducted (Keohane and Nye, 1977; Waltz, 1979:194; Chase-Dunn and Anderson, 2005; Siebrits, 2010:1).

Given how infrequently states have achieved international hegemony, only three states have emerged as hegemonic powers since the development of the modern state-system, namely; the United Dutch Provinces, Great Britain, and the United States respectively. According to ‘long-cycle’ theorists, “over the past five centuries, periods of global war have been followed by periods of international rule-making and institution building” by an emergent hegemon, who essentially reshaped the norms, rules and structures that govern the international

¹ Aside from strictly realist interpretations of hegemonic power, scholars such as Cox (1981) and Clark (2011) emphasise the need for consensus (or ‘buy-in’) where hegemonic power is concerned, particularly in the case of long-term hegemony. Consensus or legitimacy for the hegemon’s rule is achieved primarily through offering smaller states access to various public goods, from which those states can derive benefit. In exchange, those states act as the legitimisers of the hegemon’s rule. This arrangement is vital in that a higher degree of legitimacy implies that the hegemon’s position is less likely to be challenged, whereas a shift towards coercion is indicative of a loss of that consent, and signals potential hegemonic decline. According to Clark (2011:25), the years 1971 and 2001 during which time the US took the respective unilateral decisions to decouple the dollar from the gold standard, and invade Afghanistan after the events of 9/11 are indicative of crises in US and therefore international hegemonic legitimacy.

system in such a way that it is able to “preserve its preeminent position” (Kegley and Blanton, 2011:66). However, hegemony can only be maintained for a finite period, as the material, financial and organizational burden of ‘managing’ the liberal international economy and the international system as a whole, will ultimately take its toll. “Over time... every previous hegemon has overextended itself,” and contenders have arisen to challenge the hegemon’s continued dominance (Kegley and Blanton, 2011:66).

The relevance here is that since the 1970s, analysts subscribing to the ‘declinist’ school have argued that the United States, which has occupied a hegemonic position since the end of the Second World War in 1945, has been and is experiencing a period of inevitable, irreversible decline (Russett, 1985:207; Kindleberger, 1984; Gilpin, 2001; Kindleberger, 1973; Webb and Krasner, 1989). While America still occupies a dominant position at the core as the result of its material primacy and structural power², two points of interest emerge. Firstly, the United States position in relation to other core powers in 1945 was ‘over-inflated’ because of damages suffered by the European powers during wartime, and real measurements of American power (in terms of its material capability) indicate that the hegemon has clearly declined (Webb and Krasner, 1989; Kennedy, 1988). Secondly, through having successfully participated in the American-led liberal international economy, hegemonic contenders such as China, who boast rapidly increasing power capabilities have emerged and seek to challenge US dominance (Snidal, 1985). This is of critical importance because as declinists argue, “US hegemony is far from absolute and will no doubt come to an end at some point in the future” (Stokes and Raphael, 2010:16). This implies that the international system is ‘due for a power shift’ through which another core state will challenge American dominance, make an ascent, and assume the ‘managerial’ duties of the hegemon.

Currently, analysts are viewing China as the most likely candidate to assume the position of hegemon once American decline has occurred. Boasting one of the fastest growing economies, China has emerged as an economic powerhouse, a regional hegemon in Asia with the labour, the capital and expanding military capabilities to dominate a far larger agenda in the future, if it maintains current growth and development trajectories. However, while Western analysts warn of ‘impending Chinese hegemony,’ it is more than likely that China will require decades of sustained growth, and the willingness (and ability) to project military power on a global scale before successfully rivalling American primacy (Cox, 2012,

² The term ‘structural power’ refers to Susan Strange’s (1987:585) conceptualisation of the hegemon’s “power to choose and to shape the structures of the global political economy within which other states, their political institutions, their economic enterprises, and (not least) their professional people have to operate.” Structural power is located in four interrelated spheres, namely security, finance, production and knowledge. According to Strange (1987:565), the state with the greatest dominance in the four spheres possesses the greatest amount of power in the international system.

Lane, 2009). Hegemony, resting on the accumulation of overwhelming amounts of power, is in itself difficult to achieve. Numerous variables interact dynamically with one another to make up the collective power-base of a state, and while those variables or factors are not unique to the hegemon, the amounts of power the hegemon possesses is far greater (in Immanuel Wallerstein's (2000) terms, 'disproportionate') than any of its rivals at the core (Nye, 1990:189).

Interestingly, little of the literature on state power and hegemony has sought to explore the possibility that the sources of power associated with hegemony may have been subject to change³, and therefore little, if any debate exists with regard to the characteristics a state needs to display in order to be considered hegemonic (Kwon, 2011:594). In summary of the literature, the basis for hegemonic power can essentially be split into two categories: material power (which collectively forms the 'power base' of a state) and co-optive power (which is reflected in the hegemon's ability to both 'manage' and shape the structures governing the liberal international economy). In terms of material capability, economic (productive and commercial), financial, and technological power, underwritten by military primacy, is considered to be the 'ultimate criteria' for achieving global hegemony (Nye, 2008:178). Generally, economic primacy is associated with regional hegemony, whereas military primacy or a combination of the two (such as the United States possesses) is associated with total or global hegemony (Nye, 2008:187). However, power is a rather 'slippery' concept (Keohane and Nye, 1977:9) and additional elements such as control over modes of production, the distribution and creation of knowledge, and levels of cultural influence can be added to the multitude of variables that determine the state power base (Strange, 1987; Cox, 1981).

In terms of co-optive power (which implies the ability of one state to make its own preferences and ideas attractive to other states), the example most relevant to the study of hegemony would be the provision of public goods. According to Hegemonic Stability Theorists (HST), the mark of the hegemon is its willingness and ability to bear the material and financial burden of supplying the aforementioned 'public goods' for general consumption by all actors in the international system (Gilpin, 2001:99; Kindleberger, 1987:289; Russett, 1985:214). The provision of public goods is of critical importance to the hegemon, as the

³ Morgenthau (1948) in his *Politics Among Nations* does incorporate 'energy' as a factor in his categorisation of 'elements of state power.' However, 'energy' is attributed to a category including other natural resources such as geography and food. Morgenthau (1948:112) does recognise "the dynamic change to which most power factors are subject" and cautions against attributing "to one single factor a decisive importance to the neglect of all the others." However, more recent publications dedicated to the study of state power, and specifically publications relating to the study of hegemony (Russett, 1985; Nye, 2008, Mearsheimer, 2001) incorporate 'energy' as a factor relating to the economic domain, rather than affording the variable a separate category.

provision thereof ensures the continuation of the liberal international economy, legitimises the hegemon's rule and ensures that, for a time, its position and its own political and security interests remain unchallenged. Lesser powers are theoretically able to make positive gains through the use of public goods and will not seek to challenge the hegemon to the detriment of their own national interests (Webb and Krasner, 1989). Of importance is the fact that the ability on the part of the hegemon to provide the international system with a series of public goods is underpinned by material primacy (Gilpin, 2001:100). Without overwhelming military, economic, technological, financial and production-based capabilities, the hegemon would be unable and unwilling to supply these public goods, as the cost of providing the aforementioned goods would outweigh the potential benefit. As Gilpin (2001:100) notes: the problem of supplying public goods "can, at least in theory, be overcome by a small group of cooperating states," although he adds that to date, no example of this has occurred on a scale as large as the international economy⁴. However, "as the weight of global engagement [has taken] its toll, every previous hegemon has overextended itself" (Kegley and Blanton, 2011:66). This implies that while a hegemon is a necessary (if not a vital) element for the provision of public goods in the international economy, by providing those goods the hegemon essentially becomes unable to continue bearing "the [material] costs of maintaining political and economic order while protecting its position and upholding its dominion" (Kegley and Blanton, 2011:66). Thus, through providing the public goods necessary in order to cement its position and achieve consensus for its role as world-leader, the hegemon essentially engineers its own decline.

Given all of the above – that material primacy underwrites the provision of public goods, in turn allowing a state to achieve international hegemony - the issue that arises is that *the nature of power* (and therefore the variables associated with its study) is constantly changing (Nye 1990:179; Morgenthau, 1948). Over the course of the last decade, scores of analysts, researchers and academics have emphasised what, in Michael Klare's (2011) words is "the race for what's left." Natural resources, and 'primary energy resources in particular are at the core of nearly all human activity, and these resources are declining at an incredible rate. Core states including the United States, Russia and China have repeatedly emphasised the need for 'energy security' which implies securing vital sources of coal, oil and natural gas in order to maintain their 'national security' (Shaffer, 2010:142). Energy security arguably underpins all major activities of the state; being; trade and economic activity, the

⁴ Robert O. Keohane (1984:78) in *After Hegemony* makes the claim that post-hegemonic interstate cooperation can occur in the absence of a hegemon, provided that the conditions under which cooperation were to emerge is favourable. This kind of cooperation will depend on the stability of existing regimes, as well as state willingness to adhere to the 'rules and arrangements' governing the aforementioned institutions, as well as the monitoring of the behaviour or conduct of other states engaged therein.

accumulation of capital, the ability to engage in manufacturing, the development of military and consumer goods and technologies, the maintenance of state security and foreign policy interests, as well as the ability to remain competitive in international markets. This implies that access to primary energy has a critical impact on all the aforementioned elements of the state power base.

What this state of affairs has given rise to, is what is loosely referred to as 'the new (international) energy order,' in which states are categorized in terms of being 'energy-rich' or 'energy-deficit' (Klare, 2009:14). In this 'new energy order,' the greatest power now lies with those states that have the material resources to exploit domestic energy reserves, or to purchase the reserves held by energy-rich states (Klare, 2009:14-16). Energy has become such a vital component to the international system that it has gained substantial relevance, over the last several decades as a form of political and material power, often overshadowing both economic and military power as a 'political bargaining-chip' (Klare, 2009:16).

Traditionally however, 'energy' has been categorized as a factor relating to 'economic strength,' and while this is so, it has not, in the literature on power and hegemony, been viewed as a separate factor, or for that matter, as a factor of particular importance. While Morgenthau did incorporate what is termed in this study as 'energy resources' in his list of variables associated with 'national power,' few discussions of state power have afforded the concept of energy a prominent position⁵. Focus has instead been placed on the *process* of hegemonic ascent, rather than on the factors that *underpin* that process. Traditionally, emphasis has been placed on the theory of 'hegemonic war,' being that hegemony can only be achieved through a 'great power war' which would determine which state assumes the position of hegemon (Gilpin, 1981:15; Kennedy, 1988; Mearsheimer, 2001; Siebrits, 2010). While the process of hegemonic ascent and decline follow similar trajectories across multiple cases, the power factors that underpin hegemonic ascent and dictate the success or failure of the core states engaged therein, are subject to change. Given that energy arguably has a critical effect on two major power factors relating to the pursuit of hegemony, being military and economic strength, the neglect of primary energy as a *key variable* in the study of state power should be addressed.

⁵ In their work on forecasting technological developments and measures of state power, Morgenstern, Knorr and Heiss (1973:103) incorporate energy as a variable. Given the time of the text's publication, the author's make the observation that they "could not find any single material resource which decisively influences the economic and military power of any one nation or region, with one critical exception: *energy*." Additionally, Morgenthau (1948:85-86) recognises both the importance of coal and petroleum on British and US power, as well as the potential for the importance of certain resources to increase or decrease as a result of technological developments. While Morgenthau and Morgenstern *et al.* recognise the critical impact of energy on traditionally favoured power variables, it appears that this mode of thinking about energy and state power did not translate into later mainstream texts on the subject.

Michael Klare (2009:14) argues that "in the new [energy] order, a nation's rank will increasingly be determined by the vastness of its oil and gas reserves or its ability to mobilize other sources of wealth in order to purchase (or otherwise acquire) the resources of the energy-rich countries." Therefore, if the assumption is correct that energy has gained such importance that it now underpins, and overshadows, the material elements of state power, then the ability of the hegemon to achieve material primacy should rest (at least in part) on the hegemon's ability to secure *access to or control over* primary energy resources. In turn, if access to, or control over energy has direct bearing on the size and strength of the state power base, whether through the traditional economic or military lens, then a link should exist between energy and material preponderance. Primacy, then, is a direct factor in the hegemon's ability to supply and maintain the supply of public goods. In sum, access to energy should affect the state power base, which in turn will influence the hegemon's ability to make provision of public goods, and by default, impact on the hegemon's ability to secure legitimacy and consensus for its rule.

Essentially, the purpose of this study is to determine how access to primary energy affects the pursuit of international hegemony. This study will focus on establishing how access to foreign and domestic sources of energy affected both American and British hegemony. The process will be explored in terms of the 'three phases of hegemony'⁶ namely the ascent, maintenance and decline phases of the hegemonic cycle, and the impact of access to energy on each hegemonic 'phase' will be discussed. Secondly, useful scenarios can be mapped in order to shed light on whether energy (oil, petroleum or an alternative source⁷) will remain a critical factor in the emergence of a future international hegemon, such as the People's Republic of China.

1.2 Problem Statement

In order to determine the extent to which access to primary energy impacts on state power and hegemony, the concept of hegemony requires clarification. According to Joshua Goldstein, hegemony implies that a state assumes a position from which it is "able to dictate, or at least dominate, the rules and arrangements by which international relations, political and economic are conducted" (Goldstein, *quoted in* Nye, 1990:187). In order for a state to achieve 'total' or global, as opposed to regional hegemony, a state requires overwhelming

⁶ The 'three phases of hegemony' constitute the author's definition of the phases of the hegemonic cycle, and are included in order to simplify the collection and presentation of evidence in this dissertation. Similar categorisations of the phases of the hegemonic cycle are used by World-Systems Theorists.

⁷ Alternative energy sources (such as shale gas and renewables) are recognised by the author as being key to future studies on the relationship between access to or control over energy, and state power. However, given the limited scope of this study, alternative energy sources are not subject to discussion here, and the analysis is restricted to the use of fossil fuels, namely coal, oil and, petroleum.

“productive, commercial, and financial as well as political and military power” in relation to its competitors at the core (Nye, 1990:186). Hegemonic Stability Theory, unlike World Systems Theory, does not place the bulk of its emphasis on the economic domain. Stemming from a realist perspective, hegemonic stability theorists such as Gilpin and Krasner accept the main tenets of the theory⁸, being that a hegemon is required to maintain the liberal international economy, to act as a stabiliser to the international system, and that the provision of public goods is essential for the purposes of hegemonic legitimacy. However, unlike World Systems Theory and the liberal interpretations of Hegemonic Stability Theory, realists place greater emphasis on power, the impact of political motives and the pursuit of national security in terms of assessing hegemony (Webb and Krasner, 1989). Therefore, in addition to the economic-based focus of public goods, material, and especially military, capabilities are considered by realists to be the most important determinants of state power.

Interestingly, when one examines the power base factors (such as economic, military, financial and technological strength) that underpin hegemony, those factors are neither unique nor uncommon amongst states, especially those at the core. The primary difference between a hegemon and its rivals is that the hegemon achieves what Wallerstein (2000) refers to as “a simultaneous advantage” over its competitors in all sectors of production, being agro-industrial production, finance, and commerce (Clementi, 2011:9, Kegley and Blanton, 2011:53). Again, while Wallerstein and other World System Theorists place the bulk of their emphasis on the economic domain, this theory of ‘simultaneous advantage’ can equally be applied to Hegemonic Stability Theory, although in a broader context, to include all major power base factors: the economy, production, technology, finance and capital, and military power. Therefore it can be said that when a core state achieves material primacy, that is simultaneous advantage over its competitors in all of the aforementioned spheres, and demonstrates the will and ability to supply public goods to the international system in exchange for legitimacy, then that state is capable of achieving global hegemony.

As noted in the previous section, little debate exists with regard to the factors that enable hegemony, particularly the sources of material power that underpin hegemonic ascent. While minor variations exist in the literature because of the underlying theoretical premise (i.e. liberal, realist etc.), little account has been taken of the fact that access to primary energy has emerged as an overwhelmingly important variable in the study of state power. Academics engaged in the study of geo- and energy politics such as Klare (2001, 2009),

⁸ The basis for HST and the main tenets of the theory as indicated above, were first developed by economist Charles P. Kindleberger in *The World in Depression* (originally published in 1973). The key stabilizing functions of the hegemon associated with HST and global hegemony in general were the result of Kindleberger’s work on 1929 depression and its potential causes.

Stokes and Raphael (2010), Rutledge (2005), Djoumessi (2009) and Shaffer (2009) have repeatedly argued that access to primary energy, that is oil, coal and natural gas, has come to rival economic and military power in terms of importance. Oil and petroleum in particular have become "so desirable... that it has come to be thought of as a 'strategic' commodity; one without which no highly industrialised society can survive and whose availability must be guaranteed, if necessary, by military force" (Rutledge, 2005:1). This indicates that "other factors have come to rival military power in importance, and one - energy - had acquired unexpectedly vast significance" (Klare, 2009:9).

If the premise that energy has come to overshadow even military power in its importance is accepted, then energy must logically be of critical importance to the state power base – that is, military, economic, technological, and financial power collectively. Djoumessi (2009:99) argues that natural resources are at least as important as military and economic strength, and in his 'Complex-Realist Model' of power-base measurement (see figure 1.1 below), awards 'natural resources' a separate, equally weighted category. If this link between power and energy can be demonstrated, and the assumption that material primacy is directly related to the hegemon's ability to 'bear the cost' of supplying public goods is assumed to be correct, then access to primary energy should (as Djoumessi argues) be included as a factor in the study of state power, as it should have a direct bearing on a state's ability to achieve global hegemony.

Figure 1.1 The Complex Realist Understanding of the Power Base



(Source: Djoumessi, 2009:99).

To paraphrase Siebrits (2010:3), the assumption made here is that the ability of the hegemon to gain access to, or possession of, and control over primary energy sources, *benefits* its power base, giving the hegemon an advantage over its competitors at the core. This would afford the hegemon a material advantage over its competitors, and (provided that it has the will to do so) better enable the hegemon to provide public goods and secure legitimacy for its position in the international system.

As indicated, several hegemonic powers have emerged in the modern state system, being the United Dutch Provinces (1590-1650), Great Britain (1815-1914) and most recently, the United States (1945-). In terms of the two most recent hegemonic powers – Great Britain and the United States, sufficient evidence exists to support the argument that access to energy resources benefitted the hegemons in terms of their material capabilities and allowed the hegemons to bear the cost of providing public goods. During the industrial phase of global development, under Britain's hegemonic reign, shifts occurred regarding the large-scale extraction and use of primary energy (fossil fuels) for the purposes of production, manufacturing and transportation that did not exist at the time of the United Dutch Provinces hegemonic rule. These technological shifts saw critical growth in the importance of access to sources of primary energy (notably coal), and created a need for 'energy security,' particularly with regard to oil and petroleum supplies during the later phases of British hegemonic rule. Therefore, as sufficient evidence exists to indicate the relevance of energy to the British and American cases, the United Dutch Provinces will not be included in this study. The rationale here (which will be expanded on in later chapters) is that the structures that govern the global economy and the importance of energy as a primary power resource shifted dramatically during the nineteenth and twentieth century's. The development of the steam engine during the Industrial Revolution (under Britain's hegemonic reign), and subsequent technological developments (under American hegemony) made coal, and later oil and petroleum vital to multiple facets of the emergent global economy. Therefore, the inclusion of earlier cases such as the United Dutch Provinces would contribute little to the study.

1.3 Hypothesis, Objectives and Research Questions

Simply put, the hypothesis of the study is that the ability of a core state to gain access to domestic or foreign sources of primary energy, (coal, oil or petroleum), benefits the state's power base relative to its competitors, and given that it has the capability and the will to do so, allows the state to provide public goods for general consumption, and thus secure legitimacy as a global hegemonic power. While the hypothesis posited here is that access to primary energy benefits the power base of core states, energy is by no means the only factor

that has allowed hegemonic powers to ascend. Instead, it is argued that energy is a primary element *underpinning the core power base*, which has received limited attention in the study of state power and been neglected in the study of hegemonic ascent. Given the increasing importance of energy to all states, this trend is only likely to continue into the future, and this gap therefore needs to be addressed.

For the purposes of this study, the independent variable is the concept of hegemony – which in the cases of Great Britain and the United States has already been achieved, with relatively clear distinctions visible in the phases of each case's hegemonic cycle. The dependent variable is energy – or access to primary energy (being oil and petroleum). Essentially, the second hypothesis made here is that the greater control over, or access to primary energy a core state can gain, the greater the impact on the state's ability to (a) ascend to, and (b) maintain its hegemonic position will be. The intervening variables are those that comprise the material power base; being primary economic strength, the availability of capital, technological capabilities, military capabilities and access to, and control over sources of primary energy. While these variables are numerous, it is critical that they be included in the study in order to provide the most accurate analysis. As George and Bennett (2004:x) note, "theories involving several variables can better capture the complexity of social life than the two-variable typological theories that are common in the social sciences." Although no typological theory is posited in this study, the inclusion of multiple intervening variables makes for a richer, and more nuanced comparison. The strength of these factors or variables will also have a great impact on the state's ability to gain access to, or control over, primary energy sources. To this end a cyclical pattern should emerge in which access to energy sources increases the material power base of a given state, and once the power base has been expanded, the state should be able to wield greater control over, or gain greater access to further energy supplies. Thus, the cycle continues. In the event that a hegemon begins to lose control over, has less access to, or is increasingly dependent on foreign providers of primary energy (e.g. as a result of political unrest, embargo or supply shortage), their power base should decrease⁹, which in turn should negatively affect the hegemon's ability to provide public goods, indicating the start of a hegemonic decline.

⁹ The assumption that limited control over, or increased dependence on, foreign sources of oil and petroleum will have a negative effect on the material power base can occur in both the short and long-term. Although this study does not propose to test the short and long-term effects of oil or petroleum supply disruption or shortage, it can be inferred from available historical evidence that the short-term effects of shortage will in all likelihood result in an 'oil shock' similar to those experienced during the 1970s. However, most states ensure that they have sufficient 'emergency' oil or petroleum stocks to mitigate the immediate consequences of such a shock. In the longer term, increased dependence on foreign sources of oil or petroleum is common for the majority of states in the international system, as the bulk are classifiable as 'energy deficit' and are therefore

The second intervening variable that will be included in the study is the state's ability to make provision of public goods and to serve in a 'management' position within the liberal international economy. These goods include; a stable international trading currency, the provision of investment capital, and the expansion and maintenance of trade liberalisation (Gilpin, 2001:98-99; Kindleberger, 1984). Secondary public goods to be considered would be the establishment of security structures, such as those provided by the British Navy and the United States military and navy in order to ensure that certain critical trade routes and corridors (primarily Sea Lanes of Communication or SLOCs) remain open. Additionally, these security structures are critical in less stable areas such as the Middle East, in order to ensure that sufficient amounts of oil is shipped to international markets to meet global demand (Stokes and Raphael, 2010:2).

Therefore, a method of structured comparison (George and Bennett, 2004) will be used for analysis. According to George and Bennett (2004:67), the "method and logic of structured, focused comparison is simple and straightforward... in that the researcher writes general questions that reflect the research objectives and that these questions are asked of each case under study to guide and standardize data collection." This should make the 'systematic comparison' of the predominantly qualitative evidence collected for each case possible. George and Bennett (2004:67) note that only "certain aspects of the historical cases [are] examined" and this provides 'focus' to the method. For the purposes of the study conducted here, the selection of specific or certain aspects of the case for investigation limit the scope of the study sufficiently for meaningful conclusions to be drawn from an otherwise broad and unwieldy body of evidence.

The method of 'process tracing' (George and Bennett, 2004) will be utilised to establish the causal mechanisms linking the intervening variables that collectively make up the state power base to the dependent variable of energy. According to George and Bennett (2004:206) "[t]he process-tracing method attempts to identify the intervening causal process – the causal chain and causal mechanism – between an independent variable [hegemony] (or variables) and the outcome of the dependent variable [energy]." By tracing these causal links, it will be possible to empirically demonstrate how access to or control over sources of primary energy affect the size and strength of the state power base, and therefore indicate what role, in simplistic terms, access to or control over energy has to play in the accumulation and dispersion of state power during the hegemonic process.

net- oil importers. In such a case, the diversification of supply (including the use of alternative and renewable sources energy) will be a critical element of ensuring the energy security of the state in question.

In order to conduct a structured comparison, the following questions will be posed to each of the selected case studies; the United States and Great Britain. The questions are structured according to the three hegemonic stages, namely the 'ascent,' 'maintenance' and 'decline' periods, and will be used to guide the collection of supporting evidence.

- i) What is the hegemon's level of access to and dependence on a) domestic, and b) foreign sources of oil and petroleum during the respective hegemonic phase;
- ii) How did degrees of access to or control over a) domestic, and b) foreign sources of oil and petroleum impact the hegemon's power base during the respective hegemonic phase;
- iii) What were the a) positive or b) negative implications of the hegemon's collective access to or control over sources of petroleum during the respective hegemonic phase, and how did these implications bear on the state power base;
- iv) What shifts or developments (if any) occurred during the respective hegemonic phase that indicate, or can be attributed to, a causal link to oil or petroleum.

1.4 Scope of the Study

According to Hegemonic Stability Theory, four hegemonic powers have emerged since the development of the modern state system; namely Portugal, the United Dutch Provinces (Netherlands), Great Britain and the United States. World Systems Theory poses the same argument, but excludes Portugal as a hegemonic power. For the purposes of this study, given that both HST and WST have reached consensus on three of the four historical hegemonic powers, it will be accepted that the United Dutch Provinces, the United Kingdom and the United States were hegemonic powers (see figure 1.2 below).

In order to make the claim that access to primary energy resources benefits the hegemon, each state will have to be investigated comparatively. However, as noted earlier in the chapter, given the objectives of the study and the intention to focus on primary energy as it is currently used, for the sake of retaining applicability, usefulness and relevance, the United Dutch Provinces will not be examined. The motivation for this is that the structures that govern the international system, being structures of international trade and finance, as well as contemporary and 'modern' technologies, and the desire by states to increase their access to energy, have fundamentally (if not irreversibly) changed since the Dutch reigned as a hegemonic power.

Figure 1.2 Leading States and Major Power Resources*Leading States and Major Power Resources, 1500s–1900s*

<i>Period</i>	<i>Leading State</i>	<i>Major Resources</i>
Sixteenth century	Spain	Gold bullion, colonial trade, mercenary armies, dynastic ties
Seventeenth century	Netherlands	Trade, capital markets, navy
Eighteenth century	France	Population, rural industry, public administration, army
Nineteenth century	Britain	Industry, political cohesion, finance and credit, navy, liberal norms, island location (easy to defend)
Twentieth century	United States	Economic scale, scientific and technical leadership, universalistic culture, military forces and alliances, liberal international regimes, hub of transnational communication

(Source: Nye, 1990:183)

Therefore, the causal relationship between primary energy, hegemonic ascent and decline of the United Kingdom, the United States will be investigated comparatively. Due to the nature of the research problem and the aforementioned objectives, the scope of the study will be restricted to the impact of energy on the state power base and the ability of the hegemon to provide public goods. Limiting the kinds and scope of the evidence to be included in the study should make a meaningful comparison of two case studies possible. As noted by George and Bennett (2004), a case is usually part of a group or ‘family’ of cases and therefore to achieve the research objectives, the proposed study cannot be restricted to a single hegemonic case, or event.

Therefore, the scope of the study is as follows: the United Kingdom will be investigated historically, between 1815 and 1914, The United States, between 1945 and the present day. Evidence will be selected and analysed that relates directly to the research questions posed in the previous section¹⁰.

1.5 Research Design and Methodology

The study is qualitative and primarily exploratory, but also explanatory in nature, given that the primary objective of the study is to empirically demonstrate the need for the inclusion of ‘primary energy’ as a factor in the study of state power and hegemony. While most of the

¹⁰ Methods for evidence selection and analysis will be elaborated in Chapter 2.

literature on hegemony relates to American hegemony, this study will differ in that it will include analysis of British hegemony. The study will also be descriptive in nature given that it will attempt to demonstrate that 'primary energy' (oil and petroleum in particular) and the successful pursuit of international hegemony are linked, and that a clear correlation exists between access to primary energy and state power. Finally, the study will include a 'forecasting' element in which a number of useful forecasts or scenarios will be mapped out in order to determine what impact access to or control over primary energy may have on the US case in the future.

The study will be primarily qualitative in nature given that a series of research questions will be utilized to gather documented evidence of a secondary nature, in order to propose an adaptation to the existing literature on the study of state power and hegemony. The method of structured comparison (George and Bennett, 2004) will be utilized to guide the selection of evidence from the case studies. The study will contain both historical and current evidence, in that the chosen case studies span multiple time-periods. This use of current and historical evidence can be readily compiled as a result of the specific evidence (restricted to primary energy, namely oil and petroleum, and the state power base) to be acquired, in order to answer the series of research questions posed earlier in this chapter. Secondary statistical data relevant to the study will be utilised to support the discussion where applicable.

The phenomenon to be studied is international hegemony – that is, the 'three phases of hegemony,' being hegemonic ascent, maintenance, and decline. The research objective will be to investigate the impact of state ability to secure access to primary energy sources (being oil and petroleum) during the 'three hegemonic phases' associated with Great Britain and the United States hegemonic rule.

1.6 Limitations and Delimitations of the Study

Due to space constraints, it would be impossible to provide the reader with an in-depth analysis of the case studies selected for the purposes of this thesis. While a "thick description" study may be of greater use in establishing the causal linkages between state access to primary energy and the ability to attain international hegemony, given that the purpose of this study is to i) illustrate the need for the inclusion of primary energy as a separate or distinct factor relating to the study of state power, and ii) to demonstrate that access to primary energy is critical in the a) establishment and b) maintenance of international hegemony, a detailed descriptive study is not essential.

While a richer comparison could be gained from a more detailed review, based on the evidence provided here in support of the research questions, this could be tackled in a larger

research project in the future. Additionally, given that two separate cases will be examined, being two instances in which the 'three stages' of hegemonic ascent, maintenance and decline have occurred (the United States and Great Britain), the available sources for analysis are sufficient, considering the space limitations and the limited research claim of the study. In addition, given that the time periods chosen for the study are broad, only certain evidence will be analysed. The material will be selected¹¹ by the researcher and will relate specifically to addressing the research questions posed earlier in the chapter.

In order to limit the scope of the evidence selected for case-study comparison, the impact of oil and petroleum in particular will be used to address the aforementioned research questions. The material available relating to state access to oil and petroleum is sufficient to make the claim that state access to these energy sources has impacted on measures of state power. The United States case in particular, and assessments of American primacy as well as regional and global dominance can be clearly linked to i) its impressive domestic supplies and production capabilities prior to World War II, as well as its ii) material primacy in the post-war context. Great Britain's case, in contrast, reveals the initial shift in importance from coal to oil-based technologies, and given that the Industrial Revolution occurred in Great Britain, the relevance of domestic (i.e. secure) sources of primary energy (in this case, coal) demonstrate how security and reliability of supply are paramount in maintaining state power. Additionally, coal (in Great Britain's case), and oil, and petroleum (in the US case), can readily be linked to the remaining power base elements, namely economic (commercial and productive power), military, and financial power. In sum, where intersections between the economic, military, and financial spheres of the power base, and coal, oil and petroleum have become apparent in the literature, informs the kinds and types of evidence selected for the case studies.

1.7 Central Concepts

For the purpose of the study, the following concepts, which will occur frequently throughout the study, require clarification. Although these concepts have formed part of the earlier discussion in this chapter, greater understanding of these central concepts can be gained from elaboration.

1.7.1 Hegemony

According to Joshua Goldstein, the concept of hegemony refers to a single state "being able to dictate, or at least dominate, the rules and arrangements by which international relations, political and economic are conducted" (Nye, 1990:178). What this implies is that the amount

¹¹ The process for evidence selection will be guided by examining intersections between the aforementioned power base factors (economy, trade, finance, military, and technology) and the use of oil and petroleum.

of power possessed by the hegemon in question is so great that it results in an 'overwhelming material primacy' in relation to other potential competitors at the core. As noted earlier in this chapter, it is commonly accepted that only three states have emerged as hegemonic powers since the development of the modern state system, namely, the United Dutch Provinces, Great Britain and the United States. Theoretically, the reason that so few powers have assumed this position is that in order to achieve international hegemony (as opposed to regional hegemony) a state requires overwhelming economic, military, technological and financial capabilities, coupled with Wallerstein's 'simultaneous advantage' in each of the spheres (in relation to its competitors) in order to make a hegemonic ascent. This preponderance of material capability is rarely achieved in the international system.

1.7.2 Primary Energy

For the purposes of this study, 'energy' and 'primary energy' will be interchangeably used to refer collectively to coal, oil and petroleum, unless otherwise indicated.

1.7.3 Power Base

Paraphrasing Dahl, Djoumessi (2009:75) notes, "those with the most power resources have the most potential power [or] ability to get others to do what they want." Therefore, the larger the total sum of material power a state possesses, which is reflected in the collective 'power base' of a given state, the greater potential success that state should have over influencing outcomes. The 'power base' consists of the collective technological, financial, economic, military and energy-based capabilities a state possesses.

1.7.4 Hegemonic Stability Theory

Hegemonic Stability Theory posits that the international system cannot function peacefully and effectively without the presence of a single dominant state who will 'take the lead' in maintaining the liberal international economy (Snidal, 1985). According to Gilpin (2001:99-100) "there can be no liberal international economy unless there is a leader that uses its resources and influence to establish and manage an international economy based on free trade, monetary stability, and freedom of capital movement." By ensuring the above, multiple states can receive benefit through participation in the liberal international economy, and while the hegemon has no real means to 'enforce' the rules and arrangements of the liberal international economy, the provision of these public goods "encourage(s) other states to obey its rules and regimes" and this provides the international system with a measure of stability (Gilpin, 2001:100).

1.7.5 Public Goods

Hegemonic Stability theory postulates that economic openness and stability is most likely when a single dominant state – a hegemon – is present in the international system. The

hegemon then establishes and assumes a 'managerial role' over a regime that is inclusive and attractive to other lesser states within the system, in order to secure its legitimacy as hegemon. Therefore, once primacy has been established, the hegemon sets about constructing a regime (such as the liberal international economy), which functions, according to a realist interpretation as a means of allowing the hegemon to pursue its own national interests, without putting its security (or the security of the international system) at risk. By creating an open system through which other states seek to benefit by participation, the hegemon is supplying what is referred to as a 'public good(s).' These 'public goods' according to realist interpretations, exist primarily to supply the most benefit to the hegemon itself, but through supplying these goods other states (small, medium and rivals at the core) can stand to benefit, although the levels of growth associated with participation in an open economy differs from state to state. Therefore, in order to maintain international stability and ensure the continued participation and benefit associated with participation by other states in the liberal international economy, the hegemon is required to supply and 'manage' the following public goods: (1) the hegemon should take the lead in establishing a liberal trade regime through securing multilateral trade agreements and coordinating macroeconomic policy among the core powers; (2) the hegemon should maintain the flow of capital (through investment and other means) to poorer countries; and (3) supply and manage a means of foreign exchange, such as the international trading currency (Kindleberger, 1984). Additionally, during times of crisis or depression, the hegemon should "open markets for distressed goods.... [and] must also be a 'lender of last resort'" (Kindleberger cited in Gilpin 2001:99). Without performing the aforementioned functions, especially during times of crisis, the international economy could be subject to a prolonged depression, such as the depression that occurred during the 1930s. In addition to the aforementioned 'economic' public goods, the hegemon can also be required to supply other goods, such as international security. Besides entering into treaties and agreements to come to the aid of allies subject to threat, the hegemon should secure important trade corridors and SLOCs (especially in conflict-prone or hostile regions) so that international trade and the supply of goods remain uninterrupted.

1.8 Impact of the Study

The primary expected outcomes of the study intend to demonstrate the causal linkages between access to and control over sources of primary energy, and measures of state power. As indicated earlier in this chapter, oil and petroleum as sources of primary energy underpin the collective elements of the state power base, namely economic, financial and military

power. The literature however, does not adequately reflect these linkages, and it is the purpose of this study to empirically demonstrate these linkages and address the aforementioned gap by strengthening the case for the inclusion of energy as a distinct variable in the study of state power and hegemony.

Additionally, this study will demonstrate that aside from access to and control over oil and petroleum supplies, the hegemon will require security and reliability of supply, in order to benefit its power base. As will be illustrated in Great Britain's case, control over vast, high quality domestic supplies of coal benefitted the hegemon, whereas a shift to petroleum just prior to the outbreak of World War I potentially jeopardised Britain's hegemonic position, as well as temporarily weakened its wartime naval capabilities, and its ability to successfully project its naval prowess.

1.9 Structure of the Study

Having outlined the broad structure of the study in this chapter, chapter 2 will focus on reviewing and critiquing the available dominant literature on hegemony and structural change in the international system. The chapter will review the four primary theoretical schools associated with the study of state power and hegemony, namely World System's Theory (WST), Long Cycle Theory (LCT), Critical Theory, and Hegemonic Stability Theory (HST). Secondly, the chapter will be used to formulate a framework for addressing the aforementioned research questions. Using Djoumessi's (2009) conceptualisation of the material power base as a starting point, additional theoretical perspectives from Long-Cycle theory, World-System's theory and the English School will be employed in order to address several shortcomings in the Hegemonic Stability Theory approach to structural change in the international system. The resulting framework will then be used to guide the collection of evidence, and to structure the study.

Chapters 3 and 4 constitute the case studies to be examined in order to empirically demonstrate the linkages between energy and hegemony. Chapter 3 details the British hegemonic experience, and explores the initial technological shifts that occurred in the use of oil and petroleum during Britain's hegemonic cycle. The chapter emphasises the importance of energy security and reliability of supply, and makes a more generalised argument for the inclusion of energy in the study of international hegemony. Chapter four details the American hegemonic experience and examines the linkages between the development of the current US-led liberal international economy and control over, or access to sources of oil and petroleum. The chapter highlights that control over or access to sources

of oil and petroleum have had a marked impact on US power, and that the structural elements of US hegemony serve to reinforce and stabilise the US position, and their access to vital sources of energy, despite perceived indications of US hegemonic decline.

Chapter 5 presents the findings of the case studies conducted in chapters 3 and 4. These findings will be presented according to the structure of the research questions and the framework for approach, as outlined in chapters 1 and 2. The implications and relevance of these findings on the future study of International Relations and hegemony will be discussed. Through the presentation of these findings, two scenarios for the future of US and global hegemony (in relation to energy) will be discussed, In conclusion, avenues for potential future research will be explored.

Chapter 2: Literature Review and Theoretical Framework

2.1 Theories of Structural Change in the International System

A vast array of literature exists that seeks to explain the process and mechanisms whereby structural change and the 'hegemonic cycle' occur in the international system. The four primary theories that address this change are World Systems Theory (WST), Long-Cycle Theory (LCT), Robert Cox's theory of historical structural change (Critical Theory), and Hegemonic Stability Theory (HST). Each theory shares similarities and displays critical theoretical differences in their approaches to hegemony and structural change on the international level, and while any of the primary theories are sufficient for providing an explanation of international structural change, Hegemonic Stability Theory in particular best suits the needs and purpose of this study.

While each theory provides sufficient means of explaining structural change, none of the theories accounts for primary energy as an *independent* power base factor. Therefore, the purpose of this chapter is twofold: Firstly, a discussion of each of the theories is offered, including the major criticisms levelled against them, as well as the rationale for their inclusion or exclusion in the study. Secondly, this chapter will serve to address a number of theoretical issues relating to the Hegemonic Stability Theory approach to hegemony. In doing so, a framework is developed that incorporates a number of 'solutions' to HST's theoretical shortcomings. This framework for approach is developed for the purposes of addressing the research questions posed in chapter 1.

2.1.1 World-Systems Theory

The overarching premise of World-Systems Theory (WST) is that the process of structural change, and the rise and fall of hegemonic (or 'core') powers in the international system must be analysed "within a long historical perspective" (Gowan, 2004:471), and therefore WST is occupied with the structures, 'social relations,' and 'modes of production' that govern the modern world system. By placing the aforementioned elements into a 'long historical perspective' it can better be understood how the structures that govern interstate relations in the modern world system came to exist. In World-System's terms, the economic and military capabilities of a state are directly informed by "extensive division of labor," and that division of labour is determined by the capitalist mode of production (Wallerstein, 2011:583). Therefore, for Wallerstein (2011:586) and other World Systems analysts, "the modern world-

economy is, and only can be, a capitalist world-economy.” Division of labour among states in terms of productive capability are characterised and understood through core/periphery relations, and these relations determine patterns of continuity and change in the world-system.

Patterns of continuity and change are also present at the ‘core’ of the world-system. Core states are located on the top rung of the international division of labour, and command the “most sophisticated and desirable capital-intensive” mode of production (Gowan, 2004:472). Within the core, “there have been recurrent cyclical patterns in intra-core relationships” in which a single core power “rises to a dominant position within the hierarchy, becoming a ‘hegemon’ and establishing some order and stability to the core” (Gowan, 2004:472). The hegemon is then able to restructure the systems and structures governing relations at the core, and the remaining core states adapt to, or challenge these structures through innovation and economic competition. Heightened intra-core competition destabilises the core, and through conflict (hegemonic war), core powers succeed one another as old powers decline, and thus the ‘hegemonic sequence’ perpetuates.

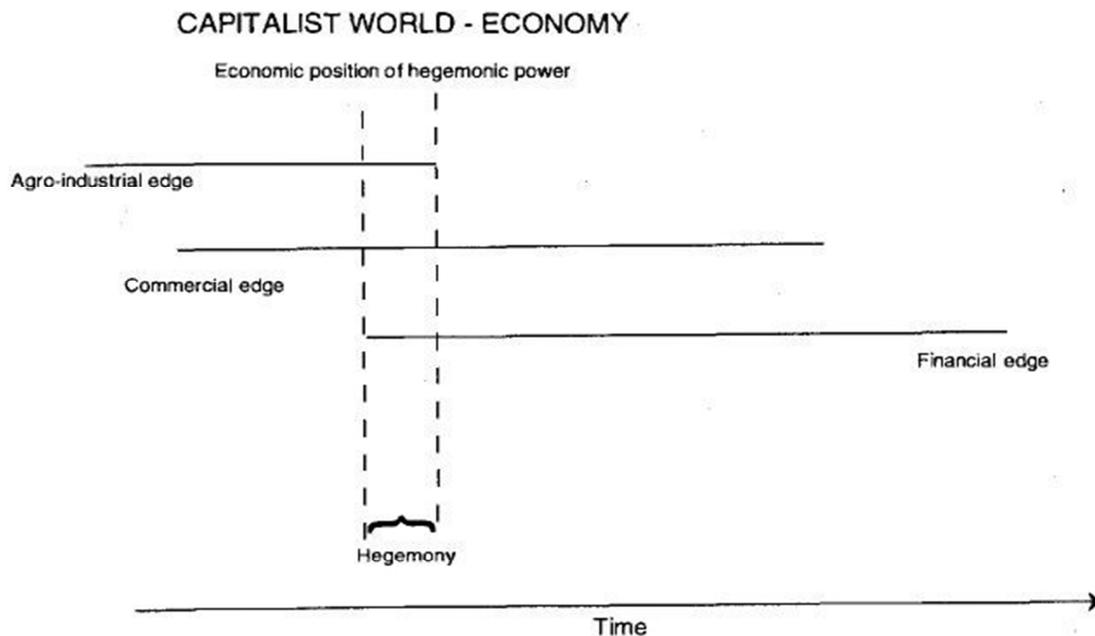
The accumulation of power at the core, and the mark of a hegemon, rests on the hegemon’s ability to achieve ‘simultaneous advantage’ over its competitors in three spheres: agro-industrial production, commerce, and finance (see figure 2.1 below). “Hegemony thus refers to the short interval in which there is *simultaneous advantage* in all three economic domains” (Wallerstein, 2000:257). By monopolising the aforementioned spheres, in other words, dominating the “most profitable leading industries”¹² of the time, the hegemon’s position rests on “a combination of economic power based on [dominance in]... leading industries and military power” (Chase-Dunn and Grimes, 1995). Therefore, for World-Systems analysts, *economic power* is the ultimate determinant of state power and hegemony. As Gowan (2004:472) notes, World System’s theorists “by no means ignore the role of military-political power but they view its role *as an indispensable support for the struggle for dominance at the level of production*” (emphasis added).

Control over, or dominance in, the spheres of agro-industrial production, commerce, and finance, and a state’s ability to wage (and succeed in) hegemonic war at the core is dependent on the material power base of a given state. In part, the material power base includes access to ‘natural resources’ or ‘raw materials’ which is “a key ingredient required in especially industrial production” (Siebrits, 2010:68). The importance of specific ‘raw materials’ or ‘natural resources’ differs from case to case, as the materials required depend

¹² Dominance in “new lead industries” as a component in the hegemonic sequence is has been developed and expanded by proponents of Long-Cycle theory.

on the nature of production and the 'new lead industries' in a given time. Therefore, access to certain natural resources (such as timber for shipbuilding, or coal for steam production) is technology and industry dependent, and access to these kinds of resources affords the hegemon an advantage over its competitors at the core.

Figure 2.1 Simultaneous Advantage in the Spheres of Production



Source: Wallerstein (2000:256)

In terms of World-Systems analysis, the primary focus on and treatment of 'raw materials', is that core-periphery relations and differing productive capabilities are characterised by "a world economy in which the periphery's raw materials are exchanged (on unequal terms) for the core's manufactured goods" (Goldstein, Huang and Akan, 1997:242). From a World-Systems perspective, raw materials sourced by core states from the periphery are used in the manufacturing of higher-end goods or products, as well as in technological innovation. Access to raw materials underpins the ability of the core states to engage in global trade within the capitalist global economy. The majority of core states lack sufficient access to raw materials to raise their production advantage, and are therefore dependent on peripheral states for their supply. The 'unequal trade' of raw materials for manufactured goods then

reinforces core-periphery dependence. Access to, or control over, specifically key sources of energy (as a raw material) has become critical to the world-system, especially since core states entered into the industrial phase of development, which is equated with the Industrial Revolution that occurred in Great Britain between 1760 and 1850.

As indicated above, for World-Systems analysts, the concept of 'energy' (being coal, oil, or natural gas) has become relevant as a 'natural resource' or 'raw material' only in the industrial phase of global development. Energy does however have a critical impact on technological development and the ability of a core state to compete in, and dominate a specific industry. Even so, natural resources are equated with the overall *economic strength* and capability of core states, and are recognised as a primary element in the reinforcement of core-periphery dependence. This 'economic bias' inherent in the treatment of material capabilities by World Systems analysis is regarded by World Systems theorists to be a shallow (realist-informed) reading of the theory.

According to Gowan (2004:474), World-Systems theorists including Wallerstein and Chase-Dunn "have underestimated the qualitative differences between the US and Britain either by overplaying British power in the 19th century or by underplaying US power in the second half of the 20th century or both." Gowan (2004:474) argues that the US case presents certain 'peculiarities' in capability that "could disrupt the cyclical pattern by which WST has characterised core dynamics." In particular, Gowan (2004:476) has emphasised how the US has managed to fundamentally restructure inter-core relations through creating a "series of structural dependencies [by] other core states upon the US for their political security."

World-Systems theorists would traditionally argue that the hegemon would not be able to dominate the structures governing the core, in other words, 'establish an empire at the core,' as natural balancing would take place to limit the hegemon's power. World Systems theorists regard this as an impossibility. Gowan (2004), and particularly Norloff (2010) have argued that US dominance of (to use WST terms) the structures that govern 'intra-core relations' is profound, but also *beneficial* to the hegemon. In part, a key factor allowing the US to dominate intra-core relations rests on the fact that the US is responsible for ensuring the security of supply of energy resources to a number of core states. According to Gowan (2004:476) the "US has the ability to control the sources of and transport routes for crucial energy and other strategic materials supplies needed by its allies, through its positions in the Middle East and its sea and air dominance in the Mediterranean, the Indian Ocean, the Pacific and the Atlantic." Given how severe the impact of an oil and petroleum supply disruption can be, allied dependence on the US in this regard is very high. Additionally, the US has managed to dominate international financial, trade, and security regimes. How US

dominance of these regimes relates to its control over or access to international oil is elaborated in chapter 4.

In terms of general criticisms levelled against the World System school of thought, few relate directly to the study being conducted. It should be noted that World-System's theorists tend to assume that the world-system should be viewed as a whole, and therefore the world-system is used as the single unit of analysis, as opposed to the realist emphasis on the state as a unitary actor. While this approach has its merits, it tends to be cumbersome in that it requires a lengthy historical study of the world system and the hegemonic sequence occurring within it, to provide a sufficient analysis. While the historical background relating to a specific case, or family of cases, is always relevant, for the purposes of this study, an in-depth or 'thick' historical account of the development of the selected cases is of less importance. Ample literature exists (across all schools and frameworks) to substantiate the existence of the hegemonic cycle, as well as the sequences completed by Great Britain and the United States. Therefore, this study is concerned less with how the historical and social forces shaping the current world-system enabled the hegemon's to gain power, but rather with highly specific factors and events relating to the pursuit of primary energy, and how gaining access to or control over energy aided, or enabled the hegemon to assume power.

This Marxist-informed approach to the capitalist world-system, while relevant, and certainly pertaining to the use of energy sources, is less suited to the objectives of this study, although scope certainly exists for an investigation into 'energy' and the 'world-system' in future research.

2.1.2 Long Cycle Theory

Long-Cycle theory was first developed by George Modelski in the 1970s as a means of understanding broad, historical structural change in the international system. Long-Cycle theory posits that cyclical patterns of power accumulation and dispersion occur in core powers over 'long' periods of time, spanning roughly 100 to 120 years in length. These cycles of power accumulation and dispersion are "synchronized with the rise and decline of leading industrial and commercial sectors in the global economy" (Thompson, 2000), and although these cycles are not 'strict' in terms of their timing and duration, sufficient evidence exists to support the argument that these cycles exist¹³.

¹³ For Modelski and Thompson, long waves, or 'long cycles' are intervals of roughly 100 years during which time the 'leadership' or hegemonic cycle occurs. During this 100 year cycle, two shorter cycles in 50 year intervals occur. These 50 year cycles represent technological innovation and the rapid development or concentration of new technologies, and their subsequent dispersion.

According to Chase-Dunn and Anderson (2005:15) hegemonic powers “rise on the basis of economic comparative advantage in newly leading industries, which allow them to acquire the resources needed to win wars among the great powers and to mobilize coalitions and keep the [international] peace.” This supports the argument outlined in chapter 1 that the ‘advantage’ hegemony can attain from sufficient access to or control over strategic mineral resources is beneficial to the power base. In long-cycle terms, control over strategic mineral resources would enable a state to pursue and maintain technological superiority in a ‘new lead industry.’ Accordingly, Modelski and Thompson “measured the rise of certain key trades and industries, so-called ‘new lead industries,’ that are seen as important components of the rise of world powers” (Chase-Dunn and Anderson, 2005:16). Figure 2.2 below illustrates Modelski and Thompson’s catalogue of ‘leading economies’ (hegemonic powers) and their lead industries.

Accordingly, ‘new lead industries’ reflect periods of economic and technological development that essentially give the leading power, or hegemon, an ‘edge’ over its competitors. This expansion of the ‘technological’ element of hegemonic power is complimentary to the World-Systems approach. At the peak of the first 50-year cycle, the hegemon dominates a ‘new lead industry’ and the economic and technological ‘edge’ gained allows the hegemon to ascend as a global power. According to Thompson (2000:136) “as imitation, diffusion, and increased competition develop and as the once novel products/technology become more routine, these monopoly rents diminish accordingly.”

Modelski and Thompson argue that world hegemony in the modern state system first began with the Portuguese in the 15th century, then the Dutch in the 17th century, the British (twice) during in the 18th and 19th centuries, and most recently, the United States in the 20th century. Given that Modelski (1978:217) and Modelski and Thompson (1996) argue that Britain achieved hegemony twice, in successive periods, it is possible that another hegemonic state, such as the United States, could achieve the same feat and ‘reinvent’ itself when confronted with hegemonic decline. US ‘reinvention’ could arguably occur because of dominance in a ‘new lead industry’ and is one of two possible scenarios that are discussed in the final chapter of this study.

Figure 2.2 Long-Cycle Categorisation of Lead Economies

<i>Lead economy</i>	<i>Lead commodities or Sectors</i>	<i>Approximate timing</i>
Northern Sung	Printing; national market formation; rice; iron	10th–11th centuries
Southern Sung	Maritime trade	11th–12th centuries
Genoa	Champagne fairs Black Sea trade	Early 13th century Late 13th century
Venice	Galley fleets Pepper	14th–15th centuries
Portugal	African gold Asian spices	Late 15th century Early/mid-16th century
Netherlands	Baltic trade late Asian trade	Late 6th century Early/mid-17th century
Britain I	West Indies products Asian–American trade	Late 17th century Early/mid-18th century
Britain II	Cotton textiles, iron Railroads, steam	Late 18th century Early/mid-19th century
United States	Steel, chemicals, electrics Aviation, automobiles, electronics	Early 20th century Mid 20th century

Source: Modelski and Thompson (1996)

Source: Nye (1990)

In addition to measuring the rise of ‘new lead industries,’ Modelski (1978:227) and Thompson’s (2000:138) work places a primary focus on naval power as the primary indication as to why and whether certain states will emerge as global leaders, whereas others will not. According to Siebrits (2010:28) this is due to the assumption that a global system cannot be created or maintained without ‘global reach,’ and naval power indicates the ability of a state to project its power abroad. Siebrits (2010:28) argues that “the only states capable of exercising this global reach are those possessing superior navies.” Thompson (2000:138) argues that:

Without exception, lead economies have emerged from the maritime-commercial power column. This development should not be surprising. To lead in intercontinental economic activities, a significant maritime transport infrastructure and orientation is absolutely necessary. Economic leads, among other things, are necessary to pay for the sea power. The sea power, among other things, is necessary to defend the economic lead.

While this is an extremely plausible and relevant argument, it limits the 'predictive' power of the Long-Cycle approach. When the hegemonic cycle is discussed in terms of hegemonic war, the issue of military and thus naval capabilities gains substantial relevance. Modelski's assumption that global power is dependent upon 'military reach' is surely relevant. Modelski (1978:227) argues that the nature of hegemonic war (as a critical phase in the hegemonic cycle) means that "ensuing world orders have tended to rest substantially upon a distribution of military power." As such, evidence of "a preponderance of naval power" and "high degrees of concentration in military capacity for global reach" is evident in "the first four global systems," namely Spain, Portugal, the Netherlands and Great Britain (see Figure 2.3 below) (Modelski, 1978:227).

In the US case, Modelski (1978:227) refers to American "control of ocean, air and... space," being, in Barry Posen's terms 'command of the commons,' as the cornerstone of US preponderance. An alternative argument would be that naval power could more accurately be related to affordability (that is, the availability of capital for investment in naval capabilities), meaning that if hegemonic powers possess material primacy, they possess the *material resources* necessary to acquire naval and military technologies that are beyond the reach of less powerful states in the international system. An alternative argument is that the possession of superior naval capabilities is both an indication and projection of *material primacy*. Secondly, the assumption that naval power indicates a hegemon falls short, when the development of alternative technologies is taken into account.

As military technologies (and the use of fossil fuels for modes of transportation) have improved, so has military reach, implying that technologies such as long-range missiles, military drones, sophisticated aircraft and land-based vehicles allow states to exert their power over far greater areas of geographical territory than was possible prior to World War II. Therefore the ability of states to better project their power abroad, aside from traditional naval capabilities, has improved dramatically. Cui Jian-Shu (2007) demonstrates this in his work on Long Cycle theory and the prospects of China's rise as a potential hegemonic power.

Table 2.3 Long Cycles of World Leadership

Long Cycles of World Leadership

<i>Cycle</i>	<i>Global War</i>	<i>Preponderance</i>	<i>Decline</i>
1495–1580	1494–1516	Portugal, 1516–1540	1540–1580
1580–1688	1580–1609	Netherlands, 1609–1640	1640–1688
1688–1792	1688–1713	Britain, 1714–1740	1740–1792
1792–1914	1792–1815	Britain, 1815–1850	1850–1914
1914–	1914–1945	United States, 1945–1973	1973–

Source: George Modelski, *Long Cycles in World Politics* (Seattle: University of Washington Press, 1987), 40, 42, 44, 102, 131, 147.

Source: Nye (1990)

In defence of Modelski's argument, naval power does provide states' with a clear military advantage and as Siebrits (2010:28) notes, provides states with protection, and allows those states to maintain their own critical trade and communications channels while disrupting those of their enemies. Therefore, naval power does serve a critical function to the hegemon in particular. Additionally, a (cleverly calculated) display of naval power or 'gunboat diplomacy' allows states to project their power in a somewhat less coercive manner, which is often a far less destructive and less costly option than actual military engagement. Altogether, while naval power is relevant (more so as a display of material primacy, military superiority and critical to the provision of certain security-based public goods), it should not serve as the primary indication of hegemony or the ability to achieve hegemonic power. However, in both Great Britain and the United States' case, naval power has been used to ensure the security of Sea Lanes of Communication (SLOCs), and to assure the free movement of goods, including oil, on the global commons.

Like Hegemonic Stability and World Systems theory, Modelski's Long-Cycle is agreement with the notion that structural change in the international system occur through hegemonic war. These cycles are, according to Modelski, independent of, but still affecting the economic cycle, which is why the Long Cycle Theory is assumed to be grounded in the neo-realist school. He therefore equates "rising prices, resource scarcities, and relatively few economic innovations" with hegemonic decline, and increased potential for hegemonic war, and alternatively, "falling prices, relative resource abundance, and the development of new leading sectors" with hegemonic ascent (Rosencranc, 1987:290).

Unlike Hegemonic Stability Theory, Long-Cycle Theory makes use of phrasing such as 'leadership' rather than 'hegemony,' in keeping with the notion of the 'benign' superpower.

The use of phrases such as 'leadership' also reflects the belief held by long-cycle theorists that the international system requires a leader of some sort that is willing to, and capable of resolving the larger issues faced by the international community. The hegemon is able to play a leading role in fostering new industry, such as Great Britain's role in the Industrial Revolution, and the United States' role in forming and expanding the knowledge economy. This phrasing also indicates that the hegemon is 'granted' its position by actors within the international system, rather than imposing its will on others, indicating a far more liberal approach to the study of structural change in the international system.

While the Long-Cycle school does positively influence the understanding of power transition in the international system, Long-Cycle Theory, as a 'stand-alone' theory, has several shortcomings that could be remedied through its application to alternative theoretical approaches. Although Long-Cycle Theory demonstrates the existence of the cyclical nature of power transition in the international system, it is not entirely effective as a tool for forecasting which core powers may ascend in future, and the theory has little ability to confidently argue cases which present beyond the reach of the historical record¹⁴.

Finally, in terms of Modelski's use of long waves in his study of structural change in the international system, a point of interest emerges. Long waves, or Kondratieff waves "are composed of alternating economic phases" (Siebrits, 2010:30) that display as 'upswings' and 'downswings' in the economic cycle, indicating periods of economic expansion and contraction or stagnation. Long waves were originally thought to occur in pairs of 50-year cycles during the 100-year cycle of hegemonic leadership, indicating periods of economic expansion and technological development which act as catalysts for periods of equilibrium and instability in the hegemonic cycle. While Modelski noted that the economic cycle was independent of, while still affecting the cycle of hegemonic leadership, he later "moved away from the close linkage between the leadership cycle and the long wave" (Siebrits, 2010:31), arguing that they should rather be treated as separate but related processes, due to the lack of synchronisation between the two cycles. According to Chase-Dunn and Grimes (1995), "most tie the hegemonic sequence to the Kondratieff cycle, despite its empirical ambiguity"¹⁵

¹⁴ A major criticism levelled against long cycle theory, as Meijer (2011) argues, is that Modelski and Thompson's work on long cycle theory and their naval capability indicators, have failed to accurately forecast the collapse of Soviet Russia and the rise of developing states such as India, and China in the absence of hegemonic war. According to Meijer (2011:iii), long cycle theory "fails to explain the disappearance of a challenger to the world power status of the US through something other than global war" and "the insignificant Chinese share of global naval capability... seems irrelevant in relation to the vital position it currently occupies in the world economy." These claims cast doubt on the 'explanatory and predictive' abilities of long cycle theory.

¹⁵ See Goldstein (1988), and Modelski and Thompson (2000).

and “there remains a consensus that the engine driving a rising core state and contender for hegemonic status is that it is the geographical home for the emergence of some revolutionary new technology and related product(s).”

Regardless of the ‘empirical ambiguity’ of the two cycles, Long-Cycle theory and the investigation of ‘new lead industries’ offers an engaging, albeit ‘simplified’ account of structural change in the international system. The obvious ‘military’ bias inherent in the theory’s approach to naval power raises questions about the theory’s ability to forecast the rise of future hegemonic powers who (like China) have not (yet) chosen to pursue naval superiority. The integration of the 50-year economic and technological development cycles in Long Cycle theory is of interest however. According to Modelski (1978) and Thompson (2000), the British and American periods of global leadership rested on maritime supremacy, but also in Britain’s case, on the development of steam technologies, and in the US case, on land-based transportation and the aforementioned ‘command of the global commons.’ The common denominator in either hegemon’s technological ‘lead’ is, arguably, *primary energy*. Britain’s adoption of steam technology during the Industrial Revolution, and its subsequent transfer to the Royal Navy depended on access to coal. The US ‘command of the commons’ relies almost exclusively on access to oil and petroleum. This reinforces the argument posed in this study that access to or control over sources of primary energy has had a decisive impact on Britain and the United States’ respective hegemonic cycles, especially in regard to technological ‘leads’ and economic advantage.

2.1.3 Critical Theory

Like World-Systems Theory, Critical Theory is informed by a Marxist approach and places emphasis on the ‘historical structures’ within which international political action occurs. For Robert Cox, whose work comprises the foundation of the Critical Theory approach, an emphasis on the process of historical change and “an appraisal of the very framework for action... which problem-solving theory accepts as its parameters” (Cox, 1986) is what sets critical theory apart from traditional International Relations theories.

For Critical Theorists, traditional International Relations (IR) theories are regarded by nature as ‘problem-solving’, in that these theories rest on the “false premise” that the present order is fixed, as opposed to changing (Cox, 1981:202). According to Bieler and Morton (2004:86), “a critical theory of hegemony directs attention to questioning the prevailing order of the world,” without taking institutions and power relations for granted. In particular, “conventional IR theory” is regarded as having “[reduced] hegemony to a single dimension of dominance based on the economic and military capabilities of states” (Bieler and Morton, 2004:87). The

approach developed by Robert Cox “broadens the domain of hegemony... as an expression of broadly based consent, manifested in the acceptance of ideas and supported by material resources and institutions” (Bieler and Morton, 2004:87).

The argument posed by Critical Theorists is that “neo-realism puts the accent on states reduced to their dimensions of material force and... reduces the structure of world order to the balance of power as a configuration of material forces” (Cox, 1981:221). Addressing the Realist approach to IR, Cox (1981:222) notes that “[o]ne effort to broaden the realist perspective to include variations in the authority of international norms and institutions is the theory of “hegemonic stability.” However, Cox (1981:223) criticises the work of Robert Keohane (and others) in that Hegemonic Stability Theory and other ‘state-centric’ approaches have failed to account for “the failure of the United States to establish a stable world order in the interwar period despite its preponderance of power.” This is why Cox (1981:223) argues, “[d]ominance by a powerful state may be a necessary but not sufficient condition for hegemony.” As such, the role of social forces and institutions on hegemony is neglected. “Hegemony is therefore a form of dominance, but it refers more to a consensual order” (Bieler and Morton, 2004:87).

Consensus in the Critical Theory approach to hegemony derives from the interaction between a ‘configuration of forces,’ namely material capabilities, ideas, and institutions. The interaction between these forces is assumed to be ‘reciprocal,’ in other words, interdependent in their interaction. Material capabilities have “productive and destructive potentials” and include “technological and organizational capabilities,” such as natural resources, equipment and technology (Cox, 1981:218). Ideas consist of “shared notions of the nature of social relations” and “collective images of social order,” which “offer differing views as to both the nature and the legitimacy of prevailing power relations” (Cox, 1981:218-219). Lastly, institutions ‘reflect prevailing power relations’ and function as a means of “stabilizing and perpetuating a particular order” (Cox, 1981:219).

As such, hegemony is “represented as a fit between material power, ideology and institutions” (Cox, 1981: 225). In particular, Cox (as do other proponents of the English School of International Relations) places emphasis on the notion of ‘legitimacy,’ or in other words, ‘consent.’ Without consent, a hegemonic power has to rely on coercion, or force, and conflict emanating from coercion will, according to historical materialism, serve as the driver for the “creation of new patterns of social relations” and act as “a possible cause for structural change” (Cox, 1981:215). For Cox, hegemony cannot function based on material primacy alone, and therefore, “the exercise of power depends on a combination of material aspects and ideas/ideology” (Leysens, 2008:26).

For Critical theorists, “the framework within which ‘action’ takes place is the historical structure,” and this historical structure is comprised of a configuration of forces (Leysens, 2008:48). For Cox (1981:219), “there is a close connection between institutionalization [and the Gramscian notion of] hegemony.” In order to “ensure the dominance of the strong” the ‘weak’ have to accept “the prevailing power relations as legitimate” (Cox, 1981:219), and institutions function as the means of expressing the interests of the ‘dominant’ in ‘universal’ terms. When confronted with a ‘universal’ expression of interests, smaller states are more likely to ‘buy-in’ to the prevailing order and act as the ‘legitimisers; of the hegemon’s rule. Applying Antonio Gramsci’s conceptualisation of hegemony to the international level, Cox (1993:61) states: “it would appear that, historically, to become hegemonic, a state would have to found and protect a world order which was universal in conception... [in other words], an order which most other states (at least those within reach of the hegemony) could find compatible with their interests.” According to Cox (1981:219), “if [the hegemon is] willing to make concessions that will secure the ‘weak’s’ acquiescence in their leadership,” institutions can be used as a means to minimize instances of conflict, or in other words, reduce the likelihood of a rival state challenging the hegemon’s rule.

2.1.4 Hegemonic Stability Theory

Hegemonic stability theory posits the argument that a single, dominant power (with the will and the capabilities to do so) is required in order to establish and maintain an open and stable international economy (Kindleberger, 1984; Milner, 1998; Webb and Krasner, 1989; McKeown, 1983). The theory posits that the ‘single, dominant power’ acts as a stabilizer in the international system, and that the presence of such a power (a hegemon) is associated, generally, with increased levels of peace, stability, and prosperity in the international system. While this may hold true, the bulk of the literature on hegemonic stability is dedicated to addressing and understanding hegemonic decline, particularly that of the United States. The literature sheds light on the effects of potential American decline, and the consequences thereof on the international system.

True to the realist tradition, Hegemonic Stability Theory holds that “the distribution of power among states is the primary determinant of the character of the international economic system” (Webb and Krasner, 1989:183). Unlike the World-Systems and Critical Theory schools, Hegemonic Stability Theory places its emphasis on the state, the balance of power, and material capability as the determinants of inter-state relations. The hegemon’s ability to ‘determine the rules and arrangements’ guiding state action in the international economic system is dependent on overwhelming material primacy, in that a hegemon is required to

possess levels of power far superior to its rivals at the core. Owing to overwhelming material primacy the hegemon is the only state capable (in terms of the ability to bear the material cost and amassing authority) of exercising significant power over the structure of the system. Through convincing other states that they should abide by the rules of the system, and 'follow the hegemon's lead' in terms of participating in, and making positive gains through the mechanisms of the liberal international economy, in exchange, smaller states act as the 'legitimisers' of the hegemon's rule.

Critical to encouraging the participation of other states in the liberal international economy is what is referred to as the provision of 'public goods.' As noted in chapter 1, public goods are, in their purest form, non-exclusive, mutually beneficial goods that are available for consumption by all states. Hegemonic Stability Theory "draws on two distinct theoretical traditions to explain the inherent instability of non-hegemonic systems and the stability of hegemonic systems" (Webb and Krasner, 1989:184). These theoretical traditions, which both accept the premise of public goods, are informed by their respective 'realist' or 'liberal' approaches.

The liberal approach to hegemonic stability was developed by Charles Kindleberger, a liberal economist, who "argues that international economic stability is a public, or collective, good, since all countries benefit from it regardless of whether or not they contribute to its production" (Webb and Krasner, 1989:184). Kindleberger (1986:300-301) argues that in an international system comprised of only 'small and medium' sized states, there is little incentive on the part of these smaller and medium sized states to contribute, and a large likelihood that their contributions will have little effect on the good's production (Webb and Krasner, 1989:184). Therefore, in the absence of a hegemon, the 'public good' of international economic stability¹⁶ will be 'underproduced' and the system will be subject to greater levels of instability and chaos. As Kindleberger (1986:300) illustrates, smaller states cannot overcome the 'institutional and strategic' challenges associated with the provision of public goods, as they are "[not] quite big enough to have responsibility forced on [them]," "lack power to affect the outcome of great events" and cannot "concern themselves with the public good of stability in the world economy as a whole." Therefore, according to Kindleberger (1986:304), "for the world economy to be stabilized, there has to be a stabilizer – one stabilizer." The question that most frequently occupies proponents of

¹⁶ For Kindleberger (1986:289), the hegemon serves in a management position. The hegemon is responsible for stabilising the international economic system by providing the following 'public goods:' i) the maintenance of an open market for 'distress goods'; ii) providing a stable system of exchange; iii) acting as a 'lender of the last resort' during times of crisis.

Hegemonic Stability theory is what will happen when the system stabilizer is no longer willing or able to perform its duty.

Robert Keohane, in his book *After Hegemony* (1984), argues that it is possible, potentially, for a number of small and medium-sized states, in the absence of a hegemon, to co-operate and provide these goods themselves. Theoretically, this assumption is plausible; however, Gilpin (1981) argues that no example of this kind of behaviour has ever emerged in the international system. While coalitions of states may pool resources in order to provide various public goods and establish 'regimes' on a regional level (such as joint security networks under the European Union, and finance for trading blocs such as the BRICS), no coalition of states has displayed either the willingness, or the capabilities to make those goods publicly available on the international level. In *After Hegemony*, Keohane (1984) tests the validity of Hegemonic Stability theory on three 'issue areas' or regimes: trade, finance, and energy. In the areas of trade and finance, Keohane finds that "changes in U.S. power are insufficient to explain the changes that have occurred" (Cox, 1981:222). Interestingly however, Keohane (1984:214) discovered that "*only in oil is the theory of hegemonic stability consistent not only with overall trends but with the process by which changes took place*" (emphasis added).

Making a fair case for the realist preoccupation with the state and material power, Keohane (1984:206) states that:

The case of oil indicates why I have no intention of seeking to replace a power theory with a functional one... Any functional explanation, which deals with the value of a given process or pattern of interaction, must be embedded in an understanding of political structure, especially the distribution of power among actors.

In Keohane's (1984:215) examination of the post-war oil regime, he found that "as American oil production capacity declined, so did its ability to implement the strategy of hegemonic cooperation." By 1973, the US was unable to make use of domestic oil supplies to meet the needs of its allies as it did in the 1950s. A lack of domestic oil meant that in the 1970s, when faced with a series of Arab oil embargoes and an increase in nationalisation by the Organisation for Petroleum Exporting Countries (OPEC), the US was unable to exert control over outcomes. It could not "effectively control the situation by deterring deliberate producer embargoes as well as providing effective relief in the event of oil shortages" (Keohane, 1984:215). The US was therefore unable to implement hegemonic cooperation and supply a 'public good' to its allies owing to a marked decline in material (energy) capability.

Realist-informed proponents of Hegemonic Stability Theory such as Gilpin and Krasner also accept collective goods theory. Their reasoning for the provision of public goods by a hegemon places far greater emphasis on the implications for the provision of public goods on matters of international stability, state power, and national security. Unlike theorists from the 'leadership school', realists do not view the hegemon as a 'benign' power that has the interests of other states at heart. Instead, they argue that the hegemon "can promote liberalization without jeopardizing essential security objectives," and that the hegemon is able to use its power in a coercive manner in order to "entice or compel others to accept an open trading structure" (Webb and Krasner, 1989:184). Therefore, the hegemon promotes international economic stability, primarily for its own benefit, but secondly as a means of providing other states with enough positive gains (through participation) to ensure that it (the hegemon's) legitimacy is secure, and its position remains unchallenged. Unlike the liberal version of hegemonic stability, the realist approach does not assume "that states have a common interest in international economic liberalization and stability" (Webb and Krasner, 1989:184). Realists accept that "even though an open system may raise the absolute level of welfare of all participants, some states will gain relative to others" (Webb and Krasner, 1989:184).

Essentially, the theory that underpins the realist interpretation of the provision of public goods, is that the hegemon makes provision of the aforementioned public goods because *it benefits the hegemon to do so*. The hegemon also stands to gain the most through participating in the liberal international economy, relative to its competitors, and therefore, bearing the cost of the provision of public goods essentially 'yields a larger return' for the hegemon, accruing greater (or disproportionate) benefits, and securing for the hegemon its legitimacy. Once the hegemon has established itself, the remaining states who 'buy in to' the new rules and arrangements guiding the international system become increasingly dependent on the hegemon, because of those states' dependence on the supply of public goods. Unless a group of states can cooperate and make such goods publicly available, it will remain in the non-hegemonic states' interest to ensure that the hegemon continues to provide public goods. Therefore, for the most part, the 'free-riding' states will seek to support, rather than undermine the position of the hegemon.

Regarding 'free riders,' Gilpin (1981:16) classifies them as "an individual [or state] who consumes the good at no personal expense or little expense." Free-rider states are the majority of (smaller) states in the international system that accrue benefit from access to public goods. Although the hegemon accrues the greatest benefit from providing public goods, smaller states also seek to benefit, although to a lesser degree. Free-riders are problematic for two reasons: firstly, as indicated by Kindleberger (1986) these states do not

have an interest in, or the capacity to, act as providers of public goods, even on a collective basis. Therefore, “lesser states have little incentive to pay their “fair” share of these production costs” (Gilpin, 1981:169), and the hegemon is forced to continue paying those costs. Over time, the “revenues generated... are insufficient to underwrite the costs” and the hegemon erodes its power base. Secondly, through participating in the liberal international economy and enjoying access to public goods, other states are able to expand their power bases, and if they increase their resources significantly, they may seek to challenge the hegemonic order. This is why it is crucial that “a hegemonic strategy must recreate the conditions for its own existence” in order to “be successful in the long term” (Keohane, 1984:178).

Interestingly, across the major theories on hegemony and hegemonic stability, the core factor that serves as an indication of a hegemon, over and above measurements of basic power-base variables, is (although the terminology shifts from school to school) the provision of public goods. In basic terms, a state can display material primacy, but primacy alone does not indicate the presence of a hegemonic power. Material primacy has to be combined with a willingness to assume the duties of ‘managing’ the liberal international economy, before a state can be assumed to be hegemonic. Public goods function as the primary means of ensuring hegemonic legitimacy (and influence over the structures that govern the international system), without which the hegemon would have little authority and most likely a rather ‘short’ reign (especially if the hegemon resorted to coercion to ensure cooperation, rather than consent) before a challenger emerges to assume its position.

Gilpin’s work on hegemonic stability, entitled *War and Change in World Politics* (1981), seeks to explain the process whereby the hegemonic cycle occurs. While Gilpin’s consideration of hegemonic stability theory provides a working explanation for the process whereby hegemonic ascent is achieved, criticisms have been levelled against the theory, many of which indicate the difficulty in applying hegemonic stability theory to various cases.

In the first instance, Gilpin himself (2001:93) admits that his work on hegemonic stability has “encountered a critical reception... [and] was attacked on theoretical, historical, and political grounds.” According to Gilpin (2001:94) one of the primary critiques against the theory “is that it was never adequately formulated,” and that it was “more an intuitive idea based on a particular reading of history than a scientific theory.” For these reasons, it is challenging to attempt to apply Gilpin’s theory to specific case-studies, and while the ‘theory’ does make reference to a sequence of events that occur during the hegemonic cycle, Gilpin provides no structured means of measuring key variables such as state power, material primacy or hegemony. As McKeown (1983:76) notes, the means of determining whether a state is

hegemonic or not “ought to be as explicit as possible,” and “Gilpin’s consideration of the importance of power rests on his general observation about the superiority of the Royal Navy” but offers no indication as to how this power afforded Britain greater control over outcomes. Additionally, and most critically for our purposes, McKeown (1983:79-80) notes that hegemonic stability theory is “not very helpful in telling us what actors did in order for a system to move from point A to point B,” implying that the linkages between “changes in capabilities translate[d] into different outcomes” is only inferred and not adequately discussed. This is the first major issue regarding hegemonic stability theory – its lack of ‘tools for measurement’ for the concepts anchored in ‘power’ that are central to the theory.

The second issue pertaining to Hegemonic Stability Theory is the hegemon’s ability to supply public goods. In order to supply public goods, the hegemon requires capabilities far superior to its competitors, but those ‘capabilities’ are not adequately discussed. While Gilpin (1981) refers to economic, military and technological capabilities, he does not specify the manner in which these capabilities should be measured, nor for that matter does he indicate whether these capabilities are mutually reinforcing. While logic dictates that, for example, technological power should have a positive impact on both military and economic capabilities, these linkages are vague and unspecific. Unlike Wallerstein (2000), Gilpin does not indicate the process whereby material primacy is achieved, and this is problematic for determining a) when a state can be considered hegemonic, and b) when a state can be considered to have material primacy, all of which c) has direct bearing on the hegemon’s ability to make provision of public goods.

In sum, Hegemonic Stability Theory claims that a hegemon (a ‘stabiliser’) is a necessary requirement for the establishment and maintenance of a liberal international economy, which is considered a public good. While counterarguments have been made that a small group of states could provide public goods through a coalition, thus far in the absence of contradictory evidence, a hegemonic power appears to be the only means of ensuring that those goods are provided. Public goods in turn, are assumed to be ‘affordable’ by the hegemon because of its ‘disproportionate’ material primacy. Therefore, in reverse, Hegemonic Stability theory might read that a hegemon is a state who has demonstrated its position and material dominance through bearing the cost of, and demonstrating the will to make public goods available. In other words, for the purposes of this study, if a state is either solely or largely responsible for the provision of public goods (on the international level), it can be considered a) hegemonic and b) in possession of superior material capabilities relative to its competitors. This reading of the theory then minimizes the issues related to ‘reading’ a theory that is vague and unspecific, and offers a means of broadly identifying and assessing hegemonic

power (as a reflection of the state's ability and willingness to supply public goods) without having to resort to complicated or disputed means of power measurement.

Finally, the last major criticism levelled against Gilpin's hegemonic stability theory, is that the theory cannot successfully be applied to multiple cases or events, and that the theory struggles to provide a compelling argument for any cases other than that of the United States. In the first instance, McKeown (1983) argues, in his assessment of *19th Century Tariff Levels in Europe* that Hegemonic Stability Theory is unable to account for Britain's efforts to lower tariff levels in Europe during its hegemonic reign. While Britain may only have had a 'secondary' influence on determining tariff issues between European states, it was successful in expanding international trade. Secondly, it is regularly argued that Britain was not a global hegemonic power (because of Britain's supposed 'lack' of military power), and that the British case lacks many of the decisive elements that characterise American hegemony. In comparison to the US, Britain's 'material primacy' is *underwhelming*, and Britain's track-record in garnering European support for its monetary and trade policies is a far cry from the US example.

Ian Clark (2009) in his assessment global hegemony offers a drastically different approach to the study of international power than has been presented in the standard literature on the topic. Associated with the English School of IR, he argues that hegemony should be studied not in terms of state power or primacy, but in terms of "how past hegemonies have operated, not just within asymmetric distributions of power, but also within diverse social contexts of legitimacy" (Clark, 2009:28). What this implies, is that hegemony can and has occurred in a variety of forms, which Clark (2009:29) categorises as "collective, singular and coalitional." This allows for a far broader study of hegemony than has otherwise been possible according to standard theories on hegemonic stability and international structural change, meaning that a single 'catch-all' theory (such as HST) limits the applicability of multiple cases of hegemony. Clark (2009:35) notes that "it is not the historical examples [of hegemony] that are deficient, but the application to them of a uniform and reified concept," and he argues that this has resulted in a loss of interest by academics in the study of hegemony in general. When Clark's, for want of a better term, 'ideal-types,' are combined with HST, the explanatory value of the theory becomes far richer. While it may remove the 'neat and tidy' elements of Hegemonic Stability Theory that make it so attractive, it presents a far more realistic picture of international hegemony and the diverse forms that hegemony can take. Clark's argument will be expanded on and clarified in the next section of this chapter.

As should be evident from chapter 1 and the first section dealing with standard theories of hegemony and structural change in this chapter, this study has three primary objectives.

Firstly, this study is concerned with proposing a working argument for the incorporation of primary energy (being coal, oil, and natural gas) into the study of state power and hegemony. As indicated, for the purposes of this study, only oil and petroleum (and coal, where applicable) will be examined. Secondly, the study is concerned with developing a framework that is a) as balanced as possible, and b) that provides a point of departure from which future research can be conducted into the relationship between energy and global hegemony. Thirdly, the framework is to demonstrate and account for the linkages between oil and petroleum and state power in the British and US cases (discussed in chapters 3 and 4).

2.2 Theoretical Framework

In sum, three major issues recur in the standard literature on hegemony and structural change in the international system. Firstly, there is a clear and apparent predisposition in all of the major theories (HST, WST, Critical Theory, and LCT) towards either an economic or a military-related perspective on energy and natural resources. Secondly, a debate exists concerning the application of these theories to a diverse number of cases. This has arisen, as Ian Clark (2009) indicated, because of the static and rather 'catch-all' nature of hegemony, which points to a lack of flexibility in the current theory. Lastly, the means of assessing (or measuring) state power, which underpins any study of hegemony and structural change in the international system, is out-dated. Power measurement, too, has been reduced to a handful of variables that are unable to cope with the complexities of state power, and this impacts greatly on the ability to provide accurate or useful analyses. One variable in particular, primary energy, has grown substantially in importance in terms of its effect on state power, but thus far, it has not featured greatly in the standard literature.

The aforementioned issues are those that the suggested framework will attempt to address. The framework will consist of a number of diverse but complimentary perspectives from the four major theories that, together, offer solutions to the issues identified above.

2.2.1 Energy and Hegemony: An Approach

Djoumessi (2009:98-99) argues that discord exists between the various schools of thought related to the study of power politics and international political economy in general. Specifically, there is disagreement between the liberal and realist schools, which emphasise either economic or military power, respectively. Both schools align their analyses toward either a military or an economic power 'preference', without taking into account that the

variables are potentially of equal importance. As Djoumessi (2009:98) notes, the liberal and realist 'biases' towards economic and military power "should be brought together," and by doing so, the "proposed theory not only avoids the errors faced by both the traditional and liberal paradigms, but also... [serves] as a solution to the fundamental controversy that exists between them."

This controversy is not only apparent in the literature relating to state and political power, it is evident in the major theories associated with the study of hegemony. Briefly, Hegemonic Stability theory is often accused of being overly concerned with the role of military power and national security in its assessment of hegemony, whereas World-System's analysis has been accused of presenting an economic bias to their treatment of the same topic. Ultimately, this has a great impact on the researcher in question; both in terms of the final assessment, and in terms of 'choosing' a theory that provides the best means of making an assessment. What this 'traditional' approach results in is an evident lack of willingness to assess multiple theoretical standpoints, in order to bring the best elements of those theories together in a unified framework. Therefore, what is being proposed here is that the contrasting perspectives on economic and military power be viewed as having *equal importance*, given that both elements are relevant and mutually reinforcing.

Djoumessi's (2009:99) 'complex realist model' offers an alternative approach to the assessment of the state power base, and addresses the 'preference-based' shortcomings of mainstream approaches. While the model in its entirety will not be discussed here, the relevant section of the model is the portion (see Fig. 1.1 chapter 1) that reflects the state power base. Djoumessi (2009) makes use of five key indicators of material power, being military and economic strength, technological level, capital and natural resources. Each indicator or variable is afforded an equal 'weighting' and the lines of influence indicate that each of the variables are complimentary and mutually reinforcing.

Unlike other means of resource-specific power measurement, Djoumessi's model affords 'natural resources' an equally-weighted position. Although 'natural resources' is awarded a central position in the graphic representation of the model, it indicates the relevance of natural resources to the collective power base, rather than awarding the variable a 'more relevant' position. Djoumessi (2009:99) argues that "in addition to considering both the military and economic strength as very important, we believe that the possession of natural resources, especially energy, is also a very decisive [power base element]." For Djoumessi (2009:99) "the amount of energy consumption determines not only economic but also military capability." The perspective that energy (or primary energy) is of equal importance to liberal and traditional interpretations of state power, is rare in the standard literature.

Although the standard literature on state power is somewhat dated, energy and natural resources have most often been relegated to a secondary position, most commonly under the banner of 'economic power' and this is one of the key issues this study will attempt to address.

Sufficient evidence exists in the literature to argue the point that power, and therefore types and indicators of state power, have the capacity to 'change.' This does not imply that certain power-base elements become irrelevant. Over long periods, certain indicators may take on a greater or lesser degree of importance, depending on the broader context and the overall nature of the international system. As Joseph Nye (1990:178-179) notes, "sources of power are, in general, moving away from the emphasis on military force and conquest that marked earlier eras. Factors such as technology, education, and economic growth are becoming more important." For example, prior to the end of the Second World War, military power and military dominance was a major, if not the most important, determinant of state power. For the most part, state power rested on notions such as conquest, territorial expansion and colonialism, which emphasised the need for military (or naval) capability. With the emergence of a liberal agenda in the post-war context, economic strength assumed a position of greater importance. Power in the form of military strength (in general) is now used for security purposes, rather than war making and conquest.

While primary energy resources have become increasingly important for all states, access to sources of primary energy has become critically important for those states located at the core. Countries such as the United States, Russia and China have equated 'energy security' to issues of national security, meaning that those states have directly linked their energy supplies to both their economic and military domains. As Brenda Shaffer (2009:142) notes, "energy security is integrated thoroughly into US foreign and national security policies, and Washington frequently uses energy sanctions and policies as a tool to advance [other] policies." Other states have also used what could broadly be termed an 'energy weapon' in order to pursue their national interests. The OPEC states refusal to supply the United States and other Western countries with oil under the 1973/74 Arab Oil Embargo was intended to illicit the withdrawal of Western (primarily American) support for Israel during the Yom Kippur War. Russia too has used the threat of cutting off oil and gas supplies to Western European states as a bargaining chip.

This 'mode' of viewing primary energy in terms of its national and international security implications is very different from the manner in which primary energy was utilised in the early 20th century. Rutledge (2005:24) notes that "the [Second World] war... demonstrated, beyond any shadow of a doubt, just how crucial petroleum was to the modern armed forces

and, during the war, American refineries had supplied 80 percent of the Allied requirements for petroleum products.” In the absence of those domestic reserves in the US, the Allied powers may not have won the war, and the US may not have made its hegemonic ascent.

Ian Clark, in particular, advocates a compelling argument for the ‘redefinition’ of hegemony as a concept. As noted earlier in this chapter, Clark (2009) argues that the concept of hegemony has become rooted in a static or ‘catch-all’ approach which, when applied to multiple and differing cases, struggles to reflect the dynamic nature of the concept. As Clark (2009:24) notes, hegemony “does not refer simply to a set of material conditions in which one state is predominant; it is not, in other words, primacy alone... Rather, it is a status bestowed by others, and rests on recognition by them. This recognition is given in return for the bearing of special responsibilities.” In essence, this statement provides an excellent summary of what the concept of hegemony entails; material primacy, combined with the ability and willingness to assume international leadership, as well as legitimacy, granted by other states as a result of the hegemon’s ability to successfully supply a series of public goods to the majority of actors in the international system. Therefore, the concept of hegemony rests on three core pillars: material primacy, legitimacy, and public goods. As such, hegemony should be assessed on multiple levels, not merely in terms of whether a state is materially superior to others. Clark (2009:29) argues that hegemony has, in the past, and will most likely, into the future, appear in varying forms; collective, singular or coalitional. This argument too, does not limit hegemony to the three aforementioned forms, as Clark (2009:35) notes, “it is, of course, naïve to imply that any future institution of hegemony needs necessarily to be limited to past historical patterns.”

Therefore, if the assumptions are accepted that the importance of state power base indicators, and forms of hegemony are subject to change, the question remains: how should primary energy (oil and petroleum in this context), and international hegemony be approached? Given that this study is concentrated on making a case for the inclusion of energy as an ‘independent’ (i.e. stand-alone) variable in the study of state power, a realist ‘state-centric’ approach to this exercise is necessary, and Hegemonic Stability Theory is suited to this task. However, HST has several shortcomings that require the input of other theoretical perspectives.

- The primary shortcoming of HST is that neither Gilpin (2001), Kindleberger (1973), nor Keohane (1984) offer a concrete means of measuring material capability, nor do they supply a comprehensive ‘list’ of the variables to be assessed. Djoumessi’s Complex-Realist Model offers a framework and suitable range of power base

indicators or variables that can address this shortcoming. Djoumessi's (2009:99) incorporates five key power indicators or variables that are present in the four major theories on hegemony, and he awards each indicator an equal weighting, while using lines of influence to denote interdependence. Borrowing Robert Cox's (1981:218) approach, we can assume that "no one way determinism need be assumed among the [indicators]; the relationship can be assumed to be reciprocal. The question of which way the lines of force run is always a historical question to be answered by the study of a particular case."

- Secondly, material 'primacy' is a rather vague means of conceptualising the amount of raw power a state requires to be considered hegemonic. To quote Russett (1985:209), it remains unclear as to "how much power is necessary to produce "hegemony," and the World-Systems notion of 'simultaneous advantage' in the spheres of agro-industrial production, commerce, and finance (Wallerstein, 2000:257) offers a potential solution as to when sufficient amounts of material power exist to be translated into hegemony.
- By incorporating 'technological capabilities' as an indicator, Djoumessi recognises the importance of technological development on state power. This relationship is most clearly articulated by Modelski (1978) and Modelski and Thompson (1996) in their Long-Cycle approach. To summarise, the development of 'new lead industries' and the hegemon's ability to dominate those industries, affords the hegemon a decisive economic advantage over its rivals at the core. Technological development and the use of energy (coal, oil, and petroleum) are intrinsically linked. We can therefore assume that as the world-system moved into the industrial phase of development, successful industrial 'leads' could only be achieved through access to energy resources. As technology develops, alternative energy sources¹⁷ will have to be found as a replacement for finite fossil fuels, and therefore, technological innovation and energy will be relevant well into the future.

¹⁷ 'Alternative' energy includes both renewable and non-renewable resources. The dissemination of technology has already led to cheaper installation costs for renewable sources such as solar panels and wind turbines for electricity generation. In terms of non-renewable sources, technological advances in the fields of oil and natural gas have allowed for the extraction of 'tight' oil and shale gas that are supplementing traditional sources of oil. Oil and petroleum reserves, in particular, are a pressing issue because these fuels are used primarily for transportation purposes. Technological advances in transportation (such as hybrid and electric vehicles) using alternative energy sources will have to be pursued in order to minimise the 'petroleum' supply problem. In particular, a group of minerals known as "Rare Earths" have gained substantial strategic value in recent years, and these minerals are critical to the production of a number of advanced consumer and military technologies. Certain "Rare Earths" are also used in order to 'crack' alternative oil-fuels such as shale gas, during the production process.

- The HST treatment of public goods shifts the theory away from an over-emphasis on material power, and incorporates the element of hegemonic consensus, in an “effort to broaden the realist perspective” (Cox, 1981:222). While the willingness to ‘bear the cost’ of providing public goods is an appropriate means of legitimising the hegemon’s rule, many so-called ‘public goods’ fail to meet the criteria of non-excludability, and are therefore better understood as ‘club goods.’ Providing these goods, whether ‘public’ or ‘club’ goods, increases the hegemon’s leverage over other core states, incorporates a measure of legitimacy for the hegemon’s rule, and translates well into hegemonic control of international trade, security, and finance structures.
- Susan Strange (1987), Carla Norloff (2010), and Peter Gowan’s (2004) work on structural power and hegemonic dominance at the core is invaluable in understanding how the US has managed to retain its position, despite its apparent material decline. Robert Keohane (1984:178) argues that “to be successful in the long term, a hegemonic strategy *must recreate the conditions for its own existence*. Pursuit of a strategy must generate strength, or hegemony will eventually collapse” (emphasis added). By incorporating a structural approach, it becomes evident that US structural power (and control over global oil) has afforded the US an overwhelming advantage in that the US has been able to ‘recreate’ the conditions for its existence, and indicates why HST has struggled to forecast US hegemonic decline. Additionally, in Great Britain’s case, a structural approach to public goods under the Pax Britannica may indicate *why* Britain was unable to induce the Great Powers and other European states to fully embrace its free-trade and currency policies.

Table 2.1**Projected Outcomes Table: Provisional**

Hegemonic Power			
Hegemonic Phase	Ascent	Maintenance	Decline
Access to Energy	Med/High	Med/High	Low
Domestic Supply	High	Declining	Low
Imports	Low	Increasing	High
Dependence Level	Low	Increasing	High
Power Base	Expanding	Established	Declining
Lead Industry	New Lead	Established	Declining
Power Base	Agriculture Manufacturing	Military Commerce	Finance
Structural Power	Low	Increased/Maximised	Declining
Legitimacy/Consensus	NA	Established	Declining
Public Goods	NA	Maximum Provision	Declining

Source: Compiled by Author

Together, the aforementioned theoretical approaches to hegemony and structural change in the international system offer a method and means of approach to addressing the relationship between control over, and access to sources of oil and petroleum, and international hegemony. In using this combination of theoretical approaches (illustrated in table 2.1) the shortcomings of Hegemonic Stability Theory can be addressed. The 'provisional outcomes table' combines the aforementioned theoretical approaches and applies them to the concepts of energy and hegemony. Using the key outcomes of Hegemonic Stability Theory (Public Goods, the Power Base, and Legitimacy) as a starting point, access to and control over sources of primary energy (coal, oil, and petroleum) can be assessed. In order to address the shortcomings identified in Hegemonic Stability Theory, the theory is augmented by the addition of Susan Strange's conceptualisation of Structural Power, Modelski and Thompson's Long-Cycle approach to 'New Lead Industries' and Wallerstein's 'simultaneous advantage' approach to the three phases of hegemony.

Provisionally, the impact of access to or control over sources of primary energy on hegemony is assumed to be as follows: During the 'ascent' phase of the hegemonic cycle, the hegemon enjoys a decisive advantage over its competitors at the core in terms of 'agro-industrial production.' During this period, the hegemon's dependence on energy is relatively low. As such, the particular energy source (if any) used by the hegemon during this phase (coal or oil) is relatively freely available and demand is catered for through domestic

production. The capacity to meet energy demand through domestic production means that the hegemon has a fairly high level of 'energy security,' and is therefore insulated from external pressures resulting from dependence on foreign powers. During this period, the hegemon's power base is rapidly expanding, generally because of the hegemon's ability to develop and dominate a new lead industry. Given that the hegemon is still expanding its power base at this point, levels of structural power, ability to provide public goods, and measures of legitimacy are on the lower end of the spectrum.

During the 'maintenance' period, the hegemon has secured its position in the core. The state power base has been maximised, industrial expansion into 'leading industries' has been achieved, and the technological gains associated with dominance in a 'new lead industry' are beginning to wane, as technology is dispersed and adopted by rival states. The size and strength of the power base allows the hegemon to provide various public goods to other states in the international system, and during this period the hegemon's legitimacy is entrenched. Increased structural power is a direct effect of the hegemon's material primacy and control over public goods. Finally, during this period agricultural dominance is exchanged for military prowess and commercial advantage. Overall, levels of energy consumption will have risen, and the hegemon will likely be unable to meet energy demand through domestic production alone. Therefore, the hegemon's energy security will decline as it becomes increasingly reliant on external energy suppliers. As such, total domestic energy reserves will have declined.

In the final phase of the hegemonic cycle, the hegemon's power base is in decline. As rival states monopolise new lead industries, adopt and improve on the hegemon's technological advancements, and benefit from access to public goods, rival states 'catch up' to the hegemon, and its degree of material power declines relative to rival core states. With a decline in material capability, the hegemon's ability to provide public goods and retain the legitimacy and structural power it possessed at its peak will decline. At this stage, the hegemon will have become highly dependent on external sources of energy, its energy security will decline, and the hegemon will become increasingly vulnerable to supply disruptions. In the decline stage, the hegemon generally enjoys an advantage in the 'invisible' realm of finance and will retain the bulk of its structural power in this domain.

This framework for investigation serves as a useful approach of addressing the series of research questions, and the examination of the British and American cases, as outlined in the previous chapter.

Chapter 3: Great Britain

3.1 Introduction

To support the argument that access to sources of primary energy gives the state a competitive advantage over others by expanding its power base, it is necessary to investigate the origins of the link between primary energy, state power and international hegemony.

Evidence suggests that this link first arose during Great Britain's hegemonic reign (1815-1914)¹⁸. Just prior to Britain's victory at Waterloo in 1815, the Industrial Revolution occurred. The technological advancements made during this period gave the island nation a decisive economic and productive advantage over rival Great Powers. Together, technological and economic advancements allowed Britain to conquer swathes of territory so vast that, as the expression went, 'the sun never set on the British Empire.' While Britain's maritime strength and colonial empire were great, statistically, measures of British power were far less by degree than those attained by its American cousin after the Second World War. Nevertheless, evidence to support Britain's hegemonic claim is substantial, and Britain was indeed a hegemonic power at its peak in 1850. Key factors, including the Industrial Revolution and Britain's substantial reserves of domestic coal made the Royal Navy and commercial trade the cornerstones of British Power. Subsequently, the German naval challenge at the turn of the 20th century saw First Lord of the Admiralty, Sir Winston Churchill convert the Grand Fleet of battleships from coal to oil. By 1912, the cornerstones of British power were indefinitely (and irreversibly), tied to oil.

The following chapter explores the effects of access to and control over energy (coal and oil) on British hegemony. The first section of this chapter details the basis of British power. By using Djoumessi's (2009:99) series of power base indicators as a guide, the influence of energy on British power is explored. The pre-World War I Anglo-German naval race served as the catalyst for the conversion of the Royal Navy fleet from coal to oil power, in an effort to maintain British maritime superiority. Therefore, special attention is paid to the impact of the 'energy shift' on British hegemonic decline. This chapter illustrates that the pillars of British hegemony, maritime superiority, commerce, and finance, were dependent on coal. In contrast, British decline can partially be linked to its inability to secure reliable and affordable supplies of petroleum.

¹⁸ Some scholars date the emergence of the Pax Britannica from 1805, after the British naval victory at Trafalgar.

3.2 British Hegemony: A Theoretical Perspective

While evidence exists to support Britain's hegemonic claim across all theoretical schools, Hegemonic Stability Theory, in particular, struggles to account for the British case. British hegemony is considered to have existed for roughly a century, from the British victory over Napoleonic France in 1815, until the outbreak of the First World War (1914). The notion of 'hegemonic stability' emerged from Charles P. Kindleberger's work on international economic instability, and since then, Britain's role as stabilizer, and therefore hegemon, "has become a textbook generalization" (O'Brien and Pigman, 1992:89). However, while the international system may have reflected Britain's "liberal and open qualities," three issues arise that seemingly contradict, and undermine, the Theory of Hegemonic Stability: Britain's inability to decisively coordinate liberal economic policy in Europe, the provision of public goods, and the "chronological consistency" thereof.

In Timothy McKeown's (1983:88) discussion of *19th Century Tariff Levels in Europe*, he argues: "British efforts simply were not successful in inducing major changes in other states' tariffs." For McKeown (1983:88), "this seems clearly to contradict the theory" of hegemonic stability because it indicates that Britain's "methods of obtaining an open system clearly differed from those the theory might suggest." In order for Hegemonic Stability Theory to be considered correct, three elements of British interaction should be evident: "An 'active' British policy on lowering tariffs", "British efforts to capitalize upon... bargaining advantages to secure [lower tariffs]" and the success of these attempts should become apparent (McKeown, 1983:80-81).

While Britain did adopt free-trade policies in the 1840s, it had less success in inducing the European states to follow its lead. In particular, British efforts to induce tariff reductions in the German customs union, the *Zollverein* were only marginally successful. Where tariff reductions did occur, they were in the general 'spirit of liberalization', rather than as a direct result of British pressure (McKeown, 1983:88). Additionally, while Britain did secure bilateral trade agreements with a number of European states, it made little use of its 'structural power' (the size and strength of its domestic market, or access to 'exotic' goods) to induce European cooperation. As McKeown (1983:88) notes, Britain refused to make concessions in a number of cases, and "the British response to increased protection usually did not go beyond verbal complaints." In later years, as Europe suffered an economic depression, Britain herself reverted to protectionist trade measures.

In addition to Britain's apparent lack of success in economic policy coordination, it had only limited success in meeting HST requirements in terms of finance. European adherence to

the Gold Standard was piece-meal and many European states retained 'bi-metallic' standards. According to Eichengreen (1989:233) "[o]nly Britain maintained a full-fledged gold standard for anything approaching the century preceding 1913" until fluctuations in gold prices forced "nearly all bimetallic countries to adopt the gold standard... after 1871." This is an additional area where Britain failed to induce broad-based Great Power cooperation, as "neither Britain's dominance of international transactions nor the desire to emulate Bank of England practice prevented countries from tailoring the gold standard to their own needs" (Eichengreen, 1989:235). In part, one of the reasons that many European states maintained a bimetallic standard was because of sterling-stability and other state's willingness to hold large sterling balances for purposes of international trade. This is a second area where "the theory of hegemonic stability does not provide a satisfactory account of... the operation of the international gold standard" (Walter, 1991:111, cited in Clark, 2011:110). However, as Broz (1997:205) notes, while Britain alone did not manage the gold standard, its "stronger commitment to gold-standard orthodoxy gave the world a medium of exchange and a store of value of unquestionable credibility."

Lastly, Britain's role "as provider of a wider security order is even more suspect" (Clark, 2011:110). In contrast to the United States, a land-based power (with a powerful ability to project long-range military intervention by sea and air), Great Britain, an island nation, was required to strategically forgo military dominance in the form of a standing army, and replace it with a navy with which it could protect its immediate territory and pursue maritime trade. In particular, British protection of maritime trade routes was a critical 'public good' supplied during its hegemonic period. However, Britain is regarded as having been reluctant to involve itself militarily in disputes on the European continent, and given its 'blue water' approach to maritime trade and naval superiority (Clark, 2011:103) an extension of resources to support a powerful standing army for 'European intervention' would arguably have been unfeasible. As such, the management and resolution of security-related issues in Europe was left to the Concert of Powers. This subordination of military or security interests for predominantly economic interests has led to criticisms of Britain's hegemonic claim, especially by realist scholars who attach great value to military strength and state security.

In terms of the 'chronology' of British hegemony, further issues arise. Clark (2011:104) indicates that a lack of synchronisation exists between estimates of Britain's hegemonic 'peak,' and its ability to supply the aforementioned public goods. Firstly, British naval superiority was established well before it began to promote liberal trade policy. Secondly, "it would appear that the zenith of British economic power coincided with its manifest inability to provide other public goods," namely European security (Clark, 2011:104), and lastly,

Britain's prominent role in international finance coincided with a period when "by common consent, British economic leadership was already passing" (Clark, 2011:105).

This implies that the British case requires a different approach the US case, specifically regarding legitimacy and cooperation. According to Clark (2011:122), the exercise of British hegemony can best be ascribed to "self-restraint" and "force of example." In the first instance, Britain's lack of military, as opposed to naval, prowess limited its ability to engage in coercive practices, at least in Europe. As such, Britain did not present as a military threat to the 'European peace', which was a key ingredient in British commercial (and therefore economic) success. Accordingly, "the Pax Britannica was *an effect*, not a cause, of peace" (Clark, 2011:112 emphasis added). Secondly, once the European balance of power began to deteriorate at the turn of the century, Britain's hegemonic position began to wane. Maintaining the peace required Britain to practice 'self-restraint' in order to achieve consensus, and its inability to resort to coercion or 'sticks' to foster compliance with its policies required Britain to 'lead by example.' As such, the limited success Britain did have in promoting free trade and other economic policy grew from the European states' desire to emulate British success. Interestingly, Germany's desire to emulate British economic success led to her embrace of protectionist economic policy. The resulting strength of Germany's domestic industry gave it the material 'boost' it required to mount a challenge to British hegemony, resulting in two world wars and decades of international instability.

What these peculiarities indicate is that the British case is not well suited to the Theory of Hegemonic Stability, because the 'competing conceptions' of the nature of hegemony itself is often the cause for debate when British hegemony is examined. According to Clark (2011:101), "[t]oo much of the discussion of British hegemony remains rooted in (primarily economic) data about relative shares of resources. British power is measured quantitatively against world economic indices, and hegemony is thereby made reducible to a variety of statistical analysis." From this perspective, it is arguable that British hegemony "cannot bear the weight of the explanatory power that some have tried to thrust upon it" (Walter, 1991:112 cited in Clark, 2011:99). Essentially, any measure of British hegemony in sole terms of economic, military and financial capabilities will render the case dismissible, particularly when measures of British hegemony are made to stand up against those of the United States which, by all accounts, dwarfs any conceptualisation of British hegemony, materially or socially. However, the reduction of Hegemonic Stability Theory to a singular case (the United States) is even less productive in terms of assessing shifts in global power and dominance (McKeown, 1983:88).

3.3 The Pillars of British Hegemony

Consensus exists that British hegemony rested on three interconnected 'pillars', namely maritime superiority, domination of international trade, and finance. To this set, Britain's "geopolitical domination of the world's major raw materials" can be added (Engdahl, 2004:1). The combination of the aforementioned factors afforded Britain unparalleled power and material advantage over its competitors at the core. As a 'raw material,' Britain's access to coal carried particular naval and strategic significance.

Between the sixteenth and eighteenth centuries, the international economy was characterised by a mercantilist system of restrictive economic policy. Mercantilist practices "stimulated home production and innovation and allowed Britain to build an industrial base from which to challenge Dutch hegemony" (Lake, 1991:128). Britain's successful challenge to the Dutch, and its decisive naval victory over Napoleonic France in 1815 left Britain an unrivalled naval power. According to Kennedy (1997:51), Britain's

[M]aritime strength... was symbolized not only by its line-of-battle ships... but also by its industrial capacity to build and support such a navy; the material and monetary importance of the world's largest merchant fleet; government reliance on a maritime presence to ensure the nation's strategic security; and the strategic significance of a number of colonial bases.

According to Kennedy (1997:59), the Royal Navy's "function as protector was tied to economic and political developments. The growth of British commerce and trade in the 1840s was in large part a function of two interconnected phenomena: Britain's adoption of free trade in 1846 and an enormous increase in the volume of merchant shipping." The technological 'leaps' and economic growth made during the Industrial Revolution grew Britain's domestic industry substantially, and suffocating mercantilist policies were steadily 'dismantled' and replaced with free trade policies, evident in a reduction tariff levels and an expanding network of bilateral trade agreements. According to Cox (1986:124) during this period, "[f]ormal empire mattered less than freedom of commercial access to all countries," the economic benefits of which boosted Britain's domestic economy. 'Rents' accrued from international trade were directed to maintaining and expanding the Royal Navy fleet, which, in turn, ensured British merchant ships safe passage in international waters, allowing them to conduct trade in foreign and colonial territory. "In an open trading world," Robert Cox (1986:125) has argued, "it was clear that Britain's industrial and financial lead gave her a decisive advantage over other powers."

After 1815, "British gold, under the jealous, guarding eye of the Bank of England was the basis for the role of the pound sterling as the source... of world credit" (Engdahl, 2004:1).

Being the “major financial aspect of British primacy,” Britain’s successful management of the gold exchange standard afforded it critical advantage over its rivals (Kindleberger, 1996:136; Clark, 2011:109). Britain’s role in international finance resulted from its dominance of international trade. As such, “high returns on overseas investments, the sale of services, and the benefits conferred by the international role of sterling” afforded Britain a balance-of-payments surplus (Gilpin, 1987:173). According to Kennedy (1997:62), “British vessels employed in the foreign and colonial trades increased between 1839 and 1845 from 14,348... to 15,964..., while the value of British exports grew from £53 million in 1839 to £58 million by 1844.” This indicates that despite reluctance on the part of the European powers to adopt British free trade policies, free trade itself was greatly beneficial to Britain herself. The adoption of the Gold Standard in 1821 in conjunction with the conduct of international trade in Pound Sterling, left Britain’s economic, and London’s financial dominance, unrivalled.

Under British hegemony, adherence to free trade policy and the gold standard were the defining public goods that characterised British hegemonic reign. According to Broz (1997:209), “England’s head start in industrialization combined with the policy of free trade to generate a huge stock of wealth and savings available for loan and investment abroad.” As such, British wealth and adherence to the gold standard meant that “the world was provided with a currency eminently suitable for international transaction and reserve purposes—one of the necessary system-sustaining functions identified by Kindleberger” (Broz, 1997:205). By maintaining gold-convertibility, Britain ensured that the Sterling was ‘as good as gold’ and it “became almost universally accepted as a transaction and reserve currency,” allowing Britain to act as lender of last resort (Broz, 1997:218).

Of interest regarding the provision of public goods under international hegemony is the marked contrast between British and subsequent US control over the institutions and structural elements guiding the international system. In the first instance, Broz (1997:209) argues that British management of the Sterling as global reserve currency “was a spillover – a positive externality – of Britain’s individual preference for monetary orthodoxy” rather than a conscious effort to stabilise the international economic order. Arguably, Britain’s approach to and promotion of free trade could be regarded in a similar light: an effect of British need or preference as opposed to a conscious effort to liberalise the international economy. As such, adherence to the gold standard (which was mixed until fluctuations in world silver prices necessitated a shift to gold in the 1870s), and an unwillingness by many states (including Germany and the United States) to fully commit to free trade policy indicate a marked lack of British hegemonic influence over rival powers. In part, formal institutions (such the GATT, Bretton Woods, and the IMF) did not exist under the *Pax Britannica*. According to Lake (1991:135) “Britain led the international economy in the nineteenth century without recourse

to any formal international institutions” and thus the nineteenth century “was a period of weak or, at best, implicit international economic regimes.” The primary outcome from a lack of regimes is that the economic order maintained by Britain could not ‘persevere’ as no formal structures existed in which cooperation on these matters could occur. While Britain did both champion and dominate two critical elements of the global economy in the 19th century, free trade and the gold standard, Britain’s inability to formalise these regimes and illicit cooperation in the manner that the United States has done, indicates a lack of British structural power over the international economic system¹⁹.

Technologically, the advent of the ‘Newcomen’²⁰ steam engine in Britain gave rise to the first Industrial Revolution (1750-1860), which fundamentally changed the way in which the production of goods occurred. According to Kindleberger (1996:128), while British trade ‘boomed’ during the eighteenth century, “British primacy cannot be said to have begun until the industrial revolution.” Here, technological innovation and the availability of domestic sources of coal fuel for steam-powered machinery afforded Britain a staggering advantage over its peers in Europe. A large manufacturing sector developed in Britain that saw, for the first time, the ‘mass’ production of goods (predominantly textiles) which could then be shipped abroad and sold for profit. Raw materials from Britain’s colonial empire were traded for finished goods, and a steady supply of both was required to feed the “ever evolving industrial and commercial revolution that was occurring in Great Britain” (Kennedy, 1997:51). In turn, British domestic industry and economic interests were heavily dependent on a ready supply of coal, and a functioning merchant marine, one that could not have thrived without the protection of the Royal Navy (RN).

The strength of the Royal Navy was particularly dependent on coal. Technological developments in steam power meant that the Royal Navy, which had embraced the conversion of shipping from sail to steam, was dependent on unfettered access to coal. Fortunately, Britain possessed tons of high quality, ‘Cardiff coal,’ a brand of coal sought-after for its steam-producing capabilities by shipping merchants and navies across the globe (Dahl, 2001:50-51). In the words of Ian O. Lesser (1991:21), “Britain was the Saudi-Arabia of coal.” While Britain did not, in real terms, possess the coal equivalent to Saudi Arabia’s oil

¹⁹ Although the argument being made here is that Great Britain lacked the ability to formalise various trade and financial institutions, which may indicate a marked lack of British ‘structural’ power over the European Powers during its hegemonic reign, it has been noted that Britain’s lack of formal approach to institution- or regime-building may equally be attributed to Britain’s particular political tradition, which unlike the United States tradition, is less formal.

²⁰ According to Roberts (2005:21) Thomas Newcomen, a metal smith, invented the first “coal-powered, ‘self-acting’ device” to pump water out of flooded mineshafts in 1721. This rudimentary steam engine was used to drain flooded coalmines, which greatly improved Britain’s coal production capability from some three million tons in 1712 to roughly double the amount by 1750 (Roberts, 2005:23).

deposits, Britain did enjoy a position in the global fuel market similar to that of Saudi Arabia today, for three reasons.

Firstly, the quality of the coal was unparalleled. Cardiff coal was “the best in the world for naval use” (Gibson, 2012:3). According to Warwick Brown (2003:12), Welsh steam coal was sought-after in that it was,

not so hard that it burnt too hot and damaged furnaces, but not too friable and open so it broke into dust and burnt too fast. It contained few impurities, allowing fires to be maintained longer before furnaces became choked and required extinguishing, cleaning and relaying. It produced a more complete combustion keeping smoke and ash to a minimum and maximum stowage of calorific value per volume.

Welsh coal, when burned correctly, produced a minimum of smoke and was highly prized in that its use would not readily betray a ship’s position by creating a large plume of dark smoke associated with the use of lower quality coals. Therefore, the ‘calorific value’ and strategic necessity of ‘clean burning’ coal ensured a consistent international demand for, and a lucrative trade in, British coal. The demand for British coal is evident in that despite producing less coal per ton than the United States, “[i]n 1913 [Britain] exported 100 million out of its total output of 292 million metric tons of coal” whereas “the USA send only 20 million of its output of 518 million metric tons abroad” (Gibson, 2012:17).

Secondly, Britain’s extensive international network of coaling stations saw Britain dominate the international coal ‘supply chain.’ Access to foreign territory across the Empire allowed Britain to oversee the construction of multiple coaling stations and dry docks, located at strategic geographical points across the globe, to which the British shipped their own brand of Welsh coal. Coaling stations were built in a number of strategic locations along maritime trade routes and ‘lines of communication’, including “Gibraltar, Malta, Port Said, Singapore, Hong Kong... Shanghai” as well as St Helena, and Table Bay at the Cape (Notz, 1918:577; Shurman and Beeler, 2000).

Thirdly, sourced directly from Wales, ‘Cardiff’ coal was safely located within British borders, meaning that the Royal Navy’s supply of coal was only ever subject to domestic, as opposed to international, pressures. Most importantly, the British government remained solely in control of its own fuel supply. This meant that Britain enjoyed an extremely favourable level of ‘energy security,’ which was critical to the ‘preservation’ of British naval, commerce, and by association, financial supremacy. From a security perspective, British naval forces could be redeployed as necessary from the

aforementioned ports, improving Britain's power projection capabilities. Finally, domination of international coal bunkering facilities "gave Britain great influence over the strategic mobility of other powers" because it could grant or deny foreign powers access to British-controlled facilities (Lessor, 1991:13).²¹

Despite Britain's eminent global position, by the 1870s Britain's power had begun to decline as other states attempting to emulate the British experience, 'caught up,' and challenged Britain's industrial lead. With Britain's relative decline, the United States and Germany, Britain's strongest competitors, abandoned free trade principles and returned to protectionism in order to foster domestic industrial growth. By the turn of the century, the US had overtaken Britain in industrial production, and Germany began to mount a hegemonic challenge, which would culminate in the Admiralty's decision to convert the Royal Navy fleet, the cornerstone of British hegemonic power, from coal to oil. In one fell swoop, the multitude of logistical and strategic benefits associated with the use of coal were replaced by short-term technological advantage that saw Britain's energy security position, its power base, and hegemonic position, deteriorate.

3.4 A Hegemonic Challenge

Between 1870 and 1914, Germany and the United States emerged as viable contenders to Britain's continued hegemonic dominance. In order to meet that challenge, with particular

²¹ A notable example of the 'strategic' advantage Britain possessed because of its control of international coal bunkering facilities occurred when Britain chose to deny the Russian fleet access to British coal during the Russo-Japanese war. Britain maintained, "any ship, domestic or foreign, that was "employed in the military or naval service of any foreign State at war with any friendly State" could not take on coal in British ports" (Cecil, 1964:992). The Russian fleet's 'obsolete boilers' required Welsh steam coal to function. When Britain denied Russia access to British coal and their global network coaling stations, the Russian fleet's journey to Vladivostok proved to be a challenge. The British, while having supplied the Russian navy (like many others) in the past with Welsh coal, could not afford to support Russia because of the 1902 alliance it entered into with Japan. Quietly however, a German-owned coaling company had been retrieving shipments of Welsh coal from Britain and 'illegally' delivering these shipments to the Russian fleet, directly contravening Britain's 'no coal for warring states' policy. The ensuing diplomatic battle between the German and Russian government's, and increasing fear of potential British retaliation, stalled the Russian fleet's journey and it took several months from September 1904 until May 1905 for the fleet to travel from Kronstadt, St Petersburg to Vladivostok, some 18 000 miles away (Cecil, 1964:990). According to Yergin (2011:168), "the Russian forces lurched from one military disaster to the next, culminating in the burial at sea of the entire Russian fleet at the Battle of Tsushima." Russia's ships "were for the most part rusty, undermanned, antiquated hulks in no condition to make steam for such a long and arduous voyage" (Cecil, 1964:990), and the delay caused by Britain's refusal to coal the 'antiquated' Russian fleet may have indirectly contributed to a swift Japanese victory.

focus on Germany, Britain made the critical decision to convert the Royal Navy fleet, from coal to oil. While Britain's hegemonic ascent comprised of a number of factors, an alternative primary underlying factor was Britain's 'coal security'- unobstructed access to large, high-quality supplies of Welsh steam coal, the possession of strategic coaling stations across the globe, and a technologically advanced Royal Navy that offered Britain protection and safeguarded British maritime trade. The decision to make the switch from the virtually guaranteed security of coal to the less secure, less dependable and more expensive oil fuel would later become a distinct disadvantage for Britain and its economic and security domains. The following section seeks to explore Britain's 'oil switch,' the reasoning behind this critical decision, and how, in comparison to coal, the move to oil undermined Britain's power base and eventually signalled her absolute decline as a global hegemonic power.

Between 1870 and 1920, continental Europe gave rise to the second Industrial Revolution. Unlike the first Industrial Revolution of 1760-1850, which took place in Great Britain, the second Industrial Revolution found its roots elsewhere: Germany. By this point Britain had begun to suffer a decline. Despite having dominated international manufacturing for decades, especially in terms of textile production, Britain had failed to 'keep up' with the rest of Europe after their first technological leap. Around 1870 British manufacturing had begun to decline, and with it, domestic industry in Britain itself. Britain's economic model and free-trade policies, which had at one time been emulated by other European states, had resulted, after some 30 years, in an economic downturn. This resultant economic shift saw a return to protectionist trade policies and rising levels of unemployment in Britain and Europe.

The British policy of absolute free trade and the gradual dismantling of mercantilist trade barriers, "designed to maintain a favourable balance of trade, restrict colonial commerce, and produce a stockpiling of bullion," (Cox, 1986:130) opened British markets to competition. With the 'reform movement,' the "repeal of the Corn Law was no doubt the culmination of a long effort to remove the state from the business of protecting internal markets against foreign competition" (Wallerstein, 2000:459). The repeal of the Corn Law (as well as some 600 other protectionist tariffs and duties during the reform period) resulted in "the devastating harvest of 1845 along with the potato blight over much of Northern Europe and Ireland" (Kindleberger, 1996:133). Britain's domestic markets were opened to a host of European and other imports, and British agriculture suffered, arguably leading to a decline in British wages (which were dependent on the price of wheat), and increased levels of unemployment. As such, Britain was subject to a series of economic depressions from around 1870 until the turn of the century.

While Britain may have suffered decline, the economic climate in Germany looked decisively different. After declining to emulate the British free-trade economic model, Germany turned to the protectionist economic practices of Friedrich List. Through doing so, Germany and other continental European powers began to reject Adam Smith and David Ricardo's economic theories. Instead, they set about "building up national industry... agricultural production, [and] turned increasingly to a form of national economic strategy" (Engdahl, 2004:11). This shift in economic policy fostered 'remarkable' economic growth in Germany and it emerged, alongside the United States, as Britain's primary competitor. Germany had directed its efforts into developing domestic scientific and engineering capabilities, increasing rail and communications infrastructure, increasing steel and iron production, developing the electricity, pharmaceutical and chemical industries, as well as the mechanisation of farming (Engdahl, 2004:11-14; Kindleberger, 1996:159; Trumpener, 2005:107). Collectively, this shift from free-trade policy to a policy of developing and safeguarding domestic industry allowed Germany to achieve unprecedented levels of growth in a very short period between 1870 and 1900. In the same way that British control over domestic industry allowed it to challenge the Dutch, a return to protectionism saw Germany emerge as a powerful industrial rival, and hegemonic challenger at the turn of the century.

During Germany's economic growth period, German national interests began to turn towards matters of trade and security. The twin developments of rail infrastructure, coupled with increased iron and steel production gave Germany the industrial capacity it required to develop a fleet and merchant navy to rival that of Britain. "In 1870... the German merchant fleet at the time was the fifth largest in the world... By 1914 Germany's fleet had risen to second place, just behind Britain's and gaining rapidly" (Engdahl, 2004:16). The improvement of Hamburg harbour gave Germany the opportunity to develop "the most modern and efficient port facilities in all Europe," and this in turn attracted large amounts of European sea and rail freight. Germany expanded its shipping presence to such a degree that traditional spheres of British influence in Egypt, the Americas and the Middle East were infringed upon (Engdahl: 2004:17). Between 1889 and 1906 Germany also set about rebuilding their navy, managing successfully in 1906 to 'out build' the British and produce a class of battleship superior to the Royal Navy's 'Dreadnought' class – the most advanced battleship, in terms of speed, agility and firepower, of the time. In 1911 the German "gunboat *Panther* sailed into the Moroccan port of Agadir – in [a] clumsy ploy meant to assert Germany's insistence on its place in the African sun" (Yergin, 2011:198). The 'Agadir crisis' illustrated to the British Admiralty, and to Churchill in particular, that "[e]xpansionism was the German goal, and the growth of the German fleet served no purpose save to threaten Britain" (Yergin, 2011:198).

Naturally, Germany's infringement on Britain's naval prowess, the rapid expansion of Germany's shipping network and the increase in German influence in traditional British 'spheres' was a cause for great concern among the Admiralty (Trumpener, 2005:107). According to Yergin (2008:195), while "many factors contributed to the growing enmity between them... no single factor counted for as much as the burgeoning naval race between Britain and Germany." Therefore, in order to preserve the status quo and guarantee Britain's continued hegemonic dominance, the 'German issue' had to be resolved. To paraphrase the *Daily Telegraph* British sentiment was that 'while she may have lost her maritime monopoly, she had not lost her supremacy' (cited in Kindleberger, 1996:160).

3.5 The Oil Shift

Between 1890 and the outbreak of World War I in 1914, a series of events unfolded in the Middle East that saw Anglo-German rivalry reach its peak. While armed conflict between Germany and Britain over territorial concessions in the Middle East never materialised, Britain did spend the 15 years prior to the outbreak of World War I strategically, although unsuccessfully, undermining German efforts in the region. By 1890, a consortium of German interests had completed the first leg of an inter-continental railway linking Berlin to Baghdad²², in the oil-rich region then known as Mesopotamia. The first stretch of the railway linked Berlin to Constantinople (today - Istanbul) and afforded Germany potential access previously 'closed' sources of raw materials (most notably, several oil fields) and markets in the interior. In particular, German control over the Baghdad railway in the interior was a lucrative source of trade. By 1890, the same German consortium sought to extend the railway a further 2500km south to Baghdad, to complete the link. In Mesopotamia, the Mosul and Baghdad regions in particular were thought to hold vast, untapped reserves of oil. Both Germany and Britain were aware of these oil deposits, and Germany, as part of the Berlin-Baghdad agreement pushed concessions from the Ottoman government to prospect for, exploit and take ownership of any resources within a 20-kilometre stretch on either side of the railway (Engdahl, 2012:10). Britain also had an interest in securing concessions in the region, and as such the "Foreign Office... made great diplomatic efforts to help British interests obtain an oil concession over most of Mesopotamia" (Kent, 2005: 175). For Germany, who, like Britain, lacked domestic sources of petroleum, an agreement of this kind would be critical. However, negotiations for concessions in the region were unsuccessful,

²² For an excellent discussion of Germany's position in the Middle East, including the strategic significance of the Berlin-Baghdad Railway scheme for German, British and other Great Power economic interests, see Kent (2005).

and Britain was forced to consider “including German interests... [but]... the actual concessions still had not been obtained by the time war broke out” (Kent, 2005:175).

German competition for Middle Eastern oil reserves caused great concern for the British for a number of reasons. Firstly, the expansion of German geo-strategic interests in the Middle East was viewed as a threat to British national interests, threatening access to Egypt and the Suez Canal to the west, and access to the land-route to India, the ‘jewel of the British crown,’ to the east (Kent, 2005). Secondly, German presence was extended over vast tracts of land in the interior via rail, where Britain, a naval power, could not easily project its power and exert military ‘reach’. Thirdly, by the turn of the century the question of oil supply had already surfaced. For the most part, the European powers (aside from Russia and parts of Eastern Europe) lacked domestic oil reserves, and the variety of oil on most markets was a variant of kerosene, used for lighting. Oil fuel was quickly adopted by many states as it served as a superior naval fuel, and by WWII the majority of navies had adopted oil and this ‘neutralized gains’ associated with the use of this new technology, shifting importance onto supply and control of oil resources instead (Dahl, 2001: 55-56).

The British response to Germany’s efforts in Mesopotamia serves as an excellent example of how control over sources of primary energy became linked to matters of British national interest and state security. By 1911, Britain was ‘on the verge’ of converting their naval fleet from coal to oil power, and assumed that the German’s were following suit (Dahl, 2001). This naturally created a sense of urgency among the admiralty and accelerated the drive to develop oil-powered ships that could achieve 25knots of speed on the open ocean, out-maneuvre the German fleet and secure a victory for Britain in the Anglo-German naval race. The adoption of oil fuel for naval purposes was therefore the only means through which Britain could achieve an advantage over Germany.

In 1911, when Churchill assumed his post as First Lord of the Admiralty, “coal was still the primary source of power for naval vessels” (Dahl, 2001:50), although the “Navy had already built or was building fifty-six destroyers... and seventy-four submarines that could only be driven by oil” (Yergin, 2011:201; Brown, 2012:66). Strategically, and logistically, coal power had several disadvantages. The transportation of coal, as well as the process of ‘re-coaling’ a ship in port was both time-consuming and labour intensive. Additionally, as Dahl (2001:51) notes, “it was virtually impossible to refuel at sea, meaning that a quarter of the fleet might be forced to put into harbour... at any one time.” Clearly, for Churchill, while the supply of coal was in abundance, its use presented several drawbacks of the kind that could severely hamper British strategic advantage in the event of war. Oil, by contrast, had multiple

advantages. While coal-power technology had reached its limit, the use of oil-fired engines was a relatively new and improving technology. Using oil, ships could travel twice the distance and achieve greater speeds than though coal power (Dahl, 2001: 51). Additionally, refuelling with oil at sea was, unlike coal, a potentially feasible option.

However, despite awareness of these technological advantages, British battleships “the very backbone of the Navy” remained coal-fuelled (Yergin, 2011:201). For Churchill and his ‘unofficial advisor,’ the ‘oil-mad’ Admiral Jacky Fisher, the technological advantage conferred by oil-propelled battleships was critical to Britain successfully meeting the coming German challenge. Coal technologies had reached their development limit, and for Churchill and Fisher, the speed and agility they envisioned for the Grand Fleet, oil-powered battleships were the only option. In April 1912, the decision was made, and “a fast division, the Queen Elizabeth class” of oil-fired battleships was commissioned (Yergin, 2011:202). Between 1912 and 1914, every ship commissioned to be built by the Royal Navy was oil-fired. Up until that time, it “constituted the greatest addition – in terms of sheer power and cost – in the history of the Royal Navy” (Yergin, 2011:202). Once the conversion had taken place, Britain’s fate was irreversibly tied to oil

Once Britain’s fleet had been converted, all that remained was for Britain to secure a reliable supply of oil, and to resolve issues related to the transportation of oil and its storage (Dahl, 2001:52). In the words of Churchill, while “the advantages conferred by liquid fuel were inestimable,” (Dahl, 2001:51), that alone would not guarantee Britain’s success. In short, the British government began a campaign to ensure security of its own oil needs, but to also deny Germany access to a stable source of petroleum (Engdahl, 2004:28). If Britain could not compete with German technology, then Britain would seek to “control the raw material on which.. [it] must run” (Engdahl, 2004:29).

Ultimately, two potential companies were considered by the Admiralty to serve as suppliers of oil: Royal Dutch Shell and the Anglo-Persian Oil Company (now British Petroleum)²³. Wary of the ties between the Dutch government and Germany at the time, Britain chose not to award the supply contract to the Shell oil company, believing that those ties may (in the future) be used by the German government to disrupt the Royal Navy’s fuel supply. Instead, the Admiralty chose to award their contract to the much smaller Anglo-Persian Oil Company (Dahl, 2001:52). Then, “by early 1913... at Churchill’s urging, the British government bought up majority share ownership of Anglo-Persian Oil... From this point, oil was at the core of British strategic interest” (Engdahl, 2004:28). Shortly thereafter, through a series of

²³ For a historical account of the British government’s relationship with the Royal-Dutch Shell (Shell) and Anglo-Persian Oil Companies (BP) see Moore (2009).

underhand agreements, the British government and Anglo-Persian succeeded in taking control of the German-Turkish oil enterprise, a company which held “exclusive oil rights along both sides of the newly-built Berlin-Baghdad railway” (Engdahl, 2012:12), thus robbing Germany of her aspirations of a secure oil supply. Well into the twentieth century, security of oil supply would remain a critical issue for Germany.

3.6 Oil and the Great War: Britain’s Strategic Disadvantage

By the outbreak of the Great War in 1914, the bulk of the Royal Navy’s battleships had been converted from coal to oil. While coal-power remained in use for smaller auxiliary craft, Britain’s main defences rested on the ability of its government to maintain (and obtain) a secure and reliable source of petroleum during wartime. Control over and access to oil proved to be one the biggest strategic disadvantages experienced by the Royal Navy during wartime.

At the outbreak of the war, British petroleum stocks were considered sufficient, freight prices had dropped, and “there was no immediate consternation over supplies” (Brown, 2003:136). By 1915 however, consumption had begun to overtake available supply and Britain began to face shortages. Britain’s oil shortage was the result of two factors: firstly, insufficient tanker tonnage was available to transport oil stocks to Britain, and secondly, the Anglo-Persian Oil Company (APOC) over which the Admiralty had total production control during wartime, struggled to meet demand. Chronic underproduction meant that “[e]ven if the Admiralty had taken all the oil fuel the company produced, it would still only have amounted to one fifth of naval requirements” (Brown, 2003:140-141).

By 1916, British oil stocks were looking grim. Having just participated in the only major naval battle of the First World War, the Battle of Jutland²⁴, Britain’s disputed (and somewhat premature) claim of victory over Germany was soured by Germany’s use of unrestricted submarine warfare to quash the Allied effort. While “the German fleet was victorious in a tactical sense, succeeding as they did in escaping from a trap,” Britain retained the strategic upper hand (Yergin, 2011:222). The German High Fleet was predominantly coal-fired, and Britain’s control over the majority of international coaling stations meant that the German fleet would have been restricted in terms of ‘safe’ locations to re-coal. After Jutland, the German High fleet remained in port for the duration

²⁴ The Battle of Jutland remains a contentious topic in world history. For a detailed account, see: Gordon (2005).

of the war. Unable to mount a viable challenge with the obsolete Grand Fleet, Germany declared “the area around the British Isles to be a war zone” (Fordham, 2009:289), and mounted three unrestricted submarine campaigns. The effect on British trade and security was substantial.

Because of tanker shortages, British oil stocks had dropped below the requisite six months’ supply level (Brown, 2003:109). By 1917 “nearly every British flagged tanker had been requisitioned and the Grand Fleet had surrendered all the oilers it thought it could spare” (Brown, 2003:150). The crisis was not so much that oil was unavailable (most of the stock originated in the United States and Central America), but that the stock could not be transported. In 1917, in the wake of an unrestricted German submarine campaign that laid waste to scores of British oil tankers and freighters, the Admiralty approached the United States (who remained a neutral power in the on-going war), for help. By this point, some “three quarters of British oil came over the Atlantic from the United States, and the German submarines made a special effort to sink the tankers” (Jones, 1981:178). The Admiralty required both oil and tankers for transport, putting increasing strain on the availability of both. In June 1917, “[s]hipping [oil] in double bottoms was introduced on North Atlantic routes... the monthly average, until the practice was stopped shortly before Armistice, [was] around 100,000 tons” (Brown, 2003:155). A consequence of using double-bottoms however was that Britain was forced to sacrifice some 1.25 million tons of dry cargo – primarily stocks of food and other essential dry goods (Brown, 2003:155). At the time, the US remained a neutral power, albeit openly supplying the Allied war effort (Fordham, 2007).

From an economic perspective, levels of US trade expanded exponentially during wartime. The targeting of US ships during Germany’s third and final submarine campaign provided the motivation for the US to enter the war in 1917, on the side of the Allies. Arguably, because of the tons of oil, massive loans, and other goods supplied primarily to Great Britain by the United States, an Allied victory would not have been secured. It appears that without the United States, indeed, the United Kingdom would have been unable to shoulder the burden of the war effort. According to Broadberry and Howlett, 2003:17), “[t]otal overseas borrowing by the government during the war amounted to £1,365 million by the end of the financial year 1918/19, with 75 per cent coming from the United States.” By far, estimates of the total cost of war on the Allied and Entente powers indicate that Britain shouldered the ‘lion’s share’ of the burden (Broadberry and Howlett, 2003). However, where Britain accrued debt, the United States grew in terms of trade. “The share of American exports going to the Allies rose from 61 percent before the war to

more than 80 percent during the war” (Fordham, 2007:286). Fordham (2007: 286) argues that with British military expenditure in the United States expanded to some 40 percent of total expenditures, it was if anything, economically viable for the United States to retain trade ties with the Allied Powers. As a result, American trade with the Central Powers declined absolutely and this is ultimately, what brought the Germans into conflict with the United States.

The German submarine campaigns, which occurred thrice from February 1915 until November 1918, were Germany’s only ‘successful’ means of reducing Allied trade with the United States, especially since the German High Fleet remained in port for the remainder of the war. According to Fordham (2007:290), the “first two submarine campaigns had averaged only [a loss of] 116,000 and 183,000 tons” respectively of Allied cargo per month, whereas the final campaign beginning in February 1917, in which both American and Allied ships were targeted, averaged “an unprecedented monthly average of 630,000 tons of shipping in the following six months.” This final campaign put enormous stress on the United States ability to supply the Allied war effort, primarily for reasons relating to the availability of merchant vessels for transportation, around the same time that Great Britain began to experience aggravated petroleum shortages.

3.7 Energy Security

Arguably, Churchill’s decision to convert the Grand Fleet from coal to oil in order to meet the German naval challenge cannot be regarded as beneficial. The single ‘defining’ naval confrontation between Germany and Britain at Jutland saw both sides declare victory. While Britain may have gained a strategic advantage over Germany because of Germany’s reluctance (or inability) to mobilise the High Fleet after 1916, this likely had more to do with Britain’s control over the majority of international coaling stations, and Germany’s inability to regularly, and reliably re-coal its fleet than with it had to do with a particular British naval advantage. Tactically however, Germany’s decision to engage the Allies in an unrestricted submarine campaign did inflict harm on Britain. Lack of access to sea freight and the drastic reductions in available vessels for transportation raised Britain’s war debt to the United States and raised total wartime expenditure. While oil imports may not have constituted the ‘lion’s share’ of British war debt, they certainly had a negative impact on British war debt and their resulting ‘overstretch.’

For the most part, Britain lacked a cohesive oil policy prior to the outbreak of war. “Britain’s oil strategy in 1914 was to build up reserves cheaply in peacetime and to buy on

the market in wartime,” however, Germany’s targeting of Allied tankers during its 1917 submarine campaign proved that Britain required ‘controllable’ supplies of fuel (Gibson, 2012:3). In order to sustain the Allied war effort, the US assumed the greatest part of the burden of supplying the Allies with fuel. As of 1913, Britain consumed the bulk of the United States surplus (see table 3.1), while British oil consumption increased dramatically at the height of World War I (see table 3.2). Having sacrificed the security and stability of coal for the tactical advantages of oil, Britain was essentially dependent on the goodwill of the United States. As such, the strain of supplying the Allied war effort was believed to have depleted US reserves, and immediately after the war, both the United States and Britain turned to the Middle East as the centre of the Allies post-war supply.

Table 3.1: Leading Oil Producers 1913

1913	Total output, tons	Exportable surplus, tons	Exportable surplus, per cent of total output	UK imports, tons	UK imports, per cent of exportable surplus
USA	33,150,000	7,120,000	21%	1100000	16%
Romania	1,880,000	940,000	50%	230000	19%
Russia	8,370,000	670,000	8%	130000	19%
Mexico	3,480,000	1,740,000	50%	70000	4%
Dutch East Indies	1,500,000			125000	8%

Source: Gibson (2012).

Table 3.2: British Oil Production and Consumption 1911-1917

Year	Output of oil shale	Crude oil produced	Imports	Total	Exports	Consumption
1911	3,206,576	293,660				
1912	3,284,956	294,699	1,653,333	1,948,032	26,846	1,921,186
1913	3,369,321	289,683	1,952,427	2,242,110	16,505	2,225,605
1914	3,388,869	285,464	2,586,850	2,872,314	20,444	2,851,870
1915	3,187,592	263,083	2,354,079	2,617,162	46,079	2,571,083
1916	3,102,036	247,471	3,159,195	3,406,666	27,907	3,378,759
1917	3,200,883	249,598	4,187,569	4,437,167	20,800	4,416,367

Source: Gibson (2012).

In sum, while Germany had less access to stocks of petroleum than did Britain, neither state enjoyed a particular disadvantage as a result. Germany had planned, initially, for a land-based conflict, which at the time could have succeeded in the absence of large petroleum stocks because the mechanisation of warfare had not yet fully occurred. Britain however, concentrated her energies into maritime warfare, for which secure, reliable and transportable stocks of petroleum were required. At the height of the German submarine campaign in 1916/1917, the Royal Navy's Grand Fleet was rendered almost immobile for fear of cutting into valuable reserves of petroleum (Jones, 1981:178). For Britain, retaining trade ties with the United States was not only critical to ensuring the survival of the British population, the oil supplied to Britain and the Allies during the course of the war was paramount to both domestic industry and Britain's security. In all, some 80 percent of the United States oil was used to support the Allied war effort, giving rise to Lord Curzon's frequently cited observation that the "Allies were carried to victory on a flood of oil" (Engdahl, 2004:39).

3.8 Summary and Concluding Remarks

In conclusion, the British case for energy and hegemony is somewhat ambiguous. While access to and control over sources of domestic coal gave Britain a decisive industrial, strategic, and naval advantage prior to 1912, Churchill's decision to convert the Grand Fleet from coal to oil propulsion had mixed success, and if anything, it is arguable that Britain's inability to access secure petroleum supplies aggravated its already weakened financial position. Having "sold off many of its overseas assets to pay for the necessary wartime supplies", Britain was no longer able to offset its trade deficit, and its preeminent pre-war position was lost (Lake, 1991: 129) However, the oil-shift occurred during the final phase of Britain's hegemonic cycle, and its subsequent decline can be attributed to a number of factors; Britain's loss of productive and technological advantage, the rise of counter-hegemonic powers such as the United States and Germany, and an inability to sustain the City of London's role in the management of international finance.

In terms of the applicability of the theoretical framework (outlined in chapter 1) to the British case, a number of tentative conclusions can be drawn. Firstly, the duration and timing of Britain's progression through the three phases of hegemony is problematic. As indicated earlier in this chapter, a lack of synchronisation exists with regard to Britain's economic primacy and its ability to successfully supply public goods and coordinate Great Power

cooperation concerning adherence to the gold standard and free trade. In particular, Britain’s relative lack of ‘structural power’ comes to the fore in this regard. While Britain may have successfully managed the gold standard and the supply of Sterling as reserve currency, in the absence of ‘formalised’ international financial institutions or regimes, Britain lacked the capacity to illicit Great Power cooperation. If the *Pax Britannica* was indeed a consequence of the ‘European peace,’ then British efforts to illicit Great Power cooperation through anything but ‘force by example’ and ‘self restraint’ would have spelled the end of British hegemony. A lack of coercive power through which Britain could potentially have exerted ‘leverage’ over the European states meant that Britain had no option but to maintain a fairly ‘loose’ approach to the organisation of the liberal economy. As such, little incentive existed for the European states to adopt and strictly adhere to British policy, and in the absence of formalised currency and trade regimes, through which these practices could endure, the system collapsed with the disruption of the European peace.

Regarding the synthesis between energy and public goods under British hegemony, the only viable conclusion that can be drawn is British commercial and financial success (founded on the superiority of the Royal Navy) stimulated a need for Britain to assume a greater role in the management of the liberal economy, because it benefitted the hegemon to do so.

Table 3.3

Projected Outcomes Table 1: Great Britain

Great Britain			
Years	1815-1850	1850-1870	1870-1914
Hegemonic Phase	Ascent	Maintenance	Decline
Energy Type	Coal	Coal	Oil/Petroleum
Domestic Supply	High	High	Low
Imports	None	None	High
Dependence Level	Export surplus	Export Surplus	High
Power Base	Expanding	Established	Declining
	Naval Supremacy established after victory over France at Waterloo	Textile manufacturing Exports Technological innovation Steam 'Lead Industry' growth Colonial Empire	Finance/ International Banking Gold Standard
Public Goods	Maritime Security	Free Trade Gold Standard Maritime Security	Gold Standard Trading Currency Maritime Security

Compiled by Author

From a broader perspective, while access to and control over coal certainly had a positive impact on Britain’s power base, is difficult to imagine that the ‘oil shift’ could have occurred

any later. In order to maintain British naval supremacy, alternative technologies had to be developed, and oil met the navy's requirements. The technological 'lead' Britain gained through conversion was brief, in that by the outbreak of World War II, internal combustion technologies had developed and diffused, rendering any advantage Britain may have possessed during the Great War, nil. If anything, the diffusion of oil-fuelled technologies increased Britain's oil needs, making the control of oil supplies (and oil-rich territory) a key post-war geostrategic objective. An important aspect of the 'oil shift' that can be learnt from the British experience, is that in the absence of secure and reliable sources of primary energy, technological advancement and the creation of 'new lead industries' are not necessarily beneficial. In the long-term however, it is unlikely that naval innovation could have moved forward in any direction but oil. Coal technology had reached its peak, and cheap, easily accessible alternatives were scarce. In order to sustain British naval and maritime supremacy, the key factors underpinning British hegemony, a technological shift (to oil) was necessary.

Chapter 4: US Hegemony and Global Oil

4.1 Introduction

The link between American hegemony and control over and access to sources of primary energy is clearly defined. Following the technological advancements made by Great Britain during its hegemonic reign, the United States has made excellent use of its privileged position to secure access to energy, and in doing so, has maintained its hegemonic status. Although US hegemony has been subject to increased levels of both structural and material strain in recent decades, it is arguable, at least in the medium term, that America will retain its hegemonic position. The United States 'privileged position' allowed it to restructure the international economic order in the post war era, in such a way as to benefit itself and its interests. The "role of American military [economic, and financial] power to sustain" that order, "and the necessity of controlling vital oil supplies – are closely related" (Stokes and Raphael, 2010:1).

The following chapter will demonstrate the linkages between American ability to control vital sources of oil, and its economic, military, and financial power. Oil, in part, brought the US the primacy it required to assert itself as a hegemon, and control over oil is what sustains American hegemony in the 21st century. The 'pillars' of US hegemony namely, economy, finance, and security will be used as a means of highlighting the areas in which US hegemony, the US powerbase, and control over or access to supplies of oil intersect to uphold and maintain American hegemony.

4.2 American Hegemony: A Theoretical Perspective

By most accounts, American hegemony serves as a striking contrast to British hegemony. Given that the United States possessed overwhelming primacy, including its ability to wield influence and to exert power in such a way as to fundamentally restructure the 'rules and arrangements' that had governed the liberal international economy up until 1945, "the US case has been found much more convincing and has enjoyed a less equivocal following" (Clark, 2011:123). In general, broad consensus exists that the United States did indeed emerge as a hegemon after 1945, and as such, the literature available on the topic is concerned with three objectives. Since the 1970s, Hegemonic Stability theorists in particular have been preoccupied with determining whether the United States retains its hegemonic position. Given that real measures of US power indicate a relative decline in American

capabilities and a somewhat stressed power base, the primary quest of scholars in IR and Global Political Economy has been to herald America's imminent collapse and to speculate as to who the United States replacement may be. Other scholars such as Keohane (1984), seeking to test the durability of the structures that govern the liberal international economy, have instead directed their focus to assessing the autonomy, durability and power of international regimes in the face of hegemonic decline (Ikenberry, 1989:375-379; Keohane, 1984).

While these approaches all have merit, for the most part, claims of American hegemonic decline and collapse are based on calculations of raw US power – in other words, they are predominantly assessments of America's declining material capabilities. However, hegemonic power, and the power of the United States is dependent on factors aside from raw material capability. US structural power, as well as the social context in which US hegemony is exercised, need to be taken into account when assessing US decline.

Part of the problem that arises here is that the “standards against which to measure American decline are seldom made clear” in that lack of agreement exists as to how much power is required to produce hegemony (Russett, 1985:209). When US power is measured according to standard indicators such as Gross Domestic Product (GDP), productivity, trade levels, and nuclear superiority, American power in comparison to its perceived 1945 level has certainly declined (Russett, 1985:210). Despite perceived indications of decline, the US is said to have “retained a primacy that had not been available to Britain at its peak” (Clark, 2011:127).

What is it that has afforded the United States a kind of hegemony that has never before been exercised in the international system? Ian Clark and Susan Strange shed some light on this issue. Clark (2011:123) argues that we should think of US hegemony “not as some universal model... but as one further variant” of hegemony. In other words, American hegemony is not merely “a simple reincarnation of the British experience” but rather a distinct model, that ‘piggybacked’ on the foundations laid by the British. How then is American hegemony different from the British case? Again, Clark (2011:124) makes an extremely valid point when considering the social context under which American hegemony has been exercised. Clark (2011:123) argues that because of its institutional basis, “US primacy was successfully converted into an accepted hegemony – at least as far as the *Western* world was concerned” (emphasis added). What this implies is that during the Cold War, American hegemony was only exercised over half the globe – the western (European and Japanese) half. Through the Marshall Plan and other policies, the US exerted financial and security-based leverage over the European and Japanese states, and as a result,

established a coalition of support for, and ‘buy in’ to, the new rules and arrangements guiding the liberal international economy. On a purely ideological basis, US liberal economic policy including free trade and a convertible currency regime was irreconcilable with the Soviet’s state-heavy, planned economy approach. Therefore, the Soviets were ideologically incapable of joining the US and its liberal coalition, and as a result, US hegemonic rule was not legitimised by those states located in the ‘Communist east.’

This manner and means of establishing US legitimacy is unlike anything experienced during Britain’s rule. In terms of adherence to free trade policy and the gold standard, Britain was only able to convince the European states to join its regime to a limited degree, and even then, European adherence to liberal economic policy was piece-meal at best. The primary reason for this is Britain lacked the kind of ‘leverage’ over Europe that the United States possessed at the end of WWII. At the close of the war the European states had been decimated, whereas the US not only exited the war relatively unscathed, its economic, military, and financial capabilities were second to none. In order to legitimise its hegemonic rule, the United States transferred much of its democratic domestic approach to the international level in the creation of institutions such as the United Nations, and the General Agreement on Tariffs and Trade (GATT). These institutions and their democratic nature lessened the threat posed by US primacy to smaller states in the international system, and the ‘club’ rather than ‘public’ goods available to those who bought in to the new American system were of value to the war-torn European and Japanese states. Thus, the US gained much in the way of ‘structural’ power, and through its ability to create and define those structures, the US established an ‘empire at the core.’

For the reasons noted above, other scholars such as Susan Strange argue that structural power is most relevant in assessing state power and hegemony. Strange (1987:565) posits that “[s]tructural power is the power to choose and to shape the structures of the global political economy within which other states, their political institutions, their economic enterprises, and (not least) their professional people have to operate.” For Strange, American structural power remains intact in that America continues to exercise control over global security, the global production of goods and services, international finance, technology, information, and knowledge creation. Therefore, while ‘standard’ or material indicators comprising the American power base have declined, the US retains its ability to organise and wield control over the structural elements of the system, which indicates, to paraphrase the title of Strange’s article, that the loss of American hegemony is indeed a myth.

Two scholars in particular have made very convincing arguments to support Strange's thesis that in structural terms, American decline is exaggerated. Carla Norloff in her 2010 book titled "America's Global Advantage" inverts the theory of hegemonic stability in her reading of US structural power, whereas Michael Cox, following Norloff's argument, provides a clear indication of current US capabilities.

Norloff (2010) claims that American hegemony remains stable, if not further entrenched than it was in 1950. She claims, contrary to the majority, that "the United States benefits from running persistent trade deficits as a result of its special position in the international system" (Norloff, 2010:2). This is because "the size of the American market, the role of the dollar, and American military power interact to make a trade deficit policy rewarding and buffer the United States" from the 'suicidal consequences' that running a sustained deficit, under normal circumstances, would have (Norloff, 2010:2). Norloff delineates her argument according to the three 'core pillars' of US hegemony, namely economy, finance, and security. The manner in which these three power base factors interact indicates where the US possesses and maintains both its material and structural advantage over its competitors at the core.

Michael Cox (2012:382) argues that in addition to American hegemony remaining stable, that "the modern international economy is now so interdependent that... most states... have become entirely dependent on each other for their prosperity and security." What Cox is indicating is that given levels of interdependence in the international system, especially considering the role of the US economy as the global stabiliser, that we are less than likely to see a marked shift in global relations in the near future. China, while it remains a promising candidate for global hegemony, has too little structural and material sway to stage a viable challenge to US dominance, and Cox (2012:382) argues that misconceptions regarding perceived levels of state power, if the events of the Cold War are anything to go by, often do more harm than good.

In sum, the theory surrounding US hegemony is extensive. Despite real measures of US power having declined in the decades since the 1970s, the US retains a clear advantage in both structural and material terms. Although the distance separating the US and China grows less, the interdependent Sino-US economic relationship will not likely result in a sudden shift, as both parties stand to incur substantial losses if the current US-led system were to fail. Additionally, the social context in which US hegemony has, and is, being played out should be taken into consideration. The emergence of a host of 'new' players in the international system has brought with it new challenges to American hegemony – primarily in that these newly emergent developing states are less inclined to play by American rules, and

they regularly challenge the US in this regard. US hegemony is no longer only subject to buy in from the 'west.' The US now has to balance emergent interests against established interests, and this has created a host of challenges to continued US dominance, in particular, with reference to the longevity the dollar's privileged position.

4.3 The Post-War Order

Given that the theoretical basis of US hegemony has been laid, the following section will illustrate how the US made use of its privileged position in structuring the new American-led post war order. During this period, the US made use of its overwhelming material capability to exert leverage on the coalition of mostly European states that would come to serve as 'legitimisers' of American rule. In contrast to the 'benign hegemon' thesis, the US made exceptional use of 'club' as opposed to 'public' goods in order to secure European and Japanese support. Here, the role of US material and structural power should come to the fore in highlighting the linkages between the US economy, finance, and the role of oil.

4.3.1 The Pillars of American Hegemony

Much like British hegemony, the *Pax Ameriana* was founded on a similar set of core 'pillars', and aside from minor variations, the cases exhibit clear similarities. US hegemony was founded on the pillars of economy, finance, and the US military, to which legitimacy was added through the creation of the multitude of institutions that govern the liberal international economy.

By the close of the war, the American "disparity in resources and capabilities was huge, not only in general aggregate economic and military terms, but also in the wide assortment of resources the United States had at its disposal" (Ikenberry, 1989:380). Economically, the United States was "already the world's largest industrial producer" by the year 1900, and it dominated "twice the share of world industrial production as Britain and Germany" on the eve of the First World War (Ikenberry, 1989:380). Owing to increased production and America's booming wartime export trade, between 1940 and 1944 "industrial expansion in the United States rose... over 15 percent a year" allowing the US to dominate nearly one third of total global production (Kennedy, 1988:358). In contrast to the bankrupt European states, America became "richer – in fact, much richer – because of the war" (Kennedy, 1988:358).

Financially the United States post-war position was extremely favourable. Owing to America's wartime export boom, by 1945 "Washington possessed gold reserves of \$20 billion, almost two thirds of the world's total of \$33 billion" (Kennedy, 1988:358). During the interwar years, evidence suggests that the US dollar came to share reserve currency status with the Sterling, and although this did not occur in any capacity approaching an official 'dollar regime' until the creation of Bretton Woods (Eichengreen and Flandreau, 2009), increased investor confidence signalled a decline in British structural power. The American's would later capitalise on the growth in 'dollar confidence', as the dollar, in reality the only viable option, was selected to replace the Sterling as global reserve currency. In contrast to the United States, by the end of the war Great Britain was facing a "financial Dunkirk" because of a "colossal trade gap... weakened industrial base, [and] its enormous overseas establishments" which consumed much of the Empire's increasingly scarce resources (Kennedy, 1988:367).

Militarily too, the United States was, and still is, 'on top' and its capabilities are unmatched. By 1945 "the U.S. navy was unquestionably second to none, [with] its fleet of 1,200 major warships... being considerably larger than the royal navy's, with no other significant maritime force existing" (Kennedy, 1988:358). The US also possessed, by a wide mark, the greatest number of military personnel, and increasing number of overseas bases, superior stocks of weaponry, aircraft and other vehicles, as well as outright nuclear superiority. Rapid technological development and ease of access to strategic supplies of oil also gave the US an advantage in that, unlike other major powers, it could project its power into the furthest corners of the globe. Barry Posen (2003:8) argues that the United States has 'command of the commons.' The United States' array of material capabilities, lead concerning technological development, the multitude of Cold War era bases and command centres, as well as the NATO alliance gives the United States "more military use out of the sea, space, and air than... others" (Posen, 2003:8). Additionally, the US "can credibly threaten to deny their use to others; and... others would lose a military contest for the commons if they attempted to deny them to the United States" (Posen, 2003:8). These 'commons' are what provide states with access to the remainder of the world, and aside from enjoying ultimate access to the commons, the US functions as 'global policeman,' and ensures that the commons remain safe and accessible to others, primarily for trade purposes.

Today, the United States retains overwhelming material primacy. The United States still "manages to produce between 20 and 25 percent" of global GDP (Cox, 2012:373), and has a quality of life rating just below Switzerland, Canada and the Scandinavian states (OECD, 2014). Additionally, the US economy remains more powerful than that of China, Japan, Germany and the United Kingdom combined (Cox, 2012:373). Financially, confidence in the

US dollar has remained high, despite a growing US deficit. Norloff (2010) argues that the US is economically and financially 'too big to fail' in that a sudden shift away from the dollar would spell disaster, not only for the US economy, but also for the investments of scores of individuals, corporations, and states who hold US currency and debt. The fallout from such an occurrence would be widespread and economically devastating.

According to the World Bank 'World Development Indicators' (2014) annual survey the United States enjoys the highest Gross Domestic Product for 2013, some \$US 16,800,000 in comparison to China's second place rank of US\$ 9,240,270. Considering global competitiveness, the US has improved its ranking and now occupies third place behind Singapore and Switzerland, although this does not necessarily indicate that US efforts at long-term economic recovery have necessarily been successful (WEF Global Competitiveness Report 2014-2015). According to the Institute for International Security Studies (IISS, 2014) "the US remained the only state with global reach across the full spectrum of operations and military capabilities" and spends some \$600 billion on annual defence, some six times more than the second biggest military spender, China. Additionally, US superpower status is underpinned by its ability to mobilise substantial manpower, its ability, with the help of several strategic global command centres, to project its power across the globe, and the fact that the US remains the primary provider of security to Europe and Asia (Cox, 2012:376).

Altogether, the US retains an overwhelming array of material capabilities and structural power. Although the US lead over its competitors at the core remains extensive, social, financial, and economic shifts in the international system have complicated matters for the US. In recent years the numbers of "pessimists... [have been] growing more numerous by the day," with a loss in competitive advantage, a colossal deficit, a "falling dollar, military overstretch, the rise of the euro, [and] the rise of China... among the factors that many believe herald the imminent decline of American hegemony" (Norloff, 2010:20). While US decline is exaggerated, the current US situation is surely unsustainable in the long term. The US degree of structural power and its power base have been subject to increasing strain. In terms of a hegemonic challenge, although China regularly ranks in second behind the US in terms of raw power measurements, the gap between the two powers is tremendous. While China remains on the rise, it has a long way to go before it can realistically challenge US dominance and begin to break down the core pillars of US power.

4.3.2 Structuring the Post War Order

While the core pillars of US hegemony were well established by the end of the Second World War, US hegemony, as with any form of global hegemony has a far broader reach than can be assessed by an estimation of material factors and capability alone. After the war, the United States not only restructured the 'rules and arrangements' by which international politics in the post-war era was played, but it did so on the back of several key institutions and regimes modelled on those created under British rule. A number of those institutions remain intact and in effect today.

Post war planners had several key concerns relating to the post war order; economy, finance, and security related. Firstly, the restructuring and reintegration of the war-torn European and Japanese states into the global economy was paramount. The strength and continued growth of the US economy is what would drive global economic growth in the post war era. For this reason, large and stable markets for US manufactured goods needed to be created, in order to prevent the United States from retreating to isolation and protectionist trade policy – a characteristic of the US between the wars. In order to fuel European and Japanese growth, the US domestic market needed to be opened to foreign imports. According to Kennedy (1987:213), "U.S. and allied planners were aware that the U.S. economy that had fuelled the war effort could be kept running at capacity when the war ended only if the United States were able to continue huge export surplus for a number of years." Therefore, preventing an American return to protectionist economic policy was vital in that US growth is what would drive the future growth of the liberal international economy, and the states within it.

Secondly, the decades preceding World Wars I and II were characterised by increased levels of chaos and instability that indicated, following the argument proposed by Charles Kindleberger (1986) in his *World in Depression*, a decline in British hegemony. Although Britain had championed free trade in Europe, states' desires to conquer territory as a means of expanding their respective economies (through territory and resource acquisition) was a key cause of interstate conflict. Post war planners believed that interstate competition and conflict could be reduced if those issues were redirected toward a more equitable and manageable platform – the free market. Incentivising states to pursue and engage in multilateral free trade would serve to curb the 'unfair' economic competition pursued by the European states prior to the war (Kennedy, 1988:359). This in turn, would create a platform from which newly emergent and independent states could engage in free trade, and they too would be integrated into the new American-led order.

Financially, the United States enjoyed what French president De Gaulle labelled “exorbitant privilege” resulting from the dollar’s fiat currency status. In 1945, the dollar was selected to replace the Sterling as global reserve currency at Bretton Woods. In brief, the use of the US dollar as global reserve currency means that the United States has far lower transaction costs than other, as it does not have to convert its currency when engaging in international trade (Zoffer, 2012). Secondly, given that the international currencies have remained pegged to the dollar since the end of the war, and that states, corporations, and individuals need to maintain dollar reserves for trade purposes, there remains a consistent demand for the US dollar, inflating its value. Between 1971 and 1973, the US also managed to secure the global trade of oil almost exclusively in US dollars, again raising the global dollar demand.

In terms of security, the rise of the ‘spectre of communism’ after 1950 gave the United States the motivation and incentive it required to foster buy-in to American-led liberal economic policy. Through a series of treaties, the development of the World Bank, and the Marshall Plan, the states brought in under the umbrella of US leadership received the ‘club’ goods of aid, loans, and security. In exchange, these states acted as the ‘legitimisers’ of US rule. The security, aid, and loans provided by the US to Europe, Japan and other East Asian states fostered a measure of dependence on the United States, and in return, the US could be assured of support for its actions and policies, as well as access to territory from which US military power could be projected into each region. These ‘club’ as opposed to ‘public’ goods also excluded Soviet Russia and other communist states from participating in the liberal economic order. By default, the conditions attached to the aforementioned financial and security goods excluded communist participation, as the beneficiaries of these goods had to conform to American free trade and currency conversion policies. The nature of the communism, and its state-heavy, planned economy approach was ideologically irreconcilable with US neoliberal economic policy.

In this manner, the US was able to restructure the rules and arrangements guiding the international system. Piggybacking on the foundations of free trade, the gold standard, and institutions such as the League of Nations created under British hegemonic rule, the United States with its overwhelming material capabilities was able to exert ‘leverage’ over the European and east Asian states and achieve consensus unlike anything experienced under British hegemony. The rise of the communist threat to the east meant that the international system was divided – liberal west, communist east - and thus the bipolar world order was born, with US legitimacy assured through a series of security, economic, and finance-related club goods. The use of US currency was cemented, legitimacy for US rule was achieved, and the post war order was established.

4.4 Energy and US Hegemony

Although American hegemony is arguably intact, US hegemonic leadership has been subject to increasing challenges, in terms of both its structural advantages and material capabilities. But what of energy? In contrast with the British case, the linkage between American hegemony and control over and access to global oil supplies is far clearer, and better documented. In the simplest terms, it is the United States overwhelming military, economic, technological and financial capabilities that have afforded the United States the ability “control the globe’s significant resources,” with particular reference to global supplies of oil (Gökay, 2003:83).

As a result of the United States large domestic supply of oil, and significant refining capacity, the US was the largest producer and supplier of oil to international markets up until World War II. Stokes and Raphael (2010:38) state that “US hegemony within the post war international order era has been reliant to no small extent upon Washington’s ability to exert control over oil reserves... as well as the conditions under which those reserves are released onto international markets.” For these authors in particular, the manner in which US control of oil sustains American hegemonic power is paramount, as they believe that “the construction of a US-led global order, the role of American military power to sustain it, and the necessity of controlling vital oil supplies – are closely related” (Stokes and Raphael, 2010:1).

While access to and control over sources of oil was no less of a strategic necessity to Great Britain than it was, and is, for the United States, unlike Britain, the American military, economy, trade and finance sectors benefitted greatly from the substantial *domestic* oil reserves the United States possessed. Having access to substantial amounts of domestic oil the US domestic oil industry was well developed. The US had the capacity refine oil on US soil, as well as the various infrastructure necessary for the shipping and storage of oil-fuel. The US also enjoyed sufficient production excess to allow for a healthy export trade in American crude. Overall, the United States was in an optimal position both prior to, and in the decades after the wars to capitalise on the use of oil fuel, and its multitude of economic, technological and military advantages.

For the United States, access to and control over global supplies of oil was not so much a factor in its hegemonic ascent, as it remains a factor in its *continued* hegemonic dominance. As stated by Stokes and Raphael (2010:38) “[a]ccess to reliable, cheap, and bountiful energy supplies is a core requirement of every industrialised economy, and the US economy is no exception.” Therefore, in order to sustain the American economy, and the interrelated

US military, financial markets and its manufacturing and trade advantages, the US required unrestricted access to vast amounts of oil. Additionally, as hegemon, the United States remains responsible for the provision of several public goods; the management and continued stability of the liberal international economy, the maintenance of the US dollar as global trading currency, and the provision of 'global' security. These public goods serve to ensure the continued functioning and stability of the global economy, stability which continues to reinforce and underpin US primacy. That primacy, in turn, reinforces the United States' ability to make public goods available for general consumption, and ensures that US leadership remains legitimate.

Stokes and Raphael (2010:41) argue that in order for any state to present a 'real' challenge to American hegemony, that state would require vast amounts of oil, particularly for naval and military purposes. Therefore, the control wielded by the United States over global oil and oil supply-chains and markets is as much to ensure the continued functioning of the US and international economies as a whole, as it is to prevent potential rivals from gaining access to those oil supplies and challenging American dominance (Stokes and Raphael, 2010:41).

While the United States remains a dominant global oil producer, since the 1960s its levels of domestic production have been unable to satisfy demand, resulting in an increasing reliance on foreign sources of oil. Much like Great Britain, which had to rely solely on foreign sources of oil until domestic supplies were discovered in the North Sea during the 1970s, the United States government recognised the importance of securing control over foreign sources of oil – predominantly from the Middle East. According to Stokes and Raphael (2010:42) "Washington's political and military dominance over oil-rich political economies generates enormous structural power for the American state," giving it additional leverage over many European and Asian states who are equally dependent on Middle Eastern oil for their economic survival.

In sum, US hegemony is underpinned and reinforced by access to and control over global supplies of oil. Oil fuels the US economy, which, as the largest economy on the globe, serves to stabilise the international economy. Ensuring global economic stability is not only critical to maintaining overall American primacy and ensuring American self-interest, but it is a critical public good. The states participating in the global economy are in turn highly dependent on uninterrupted supplies of oil, which makes 'energy security' a priority for the US state itself, but also for its allies and fellow participants in the liberal international economy. Finally, both US security and US hegemony are maintained through US control over foreign sources of oil. By ensuring US access to supplies (which has a direct impact on the dollar's status, the US economy, and its military), but also in ensuring that potential

challenger states are incapable of amassing control over or access to the amounts of oil necessary to stage a military challenge, US hegemony remains intact.

4.5 Public Goods

In the US case, energy is intimately linked to the economic, financial and security domains, and by default linked to America's ability to supply three core public goods associated with its hegemonic leadership – the management of the liberal international economy, the provision of the global reserve currency, and provision of global security.

As discussed in earlier chapters, the provision of public goods is a key indicator of a hegemonic power. The hegemon who enjoys overwhelming material primacy, remains, in theory, the only state in the international system capable of making those goods available for general consumption. However, in order for these goods to be classified 'public', they must be open to all states in the international system, and not function on an exclusionary basis. According to Gilpin (2001:100) "public goods... has the properties of "non-excludability"... and non-rivalrous consumption." Therefore, "any individual's consumption of a public good does not affect... consumption of the good by others, and that no one can be prevented from consuming the good whether or not [they have] paid for it" (Gilpin, 2001:100). In the US case, it is arguable that "many of the gains from hegemony have been less collective goods than private [or 'club'] ones, accruing primarily to the hegemon and thus helping maintain its hegemony" (Russett, 1985:208). This implies that the issue of public goods as applied in International Relations theory is 'imperfect' and that the notion of 'pure' public goods is debatable.

The provision of public goods under US hegemony has various functions. In the first instance, from a realist perspective, states are constantly seeking to benefit themselves and expand their material capabilities relative to their competitors. Therefore, while the provision of public goods may benefit multiple non-hegemonic 'free rider' states, the hegemon, as provider, should logically, accrue the greatest benefit. This argument is supported by Stephen Krasner who argues that "a hegemonic power will use its superiority to structure the trading system to its own advantage" (Snidal, 1985: 586). Secondly, in contrast to the notion that public goods should be non-excludable, the United States has arguably made more use of 'club' as opposed to 'public goods' in order to garner support for, and ensure 'buy-in' to US economic and security policy. According to Snidal (1985:), "[s]tates often seek to resolve problems of public goods provision by devising techniques to restrict benefits to contributing states," such as "extend[ing] tariff reductions or rights of innocent passage only to states that

reciprocate” (emphasis added). This kind of exclusion (based on reciprocation or non-reciprocation) can be defined as ‘club’ goods. At least during the early post war years, the US made use of the ‘club’ goods of loans, aid, and security in order to entrench and legitimise its rule.

Today however, the ‘goods’ provided by the US, including the management and stability of the global economy, as well as the provision of the dollar as trading currency, are *more* public than they were prior to 1990, although they remain essentially ‘club’ based. Given that the majority of states in the international system willingly participate in the liberal international economy, it is arguable that the ‘club’ of states who enjoy access to these goods has merely expanded. Today, virtually all states participate in the liberal international economy, and nearly all states pursue liberal economic policies. Therefore, there is no one state that the US is able to totally exclude from participating in the liberal international economy. Even states subject to international sanctions and other “discriminatory tariff and non tariff barriers” (Snidal, 1985: 595) could appeal to ‘non-sanctioned’ states for assistance. Iran for example, which has been subject to four rounds of UN-backed sanctions has made use of various loopholes in the sanctions as well as good relations with its neighbours Turkey and Iraq, in order to circumvent the sanctions and keep the Iranian economy afloat (Coughlin, 2013). Therefore, short of the use of military power and coercion, the size and number of participants in the international economy make it difficult to exclude states *in toto* from accessing US-sponsored goods. By these standards, “free trade is not a perfect public good, neither is it completely rivalrous or excludable; the idea is rather that there is some fluidity along these dimensions” (Norloff, 2010: 69).

4.6 Energy, Finance, and Economy

A frequently cited comment is French President De Gaulle’s accusation that the advantages accrued to the United States as a result of its international currency status constitutes an “exorbitant privilege” (Norloff, 2010:122). Indeed, the privilege the United States enjoys, economically, and financially because of the dollar’s status is both exorbitant, and directly related to the sale of oil fuel.

The arrangement whereby the majority of oil sales were conducted in US currency found its roots between 1972 and 1974 when the US government concluded a series of agreements with Saudi Arabia, the Organisation for Petroleum Exporting Countries (OPEC) ‘swing producer.’ In exchange for US technical and military support under the US-Saudi Arabia Joint Economic Commission, the Saudi government agreed to trade all of its oil exclusively

in US dollars. As 'swing producer,' Saudi Arabia has no production quota, meaning that Saudi Arabia can over- or under-produce oil at will, and potentially wreak havoc on international oil markets. Saudi Arabia therefore has the ability to impact on the global oil supply, and by default, it can manipulate the price of oil. Once Saudi Arabia had concluded its oil-for-dollars agreement with the United States, the remaining OPEC producers followed suit. Since the 1970s, the majority of oil sales have been conducted in US currency. This turn of events created an 'artificially high' demand for the US dollar. States, individuals and corporations wishing to trade in oil are thus required to hold substantial dollar reserves in order to make payment. Since the majority of states in the international system are net- oil importers, as long as the bulk of the global oil trade is conducted in US currency, and as long as the demand for oil remains consistent, this demand will remain directly linked to a demand for US currency.

However, the oil-dollar link goes deeper. In 1971, US President Richard Nixon took the unilateral decision to decouple the dollar from the gold standard. Between 1945 and 1971, the US dollar was pegged to gold at \$35 an ounce. According to El-Gamal and Myers Jaffe (2010:4), "[l]eading up to 1971, the U.S. started to run deficits that raised doubts regarding her ability to maintain the long-standing price of gold at \$35 an ounce." Speculators and investors began selling-off dollar assets in exchange for gold. As such, US gold stocks that had totalled almost two-thirds of the total global supply in 1945 began to decline. In 1971, "Britain demanded that all of its Dollar reserves, \$3 billion in total, be paid in gold" (El-Gamal and Myers Jaffe, 2010:4). Shortly thereafter, President Nixon decoupled the dollar from the gold standard.

This single act by the US president was not, as commonly suggested, a sign of failing American hegemony. Instead, the act demonstrated the enormous structural power the United States possessed (Norloff, 2010:160). This is evident in the fact that once the dollar was decoupled, foreign governments chose to keep their respective currencies pegged to the dollar. Importantly however, as El-Gamal and Myers Jaffe (2010:97) point out, "under the Bretton-Woods system, global economic growth, and its prerequisite growth in trade, were constrained by the global supply of gold." Once the dollar had been decoupled, the global economy entered a new growth phase, and the "growth of debt, mainly denominated in Dollars, was thus at the heart of globalisation" (El-Gamal and Myers Jaffe, 2010:97). By 1973, the Bretton Woods institutions were 'dead' and the US required an alternative backer for the dollar. After concluding the dollars-for-oil agreement with Saudi Arabia, and incentivising the remaining OPEC states to price their oil in US currency, oil had come to replaced gold as the backer for the US dollar (Iseri, 2009:137). Since 1973, the US dollar

has been underpinned by the global oil trade, and as long as the demand for oil exists, so will demand for the dollar, reinforcing the United States 'exorbitant privilege.'

4.6.1 Petrodollar Recycling

A petrodollar is any dollar earned through the sale of oil, and this state of affairs is what underpins US 'dollar hegemony' (Iseri, 2009:136). By the mid-1970s large 'petrodollar flows' were beginning to circulate in international finance markets. Part of the incentives offered to the OPEC states to continue their dollar-pricing system included "investment opportunities for their petrodollars in Dollar-denominated assets and debt instruments such as federal bonds and... mortgage-backed securities" (El-Gamal and Myers Jaffe, 2010:10). In addition to offering the OPEC states US bonds and securities, bilateral agreements with Saudi Arabia and Iraq including "major economic infrastructure development and military modernization... employ[ing] a large number of large U.S. multinational corporations" saw further petrodollars recycled into the US economy through the MNCs (El-Gamal and Myers Jaffe, 2010:122). Between 1970s and 1990s, US military sales in the Middle East rose dramatically (contributing much to instability in the regions), as did Middle Eastern investment in the US economy.

These dollar denominated assets caused oil-exporting states to remain "vested in the Dollar's health" because a weakening of the dollar and a potential shift away from the pricing of oil in US currency would cause substantial losses in foreign-owned dollar holdings (El-Gamal and Myers Jaffe, 2010:121). This is why Norloff (2010) argues that the US economy and the dollar are 'too big to fail': a shift away from the dollar to an alternative trading currency or basket of currencies would spell disaster for the US, and global economies. In this manner, it can be assured that consistently large sums of US dollars were, and are, 'recycled' into the US economy.

4.6.1 Petrodollars and the US Deficit

Once the dollar had been decoupled from the Gold Standard in 1971, the global economy entered into a new growth phase, one that was characterised and driven by increased debt. The result has been the consistent growth of the US deficit, currently totalling some \$4 trillion. According to traditional interpretations of US hegemony, the expanding US deficit, unless it is curbed, will be the end of American hegemony. While it is logical to assume that the US situation is unsustainable, Carla Norloff in her 2010 book *America's Global Advantage*, argues that American structural power is so great that the US has, contrary to mainstream perspectives, benefitted relative to its competitors at the core, despite its burgeoning deficit.

The United States reserve currency status accrues several key benefits to the US economy. In the first instance, US transaction costs are somewhat lower than other states as the US is rarely required to convert currency when engaging in international trade (Zoffer, 2012:26). Additionally, the US has the “ability to issue debt at a much lower interest rate than similarly situated countries” which affords American consumers a higher degree of purchasing power (Zoffer, 2012:26). As such, “[t]rade benefits accrue to American consumers, producers, and the American government” as foreign goods (and oil) are imported at lower cost (Norloff, 2010:248). Secondly, incentives exist for actors to retain their dollar denominated assets in that “the fear of a ricochet effect following large-scale dollar sales” and a “heavy reliance [by exporters] on American product markets” ensures that investors remain vested in the dollar.

But what of the deficit? Owing to the burgeoning trade deficit, investor confidence has waned slightly, and there are “fears that the United States has become excessively dependent on foreign capital and may not be able to honor liabilities” (Norloff, 2010:75). In order to finance the deficit, the US is required to sell off assets to foreign investors, and “there will come a point when investors are unwilling to buy more American assets” (Norloff, 2010:76). Therefore, “given the budget deficit, an important precondition for US power is the capacity to get others to fund it, and as Stokes (2013:5), rightly points out, this is “a very shaky foundation for continued US hegemonic leadership.”

Gökay and Whitman (2010:141) argue that “oil dollars provide the USA with an interest-free loan, as petrodollars are repatriated back into the US economy as investments,” implying that “the essential basis for US economic hegemony since the 1970s... [has enabled] the US administration to effectively control the world oil market.” If, for any reason, oil-exporting countries were to begin widespread trading in alternative currencies, it is arguable that the US economy would suffer a serious shock. The huge petrodollar flows repatriated back to the US by oil-exporting states means that the US in theory, does not need to produce goods and services in order to earn dollars to acquire imported oil. Instead, the US is able to make use of the substantial dollar flows entering the US, or to print dollars to pay for fuel, and is only required to produce goods and services when foreign firms and states require US exports (Spiro, cited in Gökay and Whitman, 2010:141).

How is the deficit beneficial to the United States? Norloff (2010:89) raises several points in order to support her argument that the deficit is in fact beneficial to the US. In the first instance, the role of the dollar as global trading currency gives the US an advantage as US transaction costs are lower. The growing deficit means that US consumption rates are higher than the rate of US production, which means that the US requires greater numbers of imports. Often, those imports come from US firms located abroad, and as such, those US-

owned firms reinvest their revenues in US assets. The domestic American market, given its size, “is a source of bargaining power” and “[b]y making access to the American market conditional on trade liberalization in other countries, the government has opened up foreign markets on behalf of its firms” (Norloff, 2010:89). Conditional trade liberalisation has also allowed the US to pull additional ‘strategic’ economies (such as China, South-East Asian economies, and the oil economies in the Middle East) under the umbrella of its leadership, and ensure that those economies remain dependent on the US. Lastly, the global security structure provided by the US military makes the United States a safe investment venue. US military presence across the globe, as well as the threat of the potential use of force means that foreign governments are likely to ensure the safety of American firms, and their staff, thereby “facilitating commercial expansion” (Norloff, 2010:248).

According to El-Gamal and Myers Jaffe (2010:55), based on estimates from the US Department of Energy and other estimates, total OPEC export revenues for the years 2001 and 2003 averaged just shy of \$US 250 billion, whereas 2013 measures indicate that OPEC (excluding Iran) earned roughly \$US 826 billion (EIA 2014). These estimates should serve to indicate a portion of the oil trade conducted in US dollars by the OPEC states each year. Much of those dollars are repatriated back into the US economy, and function as a means of servicing the US deficit. According to the World Trade Organization (2012 Working Paper:9), some 85 percent of global foreign exchange transactions were conducted in US dollars in 2011, indicating that the US share of global currency markets is still substantial. If, hypothetically, the OPEC producers were to discontinue pricing oil in US currency, the demand for the dollar would drop significantly as firms and foreign governments diversified their foreign currency holdings away from the dollar. This would spell disaster for the US economy, as America’s ability to continue financing the deficit would come under tremendous strain, and the dollar’s value would likely depreciate, requiring it to be replaced as global reserve currency. If the dollar were to be replaced (and evidence suggests that this is becoming increasingly likely) the multitude of benefits accrued to the United States would cease, and US hegemony would in all likelihood come to a quick end. Gökay and Whitman (2010:141) point out that the US method for financing and expanding its deficit has been in “coaxing... countries into buying up US Treasury bills and bonds,” making the US heavily, and increasingly, reliant on foreign funding. This state of affairs has precipitated “serious challenges to the US dollar as the dominant global reserve currency” (Gökay and Whitman, 2010:141).

4.7 Energy and Security

For the United States, more so than any other state, the preservation of international security is a critical factor in its economic and financial well-being. Aside from providing the physical or material resources necessary to ensure that the global economy and international trade remain (relatively) insulated from external threats and shocks, it remains in the US interest to act as ‘global policeman.’

The United States ‘security doctrine’ and its position as ‘global policeman’ emerged after the Second World War. The United States’ security role expanded as it began establishing bases and command centres across the globe. A range of strategic alliances with various non-communist states belonging to the ‘free world’ underpinned and supported the United States security role. Global security, and by default, economic security, is both a core public good as well as a key factor in sustaining American hegemony.

Primarily, US interests remain vested in maintaining security across the globe’s key shipping lanes in order to ensure that a regular, stable, and uninterrupted flow of goods, including oil, make their way unhindered onto international markets. As such, “the primary logic which drives US statecraft has been a desire to secure and maintain the conditions which best serve its own economic and political interests” (Stokes and Raphael, 2010:11). The security of strategic geographic regions such as the Middle East and Persian Gulf, given the dollar’s intimate link to oil, has made it imperative that “Washington... consistently [prioritize] the defence of these interests above those of others” (Stokes and Raphael, 2010:11).

From a statistical perspective, US security costs and ‘power measurements’ place the hegemon well ahead of its competitors. The US spends “five times more on national security than China” and continues to occupy a superior military and security position that will arguably last well into the future (Cox, 2012:377). The United States is considered to rank first out of the top fifty wealthiest countries, and “[by] nearly all measures... continues to outpace the rest of the world in defense spending, accounting for 41 percent of total global spending” (Deloitte, 2013:5). Accordingly, the “weight of U.S. defence spending allows the United States to play a dominant role in shaping global security” (Deloitte, 2013: 5).

Recent cut-backs in US military expenditure and reports that the “US military is still under severe strain, notwithstanding all the resources that have been devoted to it” (IISS Military Balance 2010:17), have led critics to argue that we are witnessing US ‘military overstretch.’ Defence budget cuts have resulted in focus shifting toward ‘smaller’ and more economical defence measures including the use of ‘special operations forces’ and an emphasis on

'cyber security' (Deloitte, 2013:4). Key focus-areas include combating global as well as cyber terrorism in the continuing "war on terror."

Despite increased military strain, according to Michael Cox (2012: 377),

[T]he very fact that the United States is able to mobilize the manpower it can..., can project power to every corner of the earth, is still the main provider of security in Asia and Europe and spends as much as is still does on 'defence' – about 45 per cent of the world's total – suggests that the country has a very long way to go before one can talk about it becoming less of a superpower.

The United States is responsible, to a large degree, for maintaining Asian, Middle-Eastern, and European security. The US has various defence treaties in place with some fifty states across the globe, all of which are key capitalist states. Many of these states, as part of the post-war alliance, have a vested interest in "preserving an America-centered world" for varying economic, political, and security reasons (Norloff, 2010:168). If the assumption is made that US hegemony rests primarily on its economic might and the continued stability of the liberal international economy, then it can be assumed that the economic and security domains are closely related. Carla Norloff (2010:167-168) offers several key motivations for the United States' economy-security-hegemony nexus.

Norloff (2010:167) highlights three key ways in which US military supremacy produces economic benefit and sustains American economic might. By "investing heavily in defence... [the United States has] effectively deterred attacks [bar the events of 9-11] on the homeland," thereby sustaining the perception that the US is a safe investment zone. By maintaining the perception that the US remains a safe investment zone, foreign governments, corporations and individuals will continue to invest in the US as well as in dollar-denominated assets. This is critical in two respects; firstly, in ensuring that petrodollars are constantly recycled into the US economy, and secondly, in ensuring that external parties are willing and able to continue servicing US debt through purchasing and investing in US assets.

Secondly, the US has intervened militarily in support of American business interests in order to "safeguard the ensuing capitalist structure from ... encroachment" both ideological and security-related (Norloff, 2010:168). As the bulk of American manufacturing firms are located in lower-cost environments (such as China, India, and other parts of the developing world), it becomes necessary for the US state to support those interests abroad. In part, the weight of the US state behind its foreign business interests has led to the broadening of the international economy and the incorporation of a host of developing states into the US-led liberal international economy. Lastly, the US is "obligated by treaty to defend some fifty

countries” including key states such as Saudi Arabia, Israel, Japan and South Korea. As such, given that US military might and the stability of the liberal international economy are so closely related, the US (in the absence of widespread discontent), is often able to act unilaterally, [especially in the security domain] in that “the marginal benefit of these stabilizing functions... [remain above] the marginal cost of an unstable order” (Norloff, 2010:168). For the US, more so than any other state, energy security and national security are closely related.

4.7.1 Oil and Security

Aside from providing the United States with the ability to expand its material position and capabilities, access to oil as a ‘strategic commodity’ has several security-related implications. In an abbreviated format, the oil-hegemony-security nexus is threefold: firstly, the United States requires substantial amounts of oil in order to keep its domestic economy, the value of the dollar, as well as its military apparatus intact. For the United States more so than any other state, access to oil underpins the entire state power base, and without that oil, US primacy, and therefore US hegemony would cease to exist. Secondly, the health of the global economy, including the economies of the United States’ allies, is entirely dependent on an uninterrupted flow of oil. Ensuring security of supply to American allies not only provides economic stability to those states (which translates into US, and global, economic stability), but it ensures that foreign governments have cause to hold substantial dollar reserves, thus helping to sustain American dollar-hegemony. Additionally, the US (as the insurer of global energy security), fosters allied dependence on itself, legitimising its continued hegemonic role. Thirdly, as Stokes and Raphael (2010) indicate, any challenger to US hegemony would require substantial amounts of oil in order to raise a realistic military challenge on the ‘global commons’. By maintaining control over the globe’s key oil-producing regions, the US is able to ensure that, while maintaining sufficient supplies to ensure economic productivity that its rivals are not able to gain access to the oil required to launch a viable military challenge to US dominance.

For the United States, ‘energy security’ and ‘national security’ are inseparable, and for the greater part of its hegemonic rule, the epicentre of American energy security has been the Middle East. As the centre of global energy production shifted from North America to the Middle East after 1945, so too, did American interests in the region. Two key factors underpin US energy security strategy in the region: firstly, it is in the United States interest to ensure that sufficient supplies and quantities of oil are extracted, and secondly, to ensure that those oil supplies reach international markets via ‘exportation lanes.’ Ensuring the

security of both production and shipping is paramount to the United States (and its allies) economic, commercial, and financial wellbeing.

In brief, US interests in the Middle East have been squarely centred on energy since the end of World War II when US President Roosevelt and Saudi King Ibn Saud “brokered a deal whereby the United States would receive consistent access to oil in exchange for military protection.” This arrangement would “serve as an underpinning for the employment of the military for the next six decades” (Michaud, Buccino, and Chenelle, 2014). As Michaud *et al*, indicate, this ‘policy’ of military engagement in oil-rich regions for the sake of security, “while never developed in national security strategy documents” has been reinforced by several US presidents, most notably President Jimmy Carter. In 1980, President Carter declared that “an attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States,” and that such a threat would be responded to by force, if necessary (Bacevich, 2010).

Since the emergence of the ‘Carter Doctrine’ Middle Eastern oil, and US national security have been linked, so much so that Bacevich (2010) argues that the Carter Doctrine has served as the basis for several military engagements by the US in the Middle East, including the Iraq war, the invasion of Afghanistan and several ‘Gulf wars.’ More recently, the 2001 National Energy Policy document, released by the George HW Bush administration stated that an increase and diversification of oil fuel supply will “enhance national security” whereas increasing US dependence on imports would “undermine... national security” (NEP, 2001: viii; xiv). As such, between 2001 and 2014, the US has made a concerted effort to diversify oil and gas supply, including the extraction of previously inaccessible domestic reserves.

Since the 1970s, when US domestic oil production declined, and US reliance on external or foreign sources of petroleum began to increase, ‘energy security’ has been a critical component of US strategy. With the expansion of the US and global economies after the war, US and global dependence on petroleum rapidly increased. Until the 1960s, the United States was able to meet demand from domestic sources; however, a decline in US production and a shift in gravity of global oil production saw US dependence on foreign oil suppliers, and hostile and potentially unstable foreign governments, increase. US energy security was under threat, and the 1973-74 Arab Oil Embargoes illustrate how vulnerable the United States had become.

According to Lee (2005:266), a “state is said to be insecure if it has to rely on external sources of strategic minerals which contribute to its ‘war potential’ or if the supply of the strategic materials is under threat.” US energy strategy is therefore twofold: in the first instance, since the publication of the 2001 National Energy Policy document, it has been

officially recognised that an immediate objective for the United States would be diversification of supply away from the Middle East, as well as the development of alternatives. Secondly, concerning America's 'war potential,' the United States would have to maintain its role as 'global policeman' and as a regional hegemonic presence in the Middle East in order to ensure that US allies had sufficient access to oil, while preventing potential challengers from gaining *too much* access to that oil.

Today, while US domestic production of oil and shale gas from previously inaccessible sources has seen a dramatic rise in American energy 'security,' the US is unlikely ever to achieve total energy independence. According to Ladislav, Leed and Walton (2014), "between 2005 and 2014, U.S. crude oil production rose nearly 65 percent and natural gas production was up 34 percent... [whereas] "the increase from light tight oil production... over the last five years is equivalent to that of Iraq's current production levels." According to Lawrence (2014:1), US oil imports have had a significant impact on the US deficit. "Between 2000 and 2012, the cumulative total of U.S. trade deficits in crude oil and refined petroleum products amounted to \$2.87 trillion, 40.5 percent of the cumulative deficits in all goods and services over the period" (Lawrence, 2014:1). This indicates that the United States' increasing dependence on oil imports has had a profound effect on US debt, further reinforcing the need for the US to diversify supply away from external sources.

The United States has succeeded in reducing imports to as little as 32 percent of overall consumption (according to recent estimates), leading to "the U.S. production of 7.9 million barrels of crude oil per day in 2013, a level the country hasn't hit since 1988" (Dhillon, 2014). However, the United States remains a key oil importer, and despite assumptions that US production will lead to total energy independence, this is unlikely to occur. Secondly, while the US has become far less reliant on Middle Eastern oil, it remains unlikely that the US will withdraw from the region, as Middle Eastern oil remains critically important to the global economy as a whole.

4.7.2 The Middle East

Concerning security, two issues emerge. According to Ladislav *et al.* (2014: 52-53), questions have arisen regarding the United States' continued willingness to maintain its leadership role in the wake of growing energy interdependence. As such, concern has been expressed regarding "U.S. intentions in two key areas: ensuring the free flow of global trade, particularly by sea, and acting as the guarantor of stability in the Middle East in particular" (Ladislav *et al.*, 2014:52).

Despite dramatic improvements in domestic production, increased production will not likely be able to sustain domestic demand, as uncertainty remains as to how much oil and gas the US will be able to produce. Given that the US and a number of its allies will remain dependent on the Middle East for petroleum, and that the US will require continued (although lower amounts of) imported oil to meet domestic needs, the US will not likely be able to reduce its presence in the region. Secondly, given that Middle Eastern oil reserves (some 52 percent of the global total) remain critically important to the stability of the international economy, the US will retain a presence in the region in order to ensure continued stability and reliability of supply. Lastly, the US will have a vested interest in ensuring that the OPEC states continue to price their oil in US currency, as well as in ensuring that competitors (such as Russia and China) cannot establish themselves as regional hegemonic powers in the Middle East.

According to Ladislav *et al* (2014:53), the protection of maritime trade via 'Sea Lanes of Communication' (SLOCs) is paramount and "the United States has served as the global guarantor of open SLOCs. This assurance has underpinned maritime trade in general, including the flow of energy products." As US imports from the Middle East decline, the concern is that US interests in maintaining open SLOCs in the region will lessen, and 'opportunities for disruption' will increase. However, given the importance of maintaining open SLOCs for the global economy in general, and for foreign governments dependent on Middle Eastern oil, the US government has indicated that the "free movement of goods remains a core national interest" (Ladislav *et al*, 2014:54). Arguably, given the linkages between the US economy, and the need for global economic security, as well as the need by US allies, including Europe and Japan, for Middle Eastern oil, it is unlikely that the United States would commit to disengagement from the region, a move that could jeopardise its economic interests.

Lastly, in terms of the Middle East, it is unlikely that the United States will withdraw from the region entirely. The primary reason for ensuring stability in the region is "because of its influence in the world oil market," and the comparative advantage the Middle East possesses in terms of oil production (Miller, 2012:38). Middle Eastern comparative oil production advantage is based on four factors. Firstly, "Middle Eastern oil is the cheapest in the world to produce... [it] is a superior product... the cheap oil there is plentiful... [and] the region is still home to half the world's proven, commercially viable conventional oil reserves" (Miller, 2012:38). However, oil production in the Middle East has been continuous for several decades, and a number of the 'mammoth' oil wells that secured the Middle East's position as the centre of global oil production will be nearing their peak. As available reserves decrease, oil production in the region will become more costly, and with the rapid increase in

alternatives, the Middle East's position in the global fuel market has become less secure. As a greater number of alternatives are developed, the cost of maintaining security in the Middle East will begin to outweigh the benefit.

However, while the US is currently pursuing a path to maximise energy independence, the remainder of the world, particularly Europe, Japan, and China will remain reliant on Middle East production to meet their energy needs. Additionally, developing states such as India and China will continue to increase their oil consumption in the coming decades and this will increase their dependence on the Middle East. Currently, there are no other states in the international system with the military reach and capabilities required for those states to assume a dominant position in the Middle East, as well as for policing global shipping lanes. Therefore, if the United States were to withdraw from the region and instability or conflict were to emerge, the US would jeopardise the stability of the international economy. The European, Japanese, and Chinese economies with which the United States has a highly interdependent relationship would encounter crippling strain if their energy security were to be compromised, and that would ultimately compromise US economic and energy security, as well as America's continued hegemonic position.

4.8 US Energy: An Overview and Potential Scenarios

This chapter has attempted to illustrate the linkages between US state power and hegemony, and control over, or access to, strategic oil supplies. In order to illustrate those linkages, US control over oil supplies has been linked to the three 'core pillars' of US hegemony; trade, finance, and security. Table 4.1 below illustrates the application of the theoretical framework to the case of US hegemony.

Table 4.1

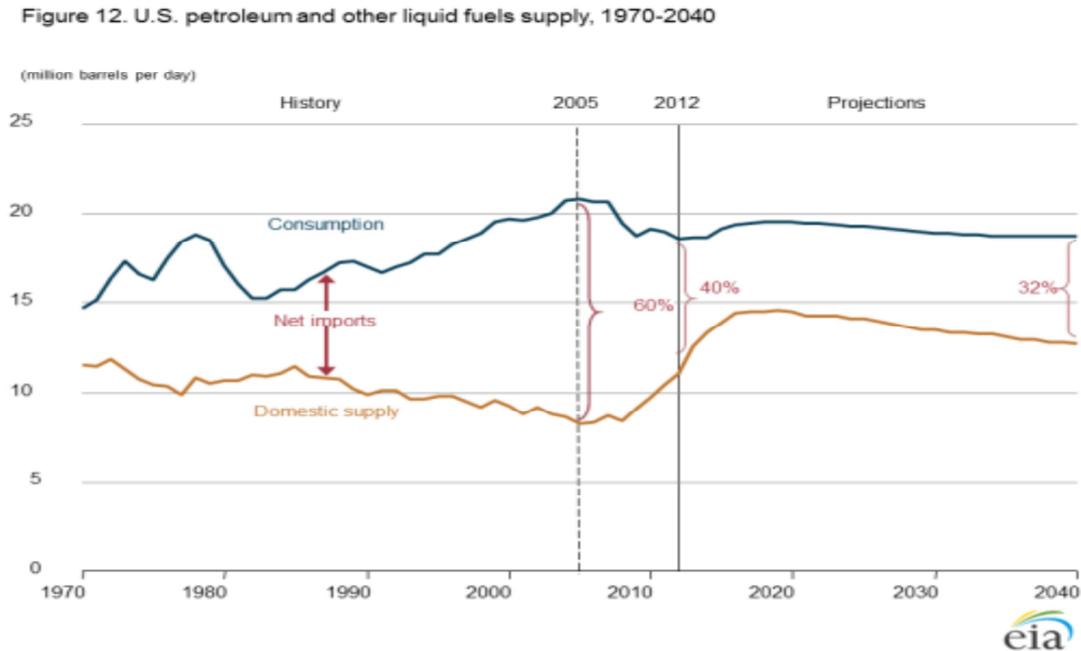
Projected Outcomes Table 2: United States

United States			
Years	1900-1945	1945-1970	1970-2014
Hegemonic Phase	Ascent	Maintenance	Decline
Energy Type	Coal/Oil	Oil/Petroleum	Oil/Petroleum
Domestic Supply	High	Decreased	Low
Imports	None	Low	High
Dependence Level	Export surplus	Export Surplus until 1960	High
Power Base	Expanding	Established	Declining
	Manufacturing Agriculture	Military Supremacy Technological Developments Aviation Manufacturing	International Finance/ Banking International Oil Trade Military Supremacy Large Domestic Market
Public Goods	NA	Gold Standard Trading Currency Security (Europe, Japan) Marshall Plan/Loans/Aid	Gold Standard (until 1971) Security (SLOCs) Middle Eastern Security Trading Currency

Source: Compiled by Author

Firstly, the pre-war levels of supply and production in the US certainly afforded the US the opportunity to pursue and achieve economic growth during the hegemonic ascent period. The export of US crude to the Allied powers during World Wars I and II had a decisively favourable impact on the Allies ability to wage war, and while US supplies cannot be said to be the decisive factor in the Allied victory, the absence of that supply would have been detrimental to the Allied powers. Additionally, the export of US crude during wartime provided the US with an extremely healthy export trade, and the revenue accrued is what came to underpin US economic and financial strength in the early post-war decades.

Secondly, in the ‘recovery’ years between 1945 and 1960, the US economy continued to serve as the engine for European, Japanese, and overall global growth. In part, that growth was made possible by ensuring ‘western’ access to American aid, and loans (some 10 percent of which was used by the European powers to purchase American oil) under the Marshall Plan.

Figure 4.1

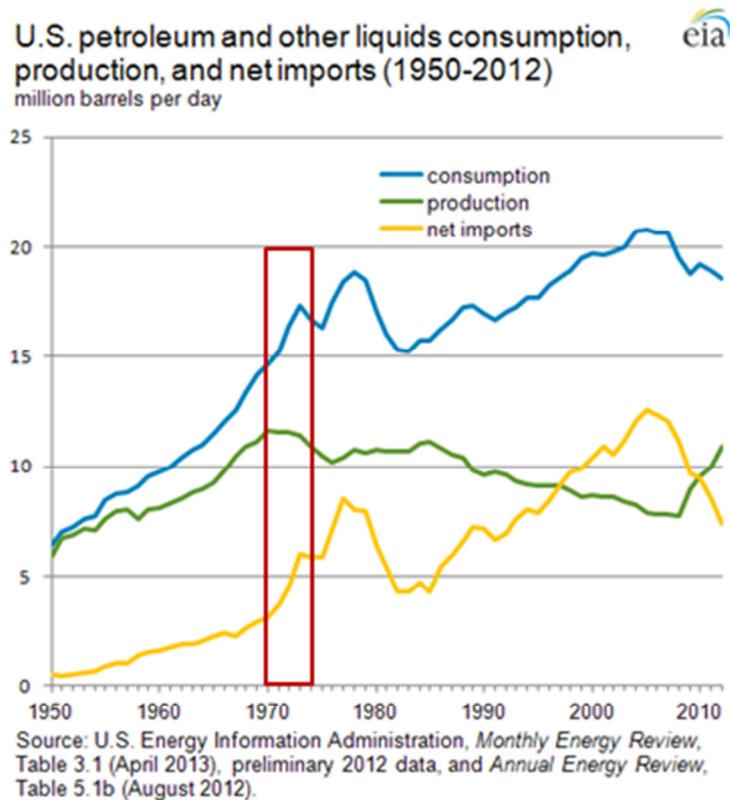
Source: Energy Information Administration (EIA)

Between 1960 and 1980, the picture shifted dramatically. The US (as the literature and the outcome table reflect) was assumed to have entered into a phase of hegemonic decline, as the rapidly recovering European and Japanese states 'caught up' to the United States. At the same time, the US economy had begun to stagnate, US gold reserves were dwindling, and the dollar and the global exchange regime came under strain. Until 1970, US oil consumption and reliance on imports had been steadily increasing, although the amounts were gradual and fairly constant (see figure 4.2). As soon as President Nixon decoupled the dollar from the gold standard in 1971, a unilateral act that is taken by many to indicate US hegemonic decline, US oil consumption rose sharply. This is arguably a result of the increased liquidity and credit made available in the international system once the dollar was decoupled, and global (and US) growth began to accelerate. If the assumption is accepted that the end of Bretton Woods, the gold standard, and the stagnation of the US economy indicate a decline in American ability to manage the international trading currency and global economy, then an increase in oil consumption and an overreliance on imports can be correlated to a decrease in state power.

If not a direct loss of state power, increased dependence on foreign sources of oil during the United States 'maintenance' and 'decline' periods have had, as illustrated, a detrimental effect on the US economy, the US deficit, and in the case of the 1973-74 Arab oil embargoes and unrest in the Middle East, on military expenditure. Overreliance on foreign sources of oil equates to economic vulnerability, which could arguably be interpreted as a loss of

independence, and therefore a decrease in state power. However, by convincing the OPEC states to price their exports solely in US currency, the US was able to ensure a demand for the dollar, and in doing so, foster increased dependence on the US and its economy.

Figure 4.2



Source: Energy Information Administration (EIA)

Currently, significant increases in US crude and natural gas production may well provide the US with the 'relief' required for it to pursue a second hegemonic ascent. Increased domestic production could very well lower the US deficit, ease financial strain on US consumers, 'free up' remaining oil reserves in the Middle East for consumption by developing states such as China, ease US military expenditure, and provided that US production increases, provide the US with an additional export avenue in the future. However, it is unlikely, for reasons elaborated on in earlier sections of this chapter, that the US will be able to disengage from the Middle East, or disengage from the provision of three core public goods: the management of the liberal international economy, the provision of the dollar as reserve currency, as well as its security obligations in various areas across the globe.

Arguably, the critical factor currently underpinning US power is the dollar. The linkages between the dollar, the global oil trade, Middle Eastern stability, and the dependence of the states and actors engaged in the liberal international economy on uninterrupted oil supply and the stability of the US economy, make the dollar a critical element in global stability. If US dependence on foreign and especially Middle Eastern oil continues to decrease, it is likely that calls for a basket of currencies for the oil trade will strengthen, as oil exporters would be less reliant on the dollar trade and could begin to diversify their currency holdings. The same would apply to net-oil importing foreign governments. While a dramatic shift away from global dependence on the dollar would have a disastrous effect on the US, this too is unlikely. As Norloff (2010) indicated, large amounts of US currency, US investments, and US debt in foreign banks would curb a sudden shift as the financial losses associated with a sharp decline in the dollar's value would be counterproductive. However, whether such a shift occurs gradually or suddenly, it would have an unprecedented impact on the US power base, and on America's ability to retain its position of global leadership.

Chapter 5: Conclusion

5.1 Overview of the Study

This chapter will present a summary of the study, including the findings, the significance thereof, as well as potential avenues for future research. This chapter will begin with a brief overview of the research aims and objectives, as well as a review of the approach and framework chosen to structure the study. Once the background to the study has been restated, the three research questions outlined in chapter 1 will be applied to the findings from each of the case studies. Following a discussion of the study's findings, the applicability of energy as a variable in the study of hegemony can be assessed. Evidence from the case studies will be used to highlight discrepancies between the hypothesised outcomes of the study, as illustrated in the 'provisional outcomes table,' and the results. This will be done in order to illuminate potential avenues for future research.

This study has sought to empirically assess and investigate the linkages between hegemony and control over, and access to, sources of primary energy. The relevance of energy to the state power base, while recognised by each of the major schools of thought (LCT, WST, HST and CT), has received insufficient attention by theorists, and has frequently been relegated to a position of secondary importance in the literature. In order to test the relevance of energy to the state power base, two hegemonic states were selected for assessment, as hegemony constitutes what could be considered the 'ultimate expression of state power.' The focus placed by this study on raw measurements of state power necessitated the use of a realist, state-centric approach to the study of hegemony. As such, Hegemonic Stability Theory was selected as the basis for the analysis. The incorporation of 'public goods' as an indicator of hegemony in HST shifts the focus of HST away from a strictly material assessment of state power, allowing for a more nuanced conceptualisation of hegemony. However, as indicated, Hegemonic Stability Theory has several theoretical shortcomings, particularly concerning a lack of indicators by which to 'measure' or assess hegemonic power. The inclusion of several additional theoretical elements from alternative schools of thought served to address some of Hegemonic Stability Theory's theoretical shortcomings, and to broaden the framework for assessment.

5.2 Summary of Findings

As indicated in chapters 1 and 2, the core objectives guiding this study were to i) assess the impact of levels access to, and control over, sources of primary energy (coal, oil and petroleum) on the power base of hegemonic states; ii) make a case for the inclusion of 'energy' as an independent factor in the assessment of state power; and iii) to develop a broad framework for assessment of the above. The framework developed in chapter 2 of the study, incorporating the research questions specified in chapter 1, serves as a means of making the aforementioned assessment.

The assessment of the role of energy in Great Britain's hegemonic cycle did not yield conclusive results. Although tentative links can be drawn between British access to domestic coal reserves and the development of steam technology during the Industrial Revolution, and the subsequent transfer of that technology to the Royal Navy, further research into the impact of coal, oil and petroleum on the British power base is required before definitive conclusions can be drawn²⁵. However, while the British case for energy's role on hegemony is somewhat ambiguous, several generalised statements can be drawn from the study. Firstly, the development of the steam engine gave Britain a clear advantage over its rivals in terms of manufacturing capacity. Although this technology rapidly diffused into Europe, and Britain's technological 'lead' only endured until around 1870, domestic coal reserves were surely beneficial to the British power base, particularly regarding a commercial and productive advantage. This assumption would agree with Wallerstein's argument that hegemonic powers first attain advantage in the sphere of 'agro-industrial production,' Secondly, the 'cornerstone' of British power, the Royal Navy, benefitted greatly from large domestic supplies of Cardiff or Welsh steam coal. The availability of high quality, sought-after coal meant that the adoption of steam technology by the Royal Navy gave Britain a tactical and strategic 'edge' over rival powers. If the assumption that the Royal Navy was indeed the core of Britain's hegemonic power is accepted, then the impact of coal on British power was significant.

As indicated in chapter 3, the Admiralty's decision to convert the Grand Fleet from steam to coal was in an effort to retain British naval and maritime supremacy, and that

²⁵ The author is aware that other work investigating the role between coal, petroleum, and British hegemony is available, in particular David A. Snyder's 2001 doctoral dissertation titled *Petroleum and Power: Naval Fuel Technology and the Anglo-American Struggle for Core Hegemony: 1889-1922*. The author was not however able to access a full copy of Snyder's dissertation for use in this study. Snyder (2001:iv) does indicate that while "conversion [from coal to oil fuel] did not in itself force Britain to concede hegemony, the issue of logistics [arguably in terms of availability, storage, and transport of oil fuel] did exert a significant influence."

supremacy was initially gained through steam-power and the use of coal. The strength of the Royal Navy, in turn, underpinned British commercial and financial success, therefore, it is possible to draw the tentative conclusion, by way of association, that access to, and control over domestic sources of coal had an impact on the ascent and maintenance periods of British hegemony. Additionally, the superior quality of Welsh coal (and British access to territories across the empire) gave Britain a remarkable advantage in the global coal market. Strategically, Britain could control foreign powers access to this valuable resource which would have given Britain a decisive structural advantage over the European powers. Regarding the effect of Britain's 'coal advantage' on other elements of its hegemonic power, the links are not definitive. At best, it can be inferred that Britain's power base (its collective economic, financial, and maritime supremacy) was dependent on the strength of the Royal Navy, and as such, when British naval capacity was undermined through lack of access to oil, that Britain's power base, and therefore its ability to supply public goods, was negatively affected. Given that the Admiralty's decision to convert the Royal Navy fleet from coal to oil occurred while Britain was well into the decline phase of its hegemonic cycle, lack of access to oil surely only accelerated British decline, rather than being a primary cause of it. In order to determine the role of energy on British hegemonic cycle, further study should be conducted into the role of coal on British power during the period between the Industrial Revolution and World War I.

While the British case may offer fewer insights than originally anticipated, the 'oil shift' that occurred between 1912 and 1914 is particularly interesting. Several lessons can be drawn from this period. Firstly, while 'technological leads' the development of 'new lead' industries are generally profitable, in Britain's case, the adoption of oil technology did little to benefit its power base. It has been stated that at the time, coal technology had essentially reached the limits of its development, and in order to meet the rising German naval challenge, the Royal Navy had little alternative but to invest in and develop new technologies. The outbreak of war in 1914 meant that longer-term technological testing and development could not occur, and therefore the logistical difficulties associated with the adoption of new oil-fuel technologies were not fully accounted for. Secondly, in the absence of a reliable, controllable supply of energy on which to run 'new' technologies, any benefit associated with that technology becomes null. British oil burning battleships may have had advantages over coal-fired battleships in terms of speed and agility, but the cost (both human and material) of securing those oil supplies, especially during wartime, was great. If anything, the British case serves to reinforce the relevance of 'energy security' and the vulnerabilities associated with energy dependence in assessments of state power.

In contrast to the British case, the assessment of the role of energy on US hegemony is far more apparent. Control over and access to sources of oil and petroleum have had a decisive impact on the American power base in all three phases of US hegemony. During the United States hegemonic ascent, substantial domestic oil reserves were used to aid the Allied war effort during both World Wars I and II. Through supplying the Allied powers with US oil, the US accrued substantial trade benefits, allowing it to build up substantial gold and capital reserves. At the close of the war, the United States military, economic and financial advantage meant that it could offer the war-torn European and Japanese with the series of loans, aid, and development packages that collectively formed the Marshall Plan. The Marshall Plan in particular gave the United States the opportunity to wield considerable power and exert 'leverage' over the European and Japanese states, and as such, the US was able to gain control over the structures governing state relations at the core. 'Buy-in' to the new US-led system saw some fifty predominantly western, industrialised, states adhere to the Bretton Woods institutions, to the gold standard, and to the use of the US dollar as global reserve currency.

Between 1950 and 1970, when the global centre of oil production shifted from North America to the Middle East, US hegemonic power shifted. US domestic reserves began to decline, and the US became increasingly dependent on Middle Eastern oil to meet domestic petroleum demand. As the events of the 1973/74 Arab oil crisis and the resulting embargo illustrate, energy dependence has severe economic and security repercussions. The turbulent events of the 1970s including the abandonment of the gold standard by US president Nixon in 1971 and the subsequent oil embargoes, which should indicate a decline in US hegemony, may well be otherwise. During this period, when US power was fundamentally challenged by the rise of the Middle Eastern petro-states, the US arguably secured itself an additional element of structural power through linking the US dollar to the global oil trade. In particular, the value of the dollar and the strength of US hegemony are directly linked to the sale of oil. As such, the longevity of the international economic system, the United States' ability to maintain the dollar as trading currency, and the industrial and economic capacity of the majority of states in the international system is directly linked to the sale of oil. While these findings may not be particularly original, the US case certainly illustrates the relevance of energy on state power and hegemony, and like Britain, emphasizes the need for hegemonic powers to ensure that they are 'energy-secure.'

In terms of other findings, this study has served to indicate deficiencies in Hegemonic Stability Theory. HST in particular struggles to account for the British hegemonic experience, and it has thus far failed to accurately predict the decline of the United States. However, by augmenting the theory and including elements such as technological advantage, and structural power, further insights can be gleaned. Technological development and 'lead sector' dominance gave Britain great advantage during the Industrial Revolution, and subsequently in its naval capacity. However, the adoption of new oil-burning technologies was a decisive disadvantage for Great Britain in the absence of energy security. For the United States, its volatile energy security position has been remedied through the development of advanced oil and gas extraction technologies, decreasing its dependence on the Middle East. Secondly, in terms of structural power, the United States capabilities are supreme. This study has illustrated that structural power has a great impact on hegemonic power in particular. While Britain had limited success in achieving European buy-in to its free trade and currency policies, it lacked, rather than the material, the *structural power* necessary to do so. One of the primary shortcomings of HST is that it does not account for Britain's inability to effectively manage its public goods. The US in contrast wielded enormous structural power because it had the means and opportunity to incentivise the European and Japanese states to buy in to its policies. Later, when the US was no longer able to maintain gold convertibility, the US used its structural power to incentivise the OPEC states to conduct their oil trade in US currency. As such, if oil producing states were to diversify their trade into other currencies, US hegemony would certainly fail.

In brief, the hypothesis that access to or control over energy benefits the power base is well supported. Energy, whether coal, oil, petroleum or some other source has, and will continue to have a decisive impact on the state power base. Coal played a prominent role in measures of British power, and oil has had a staggering impact on the US power base. Therefore, energy should be incorporated into future assessments of state power, not just as an economic or other variable, but in its own right.

5.3 Avenues for Future Research

Overall, several potential avenues for future research exist. Firstly, while tentative links were drawn between the British hegemonic cycle and access to and control over sources of coal, further research is necessary in order to determine the extent to which access coal impacted on the ascent and maintenance periods of British hegemony. Secondly, although the 'hegemonic war' thesis was not discussed in this study, if the theory is assumed to be

correct that the hegemonic cycle is perpetuated through conflict, the an investigation on state access to energy and the ability of core states to wage hegemonic war would provide interesting insight into the role of energy in successfully waging war. Lastly, scope exists for research into the potential for 'alternative fuels' to emerge as decisive factors in state power. Essentially, the question that would guide a study on 'alternative fuels' would detail which potential energy sources may *replace* oil and petroleum as strategic commodities, including the impact of renewable energy sources on measures of state power. Shifts of this kind would very likely be directly related to technological developments and the emergence of 'new lead industries,' particularly those associated with Rare Earth Elements (REEs) and China's dominant position in the REE global supply chain. The economic and technological impact of alternative fuels on measures of state power and hegemony has also presented as a potential avenue for future research.

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