

ESCALATION AND ARMS RACES: RIVALRY NOT RHETORIC

BY

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## **APPROVAL**

The undersigned certify that this thesis meets master's-level standards of research, argumentation, and expression.

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## **DISCLAIMER**

The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.



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## **ABSTRACT**

From the 2001 Rumsfeld report, to the 2007 Chinese anti-satellite (ASAT) test, to China's 2014 alleged test of a geostationary orbit ASAT, the defense community has had ample reason to place more emphasis on space. The most recent manifestations of this emphasis is the possible creation of a Space Force and changes in strategic rhetoric about the space domain. These are seismic shifts from the way the U.S. addressed space during the Cold War, when the National Reconnaissance Office covertly conducted military efforts in space while the National Aeronautics and Space Administration openly conducted peaceful space exploration. This arrangement specifically aimed to maintain space as a peaceful sanctuary. The creation of a Space Force implies a militarized change to this construct.

While domestically a Space Force may be the correct bureaucratic move to create an independent service which can best advocate for its own training and capabilities, the international message sent by such actions requires careful consideration. Many authors argue that the contemporary change in strategic rhetoric with respect to space is escalatory. They identify strategic language as a causal factor affecting the strategic disposition of arms between nations. This perspective, however, is not the case. Changes in strategic rhetoric have a strong correlation to changes in the strategic disposition of arms between states, but they are not causal. The causal factors that affect the strategic disposition of arms instead have to do with traditional factors associated with arms races.

In this study I examine the phenomenon of arms races in and out of the context of rivalry through three historical case studies. I then examine the current relationship between the United States and China. I observe that the same factors identified in the case studies have the potential to spur a space arms race within a U.S.-China rivalry. Further, I note that capability gaps have driven Chinese developments of space capability that are correlated with, not caused by, changes in strategic rhetoric. This context is important to understand given the contemporary shifts in behavior within the space domain.

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## Chapter 1

### Introduction and Arms Race Theory

#### The Question of Arms Races in Space

Although the U.S. has been a spacefaring nation since the launch of Explorer in 1958, within political and military circles, leaders are rejuvenating the national emphasis on space. This renewed emphasis has moved the debate about whether the United States Department of Defense (DOD) *should* create a space force to *how* such a force should organize. At the time of this writing there is no final political consensus answering this question. It is a work in progress.

Throughout this process, most of the discourse has surrounded internal factors, concentrating on the issues of *why* we need a space force and *how* it should be organized. These questions are important, but too internally focused, with less attention given to external factors. What will the international reaction be, for example, to developing an independent space force? Although the DOD has possessed space capabilities for decades, its military line of effort has run parallel to that of the National Aeronautics and Space Administration (NASA), with the military side focused on competition and NASA focused on cooperation. How will an independent space force affect these parallel lines of effort? What kind of international response will bureaucratizing a military space branch invoke?

On one end of the spectrum, the international response to the creation of a new military arm for space may invoke a modest response or none at all. Alternatively, the creation of a military space arm could spark a space arms race, the results of which likely are problematic in various ways. In general, arms races are costly for taxpayers. Since states in arms races pay more for their arms than needed for national

security, arms races provide suboptimal security based on the fact that the security per dollar ratio is lower than what exists without an arms race. This negative aspect of arms races likely is exacerbated when considering an extension of this phenomenon into space.

Outer space is vital to the US economy and the wellbeing of its citizens. Access to outer space has unlocked discoveries of significant medical and scientific value. The utilization of space has opened new markets, helped save lives through search and rescue functions, provided early warning for natural disasters, and increased efficiencies in national resource management.<sup>1</sup> Protecting access to space, therefore, is of critical importance to the United States as well as other spacefaring nations. Extending an arms race into the domain could have disastrous impacts on national and global economies.

This logic would seem to motivate states to pursue space strategies founded upon cooperation; however, the current strategic rhetoric about the space domain is one of competition. The National Air and Space Intelligence Center and authors such as Joan Johnson-Freese all characterize space as “congested, contested, and competitive.”<sup>2</sup> The 2018 National Space Strategy states that space is a warfighting domain, and it is the competitors and adversaries of the United States that have made it such.<sup>3</sup> Regardless of who fundamentally altered the nature of space from a sanctuary to a warfighting domain, the underlying tone regarding outer space clearly has changed from one of cooperation to one of competition.

The United States is the only great power to vote no for L.47 and L.3, two UN resolutions that support the nonmilitary use of space.<sup>4</sup> Could the creation of a space force act as the tipping point toward an

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<sup>1</sup> U.S. National Space Policy, 2010, 1.

<sup>2</sup> Joan Johnson-Freese, *Space Warfare in the 21st Century: Arming the Heavens* (New York, NY: Routledge, 2017), 26.

<sup>3</sup> U.S. National Space Strategy, 2018, [www.whitehouse.gov](http://www.whitehouse.gov).

<sup>4</sup> L.47 and 51 relate to “no first placement of weapons in outer space.” L.3 regards “Prevention of an Arms Race in Outer Space.”

arms race following a long history of the United States' unwillingness to sign such UN resolutions? What impact does the strategic language of *space dominance* and the descriptions of space as a *warfighting domain* have on this situation? Would China, for instance, view the creation of a space force as the last domino to fall before engaging in an arms race with the United States? Regardless of US policymakers' domestic intentions, forming a space force, combined with a reluctance to sign UN resolutions restricting the military use of space leads to an interesting and important question: What are the factors that influence the likelihood of arms races, and how do these factors apply to space in the current strategic context?

### *Overview*

In researching the factors that influence arms races it becomes clear that while their causes can vary to a considerable degree, one factor, rivalry, considerably increases the likelihood of an arms race. In simple terms, rivalry is a condition by which two states perceptually categorize each other as "sufficiently threatening competitors."<sup>5</sup> While not a necessary condition, recent research on the topic suggests that rivalries result in a dramatic increase in the probability of an arms race.<sup>6</sup> If such claims are true, it would be reasonable to focus on rivalry as a central feature of any study of arms races.

The approach to this study therefore is to consider four different categories where interstate rivalries are compared with cases of interstate arms races. The first case is one in which rivalry is not present at first, but an arms race ensues. The second case is one in which interstate

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<sup>5</sup> William R. Thompson, "Identifying Rivals and Rivalries in World Politics," *International Studies Quarterly*, Vol. 45, No. 4, 557-586, 2001.

<sup>6</sup> In Rider, Findley, & Diehl's work, "Just part of the game? Arms races, rivalry, and war", they find that the probability of an arms race within the context of rivalry increases by 93% compared to the general population of states, and by 81% when the same pair of states was not in a rivalry.

rivalry is present and an arms race ensues. The third case is one in which interstate rivalry is present and no arms race ensues. The last case, the general state of things amongst states, is one in which no rivalry or arms race occurs.

To illustrate each of the first three conditions, this work will examine three case studies. The fourth state of no rivalry and no arms race is the default condition of most nations and will not be examined separately. The first case study analyzes an arms race without initial rivalry through the naval arms race between the United Kingdom and Germany in the early 1900s. The second case study examines the Cold War arms race and rivalry between the United States and the USSR. The third case study regards 1950s and 1960s Egypt and Iran, where rivalry was present, but did not result in an arms race. By analyzing these cases based upon some of the common factors associated with arms races, we can see if these factors apply to the current strategic context as it relates to the militarization of space and the modern relationship between the United States and China.

### **Arms Race Theory**

Broadly speaking, an arms race occurs when nations compete to produce military capability in order to have a comparative advantage over one or more other nations. Typical examples of arms races include the arms race between Israel and Egypt in the 1960s and 1970s, or the arms race between India and Pakistan as a result of the disputed Kashmir region originating in 1947. While each arms race has a distinct character, there is a general nature of arms races evidenced through a number of cases.

One characteristic germane to all arms races is that they entail a rate of growth in the development or acquisition of military weapons that

is faster than normal. This rate of growth is comparative and objective, while its qualifying power is subjective. An arms race is comparative because the arsenals of one or more states must be changing in a manner that can be measured against one another by one or more metrics. Metrics such as fleet size and composition, nuclear warhead and delivery vehicle numbers, and overall military expenditures provide comparative and rate change data subject to objective analysis. However, this data by itself is not enough to qualify a change in arsenals as an arms race. Metrics of arsenals, objective as they are, cannot fully evidence the motivations behind their existence. For example, political scientist Paul Diehl's metric, an 8% increase in defense spending over a three year period, has become commonly accepted.<sup>7</sup> However, states meeting this criteria may not share a border or exhibit a rivalry. Therefore, although there are objective and comparative aspects in arms races, whether or not changes in armaments qualify as "arms races" is debatable.

In addition to Diehl, other theorists such as Colin Gray and Grant Hammond have proposed a variety of qualifiers. In 1971 Colin Gray defined an arms race as:

...two or more parties perceiving themselves to be in an adversary relationship, who are increasing or improving their armaments at a rapid rate and structuring their respective military postures with a general attention to the past, current, and anticipated military and political behavior of the other parties.<sup>8</sup>

In 1993, Grant Hammond proposed a series of eight criteria by which to qualify and label an arms race. These criteria range from the number of participants, the level of public animosity between parties, increases in defense spending in excess of 8% per year, and a desired purpose for

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<sup>7</sup> Paul F. Diehl, "Arms Races and Escalation: A Closer Look," *Journal of Peace Research*, Vol. 20, No. 3, 1983.

<sup>8</sup> Colin S. Gray, "The Arms Race Phenomenon," *World Politics*, 24:1, 39-79, 1971.

engaging in such behavior amongst others.<sup>9</sup> In 1993, Colin Gray came to the conclusion that arms races do not exist, and if they did they would be defined into existence artificially, and therefore, the term itself should be abandoned.<sup>10</sup> The point being made in reference to these efforts at definition is that there exists some sort of phenomena surrounding the strategic disposition of arms between rival states. Buzan and Herring call this phenomena the “Arms Dynamic.”<sup>11</sup> Regardless of terms, the surety that this phenomena exists exceeds our ability to qualify it across the tapestry of human history, geography, and technology. In other words, qualifying the phenomena is important for the purpose of analysis, because it ensures social scientists are analyzing the same phenomena. Yet, the unique history of each event renders the qualifiers for one period possibly invalid for another.

Despite the difficulty of applying like qualifiers across the history of arms races, they are typically classified into two types, dyadic and multilateral. However, the truth is more complicated. While a simplification of the arms dynamic amongst nations seems to manifest itself in a tit-for-tat competition between two states, the reality is that those two states can have a variety of security concerns. The pre-World War I period exemplifies this complicated reality. While the Triple Entente of France, Russia, and the United Kingdom pursued an arms race against Germany, France and Russia also were racing against Austria-Hungary.<sup>12</sup> The linkage of Germany, Austria-Hungary, and Italy leads to the conclusion that in a macro view there was an alliance scale arms race. There were, however, dyadic arms races occurring within the

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<sup>9</sup> Hammond, *Plowshares into Swords*, 30.

<sup>10</sup> Colin S. Gray, “Book Review: Grant T. Hammond, *Plowshares Into Swords*. Arms Races and Other Pathetic Fallacies: A Case for Deconstruction,” *Review of International Studies*, 22:3, 323-335, 1996.

<sup>11</sup> Barry Buzan and Eric Herring, *The Arms Dynamic in World Politics*. (Boulder, CO: Lynne Rienner Publishers, 1998), 79.

<sup>12</sup> Toby J. Rider, “Arms Races: An Assessment of Conceptual and Theoretical Challenges,” Texas Tech University, 2017. 5.

alliances. Grouping or disaggregating is therefore problematic because it artificializes the very real security concerns of any one nation or any group of nations. Dyadic analysis of arms races thus is a “neat” conceptualization that facilitates the study of the arms dynamic amongst nations.

That dyadic categorization oversimplifies the situation is further illustrated in multilateral arms races. In theory, any number of parties can compete with one another, including in an arms race. The example of the Triple Entente is a multilateral arms race; however, the forming of alliances frames the case as a dyadic alliance level arms race. There are examples where these dyadic sides are not easily drawn. For instance, Argentina, Brazil, and Chile engaged in a naval arms race at the turn of the nineteenth century and into the First World War. This arms race can be analyzed both from a dyadic and multilateral perspective.

These “neat” conceptualizations and classifications of arms races do not diminish the importance and utility of studying arms races. They instead illustrate the difficulty of their analysis. Consider, for example, that the most fruitful period of research on arms races occurred during and after the Cold War. This was due in part to the clear bipolar (dyadic) world order, bolstered by the data available for study, the urgency of the strategic situation between the United States and the USSR, and the professionalization of strategic studies in the West. Despite scholarship that disagrees on how to rightly divide arms races along dyadic, multilateral, or dyadic alliance lines, the topic is nonetheless salient and worthy of study.

Beyond the natural characteristics of arms races lie the motivational attributes of arms races. Motives, while varied, are universally linked to strategy. On the surface level, an arms race pursues a strategically significant military advantage in quantity, quality, or in some other category. However, states’ motivations drive their actions, or in other words, states’ motives give strategic significance to their actions.

It is motivation that drives states to develop or acquire additional military capacity to deter, coerce, or achieve status for a variety of reasons based upon their strategic situation.

Motives can be stabilizing, destabilizing, or perceptually indeterminate. States can build arsenals as a function of state size, perceiving those arsenals to be a reasonable capability for self-defense. How other states, particularly neighboring or rival states perceive those arsenals or change in arsenals is significantly more important. Buzan and Herring provide useful categorization for motives within the camps of stabilizing and destabilizing. Status quo powers that value peace and security, while displaying a preference for defensive military strategy and reassurance of other states, exhibit stabilizing impacts. Revisionist powers that are insecure and value peace less, while pursuing offensive military strategy revolving around threats and compellence, exhibit destabilizing impacts.<sup>13</sup> Therefore, motives, corresponding actions, and the perception or misperception thereof shape the interplay between states as they change the disposition of their arsenals.

Rivalry is another factor that can have significant influence over motives. Why rivalry? There is a seemingly endless literature on the topic of arms races. This literature primarily has focused on the consequences of arms races and not their causes. The classic “security dilemma,” where a wide variety of state actions for the sake of defense can be viewed as hostile to other states, sets up a natural debate over the relationship between arms races and war. The question, which abounds in the literature, is whether arms races cause war. Deterrence theory proponents, for example, argue that possessing arms and credibly knowing how to use them deters conflict from occurring. Contrasting deterrence theory is spiral theory, where states seeking a margin of superiority over their adversaries produce mistrust, hostility, and

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<sup>13</sup> Buzan and Herring, *The Arms Dynamic in World Politics*, 97.

increased prospects for war.<sup>14</sup> These approaches, therefore, have provided utility but their focus has been on the fruits of arms races and the arms dynamic instead of its roots.

Rivalry is at the root of arms races because it is what drives state motives. While qualifying a universally applicable definition of an arms race is difficult, rivalry exists at the core of the phenomena. The imperceptibility of motives allows states to interpret other states' actions as they wish. Absent rivalry, one state has no reason to perceive the actions of another as offensive. While the United States and the USSR amassed nuclear arms during the Cold War, China did not pursue a comparable arsenal and eventually qualified its strategy as minimum deterrence in the '90s. The absence of rivalry with the other major nuclear powers best explains this outcome. Furthermore, India was China's main strategic rival during this time period and possessed a very small nuclear deterrent. Even in the presence of rivalry between China and India, clear perception of rival intentions as limited or benign curtailed an arms competition between the two states. While dispositional changes occur in states due to domestic politics, advances in technology, or a variety of other factors, rivalry significantly increases the probability of an arms race.<sup>15</sup> It is further problematic that those domestic factors themselves can fuel a rivalry.

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<sup>14</sup> Robert Jervis, *Perception and Misperception in International Politics*. (Princeton: Princeton University Press, 1976), 80.

<sup>15</sup> Similar to the definitional difficulty of arms races, rivalry is not as easy to identify and qualify as one might think. Much of the recent research on rivalry and arms races uses Thompson's 2001 *Identifying Rivals and Rivalries in World Politics*. While this work produces substantial value to the discussion of rivalry, its identification criteria reveals the difficulty in measuring and qualifying rivalry. Thompson uses the occurrence of Military Interstate Disputes (MIDs) as his criteria. This is based upon the work of Jones, Bremer, and Singer from 1996. The issue of MIDs as a qualifier for rivalry and arms races becomes immediately apparent in the face of historical cases. The German-Anglo Naval Arms race, when analyzed from this criteria is an arms race absent rivalry due to the lack of MIDs. Qualification and identification therefore, is a similar challenge for both arms races and rivalry.

This association between rivalry and arms races is not to say that arms races emerge automatically or deterministically from the presence of rivalry. However, there is a strong increase in the probability of arms races due to the presence of rivalry. In their 2011 research on rivalry, war, and arms races, Rider, Findley, and Diehl identify, controlling for other factors, rivalry's impact on the probability of arms races. They find that "there is a dramatic increase in the probability of an arms race while two states are rivals: 93% greater than the general population and 81% greater than when the same pair of states was not in a rivalry."<sup>16</sup> Rival nations do not have to compete by arms racing, but rivalry increases these chances.

Therefore, in the absence of an overarching definition for arms races, we should instead recognize their universal characteristics. Using elements from previous scholarship we can arrive at a definition an arms race as *a strategically significant dispositional change in military capability, in personnel or weaponry, in order to gain military and political advantage between two or more states.*

### **Factors Influencing Arms Races**

Having arrived at a working definition, it is imperative to list some of the traits or key factors germane to arms races. Having established that rivalry is at the root of most arms races, these factors are particularly correlated to rivalry. Using these factors provides a foundation for comparison across cases in order to draw reasonably generalizable conclusions about arms race origins. The analysis of these

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<sup>16</sup> Toby J. Rider, Michael G. Findlay, and Paul F. Diehl, "Just part of the game? Arms races, rivalry, and war," *Journal of Peace Research*, Vol. 48, No. 1 (2011) 91.

factors across the three cases will demonstrate their relevance to the questions we face today.

**Table 1: Comparison of Arms Races in or outside of a Rivalry**

	Arms Race	No Arms Race
Rivalry	U.S.-USSR (Cold War)	Egypt-Iran (1960s and 70s)
No Rivalry (initial condition)	U.K.-Germany (1898-1912)	Most States (predominant condition)

### *Security Dilemma*

What then are the factors that are germane to arms races? In *Statistics of Deadly Quarrels*, L.F. Richardson compares competition between two actors in the face of threat and grievance, as well as the resulting characteristics of arms races manifest in increases in defense, rapid acceleration, and fatigue.<sup>17</sup> Threat and grievance are a concise set of characteristics that explain the elements comprising the *security dilemma*. Although threats can be perceived or misperceived, their presence is a key factor playing into the security dilemma that can result in an arms race. Threat can manifest itself in arms themselves, military policy, or foreign policy. Therefore, threat is one of the main factors to be considered when looking at arms races and rivalry.

### *Territory and Prestige*

Any sort of threat would lack meaning without grievance. Grievance as a concept and source of conflict is conceptually broad. One productive typology for understanding the range or categorization of grievance is that put forth by Rasler and Thompson as it pertains to

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<sup>17</sup> L. F. Richardson, *Statistics of Deadly Quarrels*, (Chicago: Quadrangle Books, 1960).

rivalry.<sup>18</sup> They classify great power rivalries as being related to *territorial* issues (spatial rivalry) or issues related to *prestige* (positional rivalries). This typology makes sense on the surface. One does not need to look far to find a rivalry that centers around, or manifests itself as, a struggle over one of these two categories of grievance. For instance, the U.S. and the USSR shared no borders and had no territorial disputes. However, the Cold War exhibited both nations engaging in a positional rivalry over global leadership. Conversely, Egypt and Israel share a border and have engaged in repeated historical clashes over territory. Beyond grievances however, uncertainty seems to have compelling sway over possible arms competitions.

### *Uncertainty*

As a driving factor for states to engage in the inefficient act of arms racing, *uncertainty* can be linked to the economic capacity of an adversary to compete in the arms race.<sup>19</sup> When looking at the economic capacity of an adversary for instance, a realist analysis can make the logical, albeit incorrect leap that economic capacity equates to an inevitable production of arms. Similarly, uncertainty can be linked to accurate or inaccurate perceptions of adversary capabilities. A common realist calculus is to extrapolate intent from capability. Intent, of course, does not tie neatly to capability, but depends on a wide range of security factors. Other layers of uncertainty can be tied to known or unknown leadership behavior based upon demonstrable patterns or the lack thereof. When states break previous patterns of behavior, even if the behavioral change is rooted in a rational calculation due to changing

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<sup>18</sup> Karen Rasler and William R. Thompson, "Explaining Rivalry Escalation to War: Space, Position, and Contiguity in the Major Power Subsystem," *International Studies Quarterly*, Vol. 44, 2000, 518.

<sup>19</sup> A. Kydd "Arms Races and Arms Control: Modeling the Hawk Perspective," *American Journal of Political Science*, Vol. 44, No. 2: 222–238, 2000.

security concerns, audience states may not perceive the same rational calculus, but instead misperceive a change in intentions. The array of possible interpretations of these behavioral changes therefore widens, producing uncertainty as to future intent.

### *Rivalry*

While the concept of uncertainty has received much theoretical attention, there also seems to be a robust link between uncertainty and arms race behavior supported by empirical evidence, thus bringing greater understanding to the issue.<sup>20</sup> States, acting in the international system characterized by anarchy, pursue security at a level commensurate with state power and perceived security needs. These actions are perceived or misperceived by other states through the psychological lenses or images through which they see the other state.<sup>21</sup> If therefore, one state views another through the lens or image of *rivalry*, this image of the other pollutes the ability to objectively analyze the changing security environment. Thus, due to the anarchy of the international environment and its uncertain nature, rivalry can emerge as a result and begin to define state interactions as they power balance against one another. One form of this power balancing can be arms races.

States engage in this back-and-forth, in part, due to their misperception of intent. In a relationship between an established power and a rising power, the chance of such a misperception is heightened. As the rising power exhibits a natural increase in power through security procurements, the established power is more susceptible to interpreting these procurements as a threat. This interpretation is due to the large change in the security environment between the two states as opposed to

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<sup>20</sup> Toby J. Rider, "Uncertainty, Salient Stakes, and the Causes of Conventional Arms Races," *International Studies Quarterly*, No. 57: 580-591, 2013.

<sup>21</sup> Jervis, *Perception and Misperception in International Politics*, 68.

a smaller iterative change occurring in the midst of a more stable status quo. If the established state misperceives a natural increase in power, there is the potential for a unilateral buildup of arms. This scenario costs the population greatly in taxes and treasure without increasing state security since the threat is misperceived.

It is of course not enough to simply identify the factors associated with arms races and enumerate them according to some sort of abstract coda. It is important to place flesh and bone on them by way of historical case study analysis. Accordingly, I will use three case studies in order to further understand the presence of these factors and the impact of rivalry on arms races.

### **Case Study Overview**

From the late seventeenth century until WWII, the British Royal Navy was the dominant navy in the world. As an island nation, the UK relied on command of the sea as a key to an economy that depended primarily on overseas trade. This reality manifest itself in its defense policy. Thanks to the “two-power standard” established in 1889, British defense policy maintained a navy two times larger than the next two largest navies. Britain maintained this policy until the First World War and the subsequent 1922 Washington Naval Treaty that limited naval construction for the United States, Britain, Spain, Italy, and Japan.

Germany, under Kaiser Wilhelm II and the influence of Admiral Alfred von Tirpitz, set out to challenge the naval superiority of Great Britain. Unified under a single government in 1871, Germany began constructing a national navy in 1890 aligning neatly with Wilhelm’s imperialist ambitions and a desire for a ‘place in the sun’ for the wealthy

new nation.<sup>22</sup> The construction of a German national navy began as a natural outgrowth of state power and evolved into a direct challenge of British naval superiority.<sup>23</sup> The two states engaged in a naval arms race centered around the dreadnought, an all-big-gun, steam-driven battleship that became a symbol of national power. The case is notable because it emerged outside the presence of rivalry, and is one of history's purest examples of an arms race.

Another historical arms race occurred between the United States and the USSR during the Cold War. However, this arms race took place within the context of rivalry as the United States and the USSR grappled for influence over the world order after WWII. On one hand, this rivalry manifested itself in the buildup of conventional and nuclear arsenals; on the other, the quest for prestige fueled national ambitions for manned space travel and the eventual landing on the moon.

Immediately following WWII, the US and USSR commanded the new bipolar world order. The two former allies had divided Europe on the battlefield, and the question of its future remained uncertain. The rivalry between the two poles manifested itself in strategic arsenals as well as an ideological battle for prestige and leadership over the postwar order. After the Soviets developed a nuclear bomb in 1949, the U.S. developed the thermonuclear weapon. After the Soviets achieved thermonuclear parity, the arms competition evolved into a contest over quantity of warheads as well as quantities and types of delivery vehicles. The "space race" in the 1960s embodied a prestige contest between the two poles for global leadership, but it also coincided with a strategic arms competition where

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<sup>22</sup> Hammond, *Plowshares into Swords*, 113. When states get more prosperous, or emerge as Germany did in the late 1800s, they seek security in very pragmatic ways. Looking around at nations in their new community, and being able to afford the means of security that these other nations possess, emerging nations sometimes pursue security in what can be described as a "me too" logic.

<sup>23</sup> Massie, *Dreadnought*, 911. Two dreadnoughts were launched but never completed in the program year 1914-1915, the Sachsen and the Württemberg.

technological mastery of space travel also meant mastery of the Intercontinental Ballistic Missile (ICBM). This case is notable because of how it emerged from rivalry as well as how both strategic advantage and prestige become intertwined in the motives of the competition.

A rivalry that did not produce an arms race was the Egypt-Iran rivalry in the 1950s and 60s. At the dawn of the Cold War, the two poles of this ideological and geopolitical struggle divided up allegiances across the globe. After the 1953 Iranian coup d'état, Shah Reza Pahlavi oversaw the new government who took a friendly stance towards the West and the United States. This alignment meant alignment with the newly formed state of Israel. Egypt, having undergone its own coup d'état in 1953 on a wave of Arab nationalism, opposed the state of Israel. This disagreement, combined with the 1960s movements of Arab-nationalism and Pan-Arabism helped forge a rivalry between Egypt and Iran.

Despite the rivalry between the two states, Egypt and Iran never engaged in an arms race. They built up arms from 1964 to 1970, but not with respect to one another. A few prominent factors seem to have influenced this outcome. First, Egypt and Iran are not contiguous states and had no territorial disputes. Although not always necessary for an arms race, territorial issues have a prominent influence on arms race potential.<sup>24</sup> Second, the arms buildup between the states was as a result of Cold War influences, not interstate issues between Egypt and Iran. Most important is the role played by Israel in the relationship between the two states. Israel presented the largest security concern for Egypt and the Arab world in 1948 and thereafter. The main reason for rivalry between Egypt and Iran was the Iranian stance, albeit influenced by Western allegiances, on the state of Israel. This rivalry failed to produce an arms race between Egypt and Iran because the state and behavior of

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<sup>24</sup> Toby J. Rider, "Understanding Arms Race Onset: Rivalry, Threat, and Territorial Competition," *The Journal of Politics*, Vol. 71, No. 2, April 2009, 700.

Israel consumed the security concerns of Egypt and the Arab world writ large.

### *Conclusion*

Arms races are easier to recognize than to qualify or define.<sup>25</sup> Yet, for the purpose of their comparison, it is crucial to identify and qualify them in order to study like phenomena. However, in order to draw strategic lessons, the comparison of like phenomena takes on a slightly more fluid definition. The Anglo-German naval arms race and the US-USSR nuclear races typify arms races due to their strategically significant natures, but only one of these cases was born out of rivalry. In contrast, the Egypt-Iran rivalry did not result in an arms race. In the remaining chapters I analyze these rivalries in greater detail in the hope that such analysis provides utility in understanding the potential for arms races in the current strategic context of space.

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<sup>25</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 287.

## Chapter 2

### The Anglo-German Arms Race

*...this was an arms race that should not have taken place, where the challenger had no prospect of overtaking the leader, and where the only possible outcome was a humiliating defeat.*

Matthew S. Seligmann

In 1871 the British Royal Navy, a derivation of the English Navy, turned 325 years old. In the preceding three centuries, the Royal Navy saw its share of challengers to its maritime dominance. Despite the strength of other navies such as those of Spain or France, or their combination in alliance against it, the Royal Navy managed to achieve and maintain position in the world as the most dominant naval force. That the British had a strong interest in preserving this position of power is well understood. The British Isles have long depended upon naval trade as the lifeblood of their economy. This is as true today as it was in 1871.

In contrast, 1871 marked the unification of Germany. From its birth until 1878, Germans mainly concerned themselves with the necessary trappings of domestic arrangement and governance. Once domestic issues were predominantly stabilized, Germany began to look outward. This look outward manifested itself in the professionalization of the military, the creation of Field Marshal Helmuth von Moltke's General Staff, and eventually the development of the Imperial German Navy.<sup>1</sup>

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<sup>1</sup> Grant T. Hammond, *Plowshares into Swords*, (Columbia: University of South Carolina Press, 1993), 108.

The Royal Navy's budget for 1885 was 12.8 million pounds sterling compared to the German Imperial Navy's 3.8 million.<sup>2</sup> The reason for British overwhelming advantage in this figure was due to the "two-power standard." Since 1770, the general British policy had been to maintain the Royal Navy at twice the capability of the next two greatest powers.<sup>3</sup> While this policy was never a strict guide, it was a general rule that protected the Royal Navy's position of power. In order to guarantee a favorable footing for Britain's naval trade dependent economy, the "two-power standard" was formalized as policy in 1889. This force ratio established itself closer to a three-power standard, for in 1885, France, Russia, and Germany's naval budgets were 15.1 million pounds. Furthermore, in 1898, the year in which the first German Naval Law was enacted under the urging of Admiral Tirpitz, Britain's 25.7 million sterling budget outmatched France, Russia, and Germany's combined 24.8 million.

The year 1898 was also a watershed for German defense. While the majority of German attention had been spent on its army until this time, Admiral Alfred von Tirpitz managed to convince the Reichstag of the importance of naval power. Admiral Tirpitz had been appointed State Secretary of the Navy only one year prior, and was convinced of the navy's importance for protecting its territories abroad. Beyond this practical purpose, he reasoned that by pitting his naval force against that of the British, the preeminent naval power, Germany would gain political leverage for diplomatic concessions.<sup>4</sup>

The focus on diplomatic concessions was due to the influences of imperialism on the economy of the day. Being a newly unified state, in

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<sup>2</sup> Hammond, *Plowshares into Swords*, 112.

<sup>3</sup> Phillips P. O'brian, *British and American Naval Power: Politics and Policy, 1900-1936*, (Westport CT: Greenwood Publishing Group, 1998),4.

<sup>4</sup> Thomas Mahnken, Joseph Maiolo, and David Stevenson, *Arms Races in International Politics*, (Oxford: Oxford University Press, 2016),22.

the 1890s Germany sought colonial expansion in southern Africa and the enhancement of global influence similar to the other powerful European states such as the UK.<sup>5</sup> The 1896 Kruger Telegram from Kaiser Wilhelm II congratulated President of the Transvaal Republic for expelling the recent invasion by British regulars. This congratulatory overture offended the British and signaled competition for colonial forays and influence in Africa. Tirpitz' hope was that perhaps a larger navy could convince the other colonial European powers to respect the desires of the newly formed German state and give teeth to its foreign policy of *Weltpolitik*.

*Weltpolitik* or "world politics" was the foreign policy adopted by Kaiser Wilhelm II. The adoption of this foreign policy signified the rise of Germany from a continental nation to the state of being an imperial continental power. In the age of colonialism, this meant that Germany would seek out not just continental power, but also colonial power. This change posed a significant challenge to Britain as the offshore balancer against any state attempting to become a regional hegemon. It is this policy that formed the core of the burgeoning competition between Germany and Britain. The realm of this competition, thanks to Tirpitz, was maritime.

The 1898 Navy Bill began a period of growth in naval power commensurate with the needs of a modern state like Imperial Germany. From 1897 to 1900, the German naval budget increased at a modest rate from 6.5 million pounds sterling to 7.5 million. However, 7.5 million quickly turned into 11.7 million by 1902.<sup>6</sup> In the height of the race, from 1905-1914, German naval expenditures increased from 233.4 million marks to 478.9 million marks.<sup>7</sup> Over the course of this nine year period, the corresponding British expenditures increased from 36.8 million

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<sup>5</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 22.

<sup>6</sup> Hammond, *Plowshares into Swords*, 112.

<sup>7</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 32.

sterling to 48.7 million. The Germans increased their spending by 105 percent compared to the British increase of 32 per cent.<sup>8</sup>

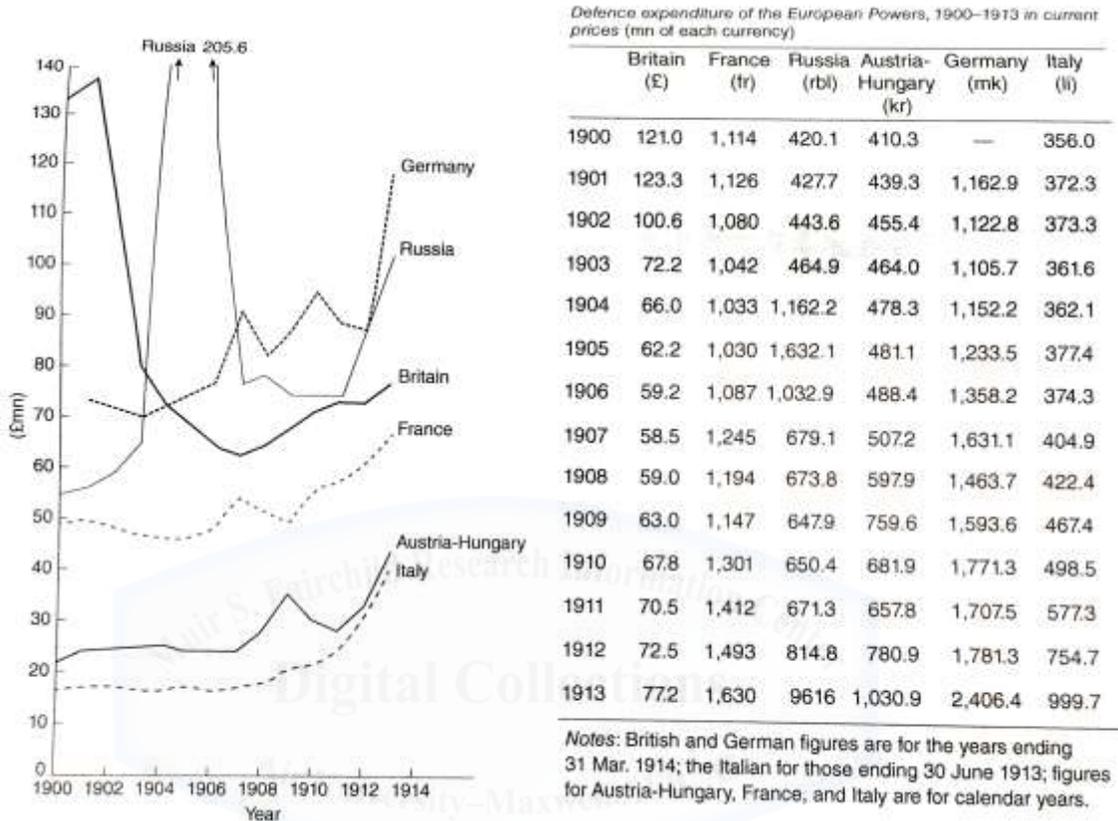


Figure 1. Defence expenditure of the European Powers, 1900-1913.  
 Source: Cambridge, *History of the cold war volume 2*, 101.

<sup>8</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 32.

<i>Year</i>	<i>Great Britain</i>	<i>France</i>	<i>Russia</i>	<i>Germany</i>	<i>Total: F + R + G (3)</i>
1884	10.9	7.7	3.6		
1885	12.8	7.4	3.9	3.8	15.1
1886	13.4	7.9		4.3	
1887	12.4	8.5		4.2	
1888	13.8	7.8		4.1	
1889	17.0	8.0	6.3	4.2	18.5
1890	17.5	8.1	4.4	4.9	17.4
1891	17.3	9.2	4.9	4.7	18.8
1892	16.6	10.1	5.3	4.8	20.1
1893	15.7	10.1	5.5	5.2	20.9
1894	17.8	11.0	6.1		
1895	20.8	10.7	6.1		
1896	22.8	10.6	6.4		
1897	22.0	10.4	6.2	6.5	23.2
1898	25.7	11.7	7.1	6.0	24.8
1899	17.9	12.1	8.7	6.5	27.2
1900	32.1	12.5	10.0	7.5	30.9
1901	34.3	13.1	11.7	9.6	34.4
1902	34.7	12.3	10.7	10.0	33.0
1903	39.2	12.5	12.3	10.3	35.2
1904	42.4	12.5	11.8	11.7	36.1

*(Total F + R + G = Totals for France, Russia, and Germany combined. Blank spaces indicate information not known.)*

Figure 2. Naval Expenditures (in millions Sterling)

*Source: Hammond, Plowshares into Swords, 112.*

Although Admiral Tirpitz intended to race with the British in the construction of naval arms, the dynamic did not take on the true form of an arms race until 1902. Although the Germans signaled no intention of attacking the UK, Germans such as Wilhelm and Tirpitz viewed the British as working in concert with Russia and France to contain

Germany. To the British, the Germans were less of a threat to their naval dominance than the French. However, after the naval alliance with the Japanese in 1902, British strategic thinking changed to assess Germany as the primary opponent of the Royal Navy.<sup>9</sup> This was further reinforced in 1905 with the defeat of the Russian fleet at the hands of the Japanese. Since 1894, the Franco-Russian Alliance had been the subject of much British strategic thinking. Now, with the Russian fleet destroyed after the Battle of Tsushima, the de facto reality was that the French fleet no longer posed a threat without its ally.<sup>10</sup> In the new geopolitical environment of 1906, Germany was now the most likely British adversary.

Combined with the perceived threat of Germany, Britain was uniquely equipped to engage in a naval arms race in 1905. Not only did it possess the vast infrastructure and human capital necessary for fleet construction, it had the right man in charge of the whole operation. Appointed as First Sea Lord in 1904, Admiral Sir John Fisher rejected conventional wisdom about technological progress that might put the brakes on an arms race. Prevailing wisdom had been that since Britain had put the most capital into the development of its fleet, any technological innovation would make recently produced ships obsolete and increase the costliness of their replacements. Admiral Fisher rejected this logic and proposed that the Royal Navy should seek year-by-year improvements in both quality and technology. He recognized that even though Britain had the largest navy, by setting a high standard of quality and innovation, it would make catching her impossible for other Admiralties. Admiral Fisher called this strategy “plunging,” because it signified forging head first into an endeavor without hesitation of turning back. Certainly, this “plunging” would render some British ships as out-

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<sup>9</sup> Hammond, *Plowshares into Swords*, 114-115.

<sup>10</sup> O'Brian, *British and American Naval Power*, 30.

of-date, but it would render competitor vessels obsolete even faster.<sup>11</sup> Admiral Fisher's aggressive policy towards technological progress, Britain's superior naval-industrial complex, and the vital nature of naval superiority to the British economy made its barrier for responding to a challenger such as Germany extremely low.

At the center of the Anglo-German Naval Arms Race lies the *Dreadnought*. The HMS *Dreadnought* was the conception of Admiral Fisher. It was the world's first all-big-gun single calibre turbine-powered battleship.<sup>12</sup> This bigger, faster, and more heavily armed battleship represented a significant advancement in naval technology, but was not the end. In fact, it was the first iteration in rapid battleship development in the era. From the 1906 *Dreadnought* to the *Queen Elizabeth* class battleship in 1948, British battleships developed through seven different classes and increased in weight by 80 percent. Similar German developments illustrate the rapid changes in naval technology during this period.

Ultimately, the arms race came to a close in 1914 by German admission. Kurt Reizler, a close advisor to Chancellor Hollweg admitted "the English can, and always will be able to build twice what we can."<sup>13</sup> This admission was already evident in 1908 as Admiral Tirpitz utilized back channels to ask about placing limitations on gun and ship size.<sup>14</sup> The Reich simply did not have the tax base to sustain the growth necessary to compete with Britain. Despite his doubts, Admiral Tirpitz continued on his path until 1912 when matters were taken out of his hands. Following the Second Moroccan Crisis in 1911, the Reich government aimed to focus more attention on the German army rather

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<sup>11</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 28.

<sup>12</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 29.

<sup>13</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 35.

<sup>14</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 32.

than the navy.<sup>15</sup> Even though Admiral Tirpitz aimed at a new naval law in 1913, the priorities of the Chancellor and the Reich had decisively changed. This political shift after Morocco calcified what should have been clear all along; the Germans would never be able to reasonably challenge the British in ship building. Wilhelm's frustrations with Tirpitz in the summer of 1912 over the low quality of ships as well as the comparative disadvantage with the British fleet indicate a slow realization that the arms race would not achieve its aims.<sup>16</sup> That Tirpitz never changed his approach illustrates that his strategy was faulty from the outset.

Tirpitz's strategy hinged on four assumptions from his 1897 memorandum, and he never swayed from them. First, he reasoned that since Britain had to project power globally, a larger German Navy could threaten its local fleet in the North Sea. Second, quality and crew readiness were of secondary nature since the British Navy had to feel threatened in that one theater. Third, since the German fleet was to be built for the purposes of political pressure, the costs associated with readiness and personnel could be waived. Lastly, he reasoned that a slightly inferior fleet in quality would still be able to pressure the British Navy.<sup>17</sup> To summarize, the strategy was to build an inferior navy in both quality and combat readiness. It further rested on the assumption of geopolitical stability such that Britain would not modify its force posture in the North Sea, an assumption proven false after the Russo-Japanese war. Ultimately these poor assumptions yielded an inferior strategy that only served to exacerbate German-Anglo relations.

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<sup>15</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 35.

<sup>16</sup> Mahnken, Maiolo, and Stevenson, *Arms Races in International Politics*, 34.

<sup>17</sup> Jonathan Steinberg, *Yesterday's Deterrent: Tirpitz and the Birth of the German Battle Fleet*, (New York: MacMillan, 1965), 208-223.

### *Security Dilemma*

The arms race between Germany and the UK is a classic tragedy of great power politics. The UK acted as an offshore balancer in a time period when the unification and rise of Germany had to be countered in order to prevent a hegemon on the European continent. Kaiser Wilhelm II's shift in German diplomacy from a status quo power to a revisionist power manifested itself in both policy and economy. The policy of *Weltpolitik* embodied the transformation of Germany from a nascent state seeking to maintain status, into an imperial state seeking to expand. This need for status provided the impetus to develop a navy capable of supporting expansion. The imperial nature of European economies only furthered the German government's policy change. Similar to the British, the German government began to protect the colonized property and interests of its private citizens. Thus, the economic and political dynamics that combined under the structure of colonialism only served to further the German pursuit of *Weltpolitik*.

Since the domain that enabled the economic incentives of colonialism was maritime, it drove the logic of challenging British supremacy at sea. In the same logic of Alfred Thayer Mahan and the British, the German Navy was designed to "protect Germany's sea trade and colonies... Germany must have a battle fleet so strong that even for the adversary with the greatest seapower, a war against it would involve such dangers as to imperil his own position in the world."<sup>18</sup> However, while the domain where the arms race manifested itself was maritime, the motivation for such a challenge was indelibly linked to economics, and the security dilemma induced by great power politics.

Between 1800 and 1905, Germany never posed a real threat to the UK. The UK contained more latent power compared to Germany until

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<sup>18</sup> Robert K. Massie, *Dreadnought*, (New York: Random House Press, 1991),181.

1903.<sup>19</sup> At that time, the UK's share of European wealth fell to 34.5 percent while Germany's percentage increased to 36.5. The subsequent geopolitical maneuvering and alliance formation resulting in the Triple Entente in 1907 illustrates that the security dilemma between the UK and Germany matured for the British when the emergent Germany threatened the wealth of the UK through its emerging seapower. Conversely, the security dilemma matured for the Germans when the UK demonstrated its resolve to halt German imperial expansion as illustrated in the colonial skirmishes such as the Boer Wars and the Second Morocco Crisis. The UK-German arms race therefore was a classic struggle between an emerging and established power under the framework of great power politics.

Since a security dilemma is composed of both threat and grievance it is important to articulate both aspects. Germany's emergence and revisionist policy of *Weltpolitik* posed a threat to Britain and the European status quo. German actions under *Weltpolitik* formed a grievance for the UK when the Kruger telegram signified emerging German competition abroad. For the Germans, threat and grievance were less acute. British resistance to its emergence as a great power formed a threat and grievance. Britain's ability to blockade, use expeditionary forces on the continent, and threaten German colonial development created a logical reason for Germany to develop its military capabilities. Although the Boer War exacerbated UK-German relations, it should not be looked at as a grievance that helped cause the arms race. The arms race began years before the Boer War began in 1899. The Boer War instead served only to further sour relations between the two countries. This timing of events again supports the claim that at the beginning of

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<sup>19</sup> John J. Mearsheimer, *The Tragedy of Great Power Politics*, (New York, NY: W.W. Norton & Company, Inc., 2001), 70 and 301.

the arms race, there was no rivalry between the British and the Germans.

### *Territory or prestige*

The issues of territory and prestige are interestingly intertwined in the case between the British and the Germans. Territory was not a factor in the traditional sense because there was no bordering or disputed territory between the two parties. However, colonial territorial expansion and claims were manifestations of the prestige that came with being a great power. The Kruger telegram, the Boer War, and the Moroccan Crisis all illustrate how expanding German influence and attempts to limit the influence of other European powers acted as disruptors of the power balance in Europe through the medium of colonial territory.

At its root then, prestige, not territory, influenced the arms race between the British and the Germans. Despite the fact that British journalists whipped the populace into a frenzy about a possible German invasion, there was never any period where domestic territory was a major influence on the arms race.<sup>20</sup> It was instead only colonial territory and its corresponding prestige that manifested itself as an arena for competition between Germany and Britain.

### *Uncertainty*

The rise in power by Germany, combined with their revisionist foreign policy, caused uncertainty in the Anglo-German case. Where in other cases, a rise in a foreign power might result in uncertainty of their intentions and an uncertain security environment, the German rise, combined with *Weltpolitik*, produced a certainty about intentions and at the same time an uncertain security environment. Admiral Sir John Fisher responded the only way he knew how. “Plunging” headlong into

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<sup>20</sup> Massie, *Dreadnought*, 627.

the Anglo-German naval arms race served to preserve British naval superiority as a means to render German colonial ambitions militarily impossible. While on the surface this appears to follow the realist logic that capability equals intent, German arms race behavior combined with *Weltpolitik* confirmed a sound grasp of German intentions. This combination linking moderately certain German intentions, with an uncertain security outlook, drove the British to the Anglo-German Naval arms race until the Germans could no longer compete.

### *Rivalry*

Before the arms race, there did not exist an Anglo-German rivalry. There did, however, develop a rivalry throughout the late 1890s and first decade of the 1900s. The 1896 Kruger telegram signaled a German challenge to British superiority. From the 1899 Second Boer War to the 1911 Second Morocco Crisis, the colonial struggles between Germans and the British demonstrate their growing rivalry. This rivalry emerged as a result of a few factors. First, and the most prominent, the security dilemma presented by a rise in German power and its revisionist ambitions signaled the emergence of a burgeoning rivalry between the British and the Germans. Second, the certainty of German intentions, manifested by *Weltpolitik* and their military and diplomatic actions in the Boer Wars, further built the rivalry. Lastly, the arms race served to concretize both the resolve of German intentions, as well as British perceptions thereof. On the whole, the sum of these actions resulted in a rivalry that coincided with the Anglo-German Naval arms race and the coming of WWI.

### *Conclusion*

The Anglo-German Naval arms race was unique in that it is one of history's purest examples of an arms race. It meets nearly every

definitional quality of an arms race and no notable scholars exclude it from the literature. It is interesting that while it started absent a rivalry between the two states, there developed a proto-rivalry or perhaps full rivalry during the period of the arms race. This seems self-evident from the multiple colonial forays and antagonisms. While there was no direct military interstate conflict, a criteria often associated with rivalry, a rivalry seems to have developed by 1899 as evidenced in multiple colonial competitions. The Kruger telegram, the Boer War, and the Moroccan Crisis evidenced how German *Weltpolitik* and emerging power had created a security dilemma for the British. This security dilemma motivated the aggressive maritime shipbuilding campaign that is famously known as the Anglo-German naval arms race.

The Anglo-German naval arms race is relevant to a potential arms race between the U.S. and China because the macro features of the two cases are the most similar. Both cases feature rising powers, Germany and China in the early 1900s, on pace to potentially displace established powers, Britain and the US, respectively. Further, while no rivalry existed early on in the Anglo-German race, it developed as Germany rose in power. China's rise in power similarly corresponds with its burgeoning rivalry with the U.S. These cases therefore illustrate commonalities of seismic changes in the international system due to emerging powers and evolving rivalries. To further develop this research, we turn to a mature rivalry that produced an arms race as well as a race for prestige and global ideological leadership.

## Chapter 3

### The U.S.-USSR Arms Race

*[The] rivalry between the two powers took many forms. The development of competitive military forces was merely one, and strategic weaponry came to serve as a leading measurement of their relative power and standing.*

Ernest May

In 1945 at the close of WWII, the United States was the lone military superpower in the world and in the sole possession of the atomic bomb. Russia, despite having achieved victory over Nazi Germany, had paid a staggering price in the war. Having divided up Europe, the two allies now faced each other, the fundamental nature of their relationship visibly changed. This new bipolar world order did not have to result in rivalry between the United States and the USSR; however, it did just that. One of the manifestations of the existing rivalry realized itself in the form of the development of nuclear arms.

#### *Phase 1 Rivalry and Nukes*

The US' strategic advantage as the sole possessor of the atomic bomb became clear in 1948 during the Berlin Crisis. As Stalin blockaded the city, President Truman ordered the forward deployment of atomic-capable B-29s to Britain. The ensuing Berlin Airlift to resupply Americans and Berliners could have easily resulted in disaster had the atomic threat not been present. This strategic advantage changed in 1949 with the Soviet Union's test of *First Lightning*, its first atomic device.

In the wake of these developments, Truman raced to compete in the technological battle for the "super" bomb, or the thermonuclear

weapon.<sup>1</sup> The logic to develop thermonuclear weapons was simple. Truman's special committee on the matter assessed the Soviets as capable of developing a thermonuclear weapon, so the president reasoned it necessary to develop one for the United States. The years 1952 and 1953 marked the maturation of this race for the "super" bomb by the United States and the USSR respectively. But the race for technological superiority in "wonder weapons" now would take on a different form. Technological parity was achieved with mutual propriety of thermonuclear weapons; the ensuing race revolved first around delivery vehicles and then nuclear stockpiles.

Early in the Cold War, the delivery method for nuclear weapons remained identical to that of WWII. Therefore the emphasis lay clearly on the rapid development of a superior bomber force. This effort manifested itself in both the numerous iterations of aircraft designs as well as the total number of strategic bombers. From 1945 until 1955, for example, the USAF operated the Lockheed P-2 Neptune, the Boeing B-50 Superfortress, the Convair B-36 Peacemaker, the North American B-45 Tornado, the Boeing B-47 Stratojet, and the Boeing B-52 Stratofortress. While the various numbers of aircraft types are impressive, the total number of strategic bombers is even more illustrative as to the strategic importance placed upon nuclear delivery vehicles. In the same decade, the United States went from one nuclear capable bomber to over 1,000.<sup>2</sup> Though the USSR produced a similar number of aircraft types, the lack of transparency about its aircraft numbers directly contributed to a perceived "Bomber Gap."

This lack of transparency took a frightful turn in the aftermath of Soviet Aviation Day in 1955. In a move reminiscent of the "Potemkin Village" exercises, where the Grigory Potemkin assembled fake villages

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<sup>1</sup>Craig, Campbell. *Destroying the Village: Eisenhower and Thermonuclear War*. (New York, NY: Columbia University Press, 1998), 29.

<sup>2</sup> See figure 1.

along the Dnieper River in order to impress Empress Catherine II of Russia, the Soviets flew strategic bombers past the reviewing stands, then out of sight, then past the reviewing stands again. The appearance of this stunt suggested higher acquisition numbers than previously thought.<sup>3</sup> A combination of unclear analysis of Soviet capability and a general climate of fear resulted in the “Bomber Gap” debate about how disparate the strategic bombing capabilities were between the United States and the USSR. The “Bomber Gap” narrative both justified military expenditures to the general public, as well as illustrated the competition between the US and the USSR for the more capable force when it came to nuclear delivery.

The concepts behind the “Bomber Gap” neatly summarize how rivalry drove the arms race for nuclear weapons in the first phase of the Cold War, defined by air atomic nuclear strategy. Before the ICBM, Eisenhower leaned heavily on Strategic Air Command (SAC) to deter the Soviets with an air atomic strategy. Having a third of SAC’s 1,200 B-47 long-range bombers fueled and loaded at all times with nuclear weapons provided Eisenhower with his nuclear deterrent.<sup>4</sup> After the Soviet Aviation Day of 1955, the “Bomber Gap” embodied the fear of the American populace and politicians wielded it to massively expand the USAF bombing fleet. U-2 flights exposed the “Bomber Gap” as a farce in 1956, as illustrated in Figure 1, but it stands as a powerful indicator of how rivalry influenced the arms buildup in the first phase of the Cold War.

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<sup>3</sup> Hammond, 194-195.

<sup>4</sup> Brzezinski, 24.



Figure 3. US-USSR Strategic Bombers  
 Source: Cambridge, *History of the cold war volume 2*, 101.

### *Phase 2 Rivalry and Space and Missiles*

While the Americans feared a fictitious “Bomber Gap” and used it as a justification for more bombers, the Soviets contended with an actual gap in bomber capability. The Soviet bomber fleet, beleaguered with limitations in reliability and range, had no effective response to the American air atomic strategy. General Curtis LeMay, Commander of SAC, reinforced his numerical superiority with a bellicose posture, flying aggressive exercises into Soviet territory.<sup>5</sup> Khrushchev, having no effective response, turned his attention to the development of the ICBM under the leadership of Sergei Korolev. International rivalry drove this strategic choice as Khrushchev found himself without other options.

<sup>5</sup> Operation Powerhouse demonstrated the operability of SAC’s aircraft with 1000 simultaneous sorties. Operation Home Run flew reconnaissance versions of B-47s through Russian territory.

On both sides of the world, military leaders set their sights on the development of the ICBM. However, the first three objects launched into space would be the Russian satellites Sputnik I and II, and the American Explorer 1. In the USSR, Sergei Korolev fought with military leaders such as Marshal Mitrofan Nedelin, who advocated for a functional rocket, arguing that it was the Army's only need.<sup>6</sup> Korolev disagreed bitterly, stating that the prime objective was to be first into space.<sup>7</sup> Khrushchev backed Korolev, giving his opinion considerable influence. However, the greater motivator was that no one in the Soviet Presidium wanted to be the person who delayed a launch into space. If the Americans launched first, and Khrushchev discovered that someone had been the cause for delay, that individual could expect reprisal.<sup>8</sup> In the Soviet Union, fear of being second, fueled by international rivalry, won the day over military institutional preferences.

Back in the United States, the launch of Sputnik caused a cascade of reactions in both the political and military realms. According to General Bernard Schriever, director of the Air Force Missile Command, "Sputnik woke us up."<sup>9</sup> With mounting political pressure to respond, President Eisenhower downplayed notions of a race with other nations while simultaneously ordering the U.S. Army Ballistic Missile Agency (ABMA) to begin preparing their rocket program as a backup to the Navy Vanguard program already working on rocket technology.<sup>10</sup> The United States Army successfully launched the satellite Explorer 1 four months

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<sup>6</sup> Matthew Brzezinski, *Red Moon Rising: Sputnik and the Hidden Rivalries that Ignited the Space Age*. (New York: Holt, 2008), 147.

<sup>7</sup> Brzezinski, *Red Moon Rising: Sputnik and the Hidden Rivalries that Ignited the Space Age*, 148.

<sup>8</sup> Brzezinski, *Red Moon Rising: Sputnik and the Hidden Rivalries that Ignited the Space Age*, 149.

<sup>9</sup> Brzezinski, *Red Moon Rising: Sputnik and the Hidden Rivalries that Ignited the Space Age*, 249.

<sup>10</sup> Richard D. Easton and Eric F. Frazier. *GPS Declassified*, (Lincoln: University of Nebraska Press, 2013), 19.

later after a very public failure of Vanguard. Nevertheless, the launch of Sputnik provided external motivation for the trifurcated U.S. rocket programs under the AF, Navy, and Army. The rivalry between the US and the USSR fueled this motivation as the Soviets were first to space.

### *Implications for an arms race*

The same technology used to launch Sputnik and Explorer into space could be used for weaponry. Motivated by international rivalry, U.S. fear led the “Bomber Gap” to quickly turn into the “Missile Gap” after both superpowers developed the ICBM. As the speed with which the nuclear weapon could be delivered with an ICBM shrunk the battlespace between the United States and the USSR, attention now turned to questions of maximizing the numbers of nuclear warheads and ICBMs as well as their strategic placement both in the United States and around the world. This new era of the arms race between the U.S. and the USSR extended from 1957 until the end of the Cold War. The U.S. and USSR both stockpiled thousands of nuclear weapons and developed new types of ICBMs and other delivery vehicles. These developments prompted both nations to start developing ballistic missile defense capability, eventually leading both sides to realize that ballistic missile defense only prompted the other nation to develop more missiles. Without controls in place, there would be a never-ending spiral. In an effort to end this spiral, the U.S. and USSR negotiated both the 1972 Anti-Ballistic Missile Treaty and the 1987 Intermediate-Range Nuclear Forces Treaty.<sup>11</sup>

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<sup>11</sup> There is debate as to which periods of the Cold War typify an arms race vs collective efforts to control the arms race. Timothy Hoyt offers that 1945-1960 was a period of intense armaments development. 1960-1978 marked a period where efforts were made to control arms. Then in the period of 1978-1990 arms racing resurged and waned towards the end of the Cold War. From *Arms Races in International Politics*, 2016. 141.

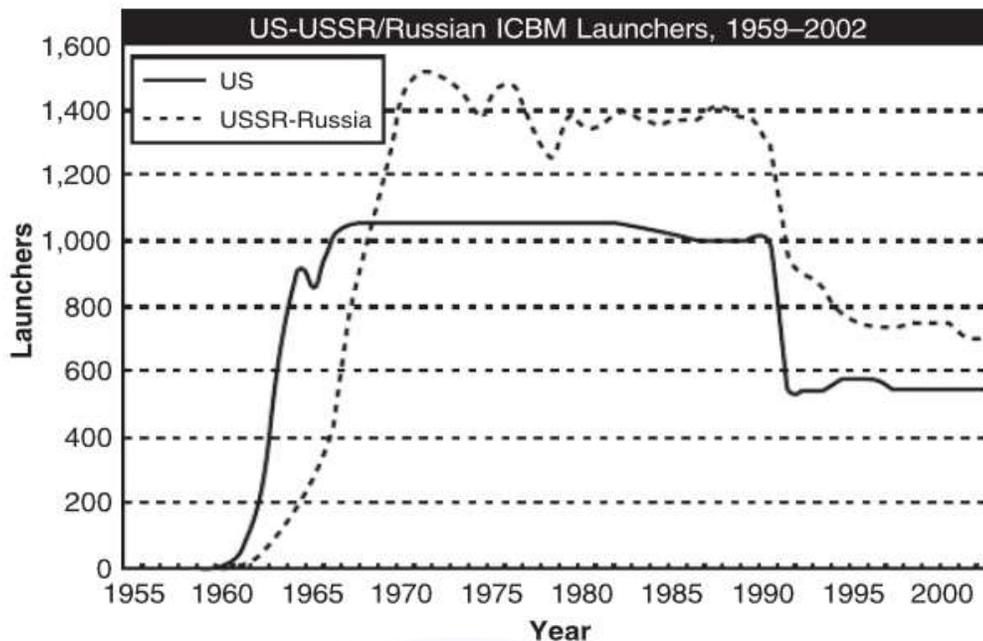


Figure 4. US-USSR Strategic Bombers  
 Source: Cambridge, *History of the Cold War*, Vol. 2, 101.

### *Space Race*

Although the initial actions in space were completed by President Eisenhower and Nikita Khrushchev in 1957 and 1958 with the launch of Sputnik I, II, and Explorer I, the need to exploit space for security ensured continued development of the space domain. The “space race” was a dual pronged effort. The first and most militarily necessary reason for the “space race” was the need to surveil Soviet activity. The “Bomber Gap” and the “Missile Gap” evidenced as much. The second reason was the need to obtain prestige in the ideological struggle between capitalism, communism, and the question of which state would lead the bipolar world order. In order to accomplish these feats, President Eisenhower established a vast architecture of secret satellite reconnaissance under the National Reconnaissance Office (NRO). Declassified in 1992, the NRO maintained surveillance over the USSR throughout the Cold War, exploiting space for national security. In an effort to keep the space domain a peaceful and benign environment, however, NASA was

developed as a civilian organization that would explore space for purely scientific and peaceful purposes.

Despite NASA's peaceful mandate, the space race to the moon illustrates how rivalry with the Soviets drove American behavior in competition to be first. The Cold War was just as much about prestige as it was about strategic advantage. Either side could have all the nukes, bombers, or ICBMs it could afford, but without the prestige of being the global leader, neither side could assert themselves as the nation to follow into the future. Studying the historical context of President John F. Kennedy's "second State of the Union Address" in 1961 illustrates how the race to land a man on the moon was really a race to assert the role of the United States' global leadership.

President Kennedy claimed that past threats to freedom were mainly military; however, the new threat to freedom was communist influence over the people and governments of the emerging nations on the southern half of the globe, in which he included Asia, all of Africa, and the Middle East.<sup>12</sup> As these nations emerged, he claimed, the enemies of freedom were sending aid, agitators, technicians and propaganda in order to win over these peoples. The international American response he proposed included Kennedy's Act for International Development (AID), which would eventually become the U.S. Agency for International Development (USAID). Further, he called for the expansion of the U.S. Information Agency (USIA) to in order to engage in the "world-wide struggle" over the ideas America shares with the world versus ideas that would be forced on them by enemies of freedom.<sup>13</sup> On the domestic front, he proposed internal controls such as implementing Keynesian fiscal policy to control the economy, reinforcing the military to allow for military responses below the nuclear threshold, as well as increasing the

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<sup>12</sup> Walter McDougal, ...*The Heavens and the Earth: A Political History of the Space Age*, (Baltimore: The Johns Hopkins University Press, 1985), 302.

<sup>13</sup> McDougall, ...*The Heavens and the Earth: A Political History of the Space Age*, 302.

budget for fallout shelters and other civil-defense measures. Finally, after these calls to mobilize American efforts both at home and abroad through the reorganization of U.S. agencies, President Kennedy challenged Americans to land a man on the moon.

The space race therefore reflected an idealized imagery embodied by American exceptionalism and spirit of exploration; however, the motivation for such bold endeavor found its roots in the rivalry between the U.S. and the USSR for global leadership. American leaders perceived that the Soviets intended to dominate the globe by spreading communist ideas throughout the emergent world. The space race illustrates just how powerful the U.S.-USSR rivalry was, seeing the U.S. Congress commit to the Apollo program, the most costly of government programs in peacetime ever.<sup>14</sup> The space race alone neither answered the question of ideological superiority between capitalism and communism, nor did it end the Cold War. The space race does, however, illustrate both how powerful rivalry is as a motivator as well as the lofty extents of human achievement that can come as a result.

The U.S.-USSR case is truly multifaceted, punctuated by different phases of strategic competition. The bomber, missile, and space phases of the competition all point to the conditions of a rivalry in which the players chose to compete for strategic advantage. This case exhibited multiple factors associated with arms races including the elements of a security dilemma, competition for both territory and prestige, and rivalry.

### *Security Dilemma*

The U.S.-USSR case illustrates both the threats and grievances associated with a security dilemma. Initially, the air atomic strategy of the U.S. threatened the USSR with its both its advantage in atomic and

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<sup>14</sup> McDougall, ...*The Heavens and the Earth: A Political History of the Space Age*, 305.

airpower capabilities and its aggressive forward basing and exercises. Khrushchev responded by developing the ICBM. These latent threats continued to expand in the missile age as both warhead stockpiles and delivery vehicles grew. Many grievances spurred the two sides to action. The blockade of Berlin, General LeMay's aggressive force posture, and the placement of Soviet missiles in Cuba are just a few of the many grievances that spurred both sides to pursue strategic advantages in both weaponry and force disposition.

### *Territory or Prestige*

While territory is a key factor influencing arms races, the U.S.-USSR case exhibited more of a sphere of influence over territory rather than territorial claims per se. The opposing spheres of NATO and the Warsaw Pact represented more of the prestige that comes with leadership and influence. Whether or not prestige was an issue in the Cold War is clearly answered by the space race. Landing on the moon presented a case to the world that the U.S. was the global leader. Prestige therefore, played a pivotal role influencing the actions of both sides in the Cold War and the Space Race.

### *Uncertainty*

Uncertainty is an important element to highlight in the U.S.-USSR case. Uncertainty affected both sides throughout the Cold War and led to both massive arms buildups and eventually arms controls. The "Bomber Gap," although a farce, justified a large U.S. bomber fleet through inducing fear out of uncertainty. An almost identical feedback loop of fear, politicization, and production drove ICBM development due to the "Missile Gap." The need to counter these threats eventually led to the need for missile defense, which by its nature increased uncertainty and the need for missile defense treaties.

## *Rivalry*

Prestige and uncertainty played pivotal roles in the U.S.-USSR arms race, but the strategic rivalry between the two states amplified its intensity. Different presidents dealt with the rivalry in different ways. President Eisenhower determined to limit military spending after WWII and made concerted efforts to downplay claims to Soviet military superiority as well as the rivalry itself.<sup>15</sup> While presidential hopefuls latched on to powerful political imagery such as the “Bomber Gap” and the “Missile Gap” for campaigning purposes, President Kennedy fully embraced the rivalry in a contest for global leadership, personified in the space race. Attempts to temper or engage in the rivalry evidence its palpable presence. The continuous iterations of strategy throughout the Cold War show how rivalry influenced both the U.S. and the USSR.

## *Conclusion*

The U.S.-USSR case is a rivalry that produced an arms race. Both sides found themselves in a security dilemma due to latent threats from the other side as well as numerous grievances throughout the Cold War. Their rivalry manifested itself in many ways as the two nations competed to convince the world of the soundness of their political ideology and their ability to protect proxy states from the opponent. Ultimately, this rivalry produced significant dispositional changes in strategic arms embodied by an evolution from air atomic strategy to a nuclear triad.

The U.S.-USSR case is relevant to a potential arms race between the U.S. and China case because it illustrates what the relationship, and corresponding arms dynamic could become; a heated, dangerous, and drawn out rivalry. Even at the time of this writing, there exist the seeds of rivalry between the U.S. and China. Despite economic interdependence and cooperation in a variety of spheres, economic and security issues

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<sup>15</sup> Easton and Frazier, *GPS Declassified*, 19.

plague a relationship which day-by-day, begins to look more and more like a rivalry. Since rivalry is an important factor when it comes to the prospect of arms races, it is now time to turn our attention to a case where a rivalry did not result in an arms race.



## Chapter 4

### The Egypt-Iran Rivalry

Although rivalry is a powerful motivator in arms races, no arms race erupted between Iran and Egypt during their years of rivalry in the 1950s and 1960s. In this period, until in 1970, the two states engaged in a bitter rivalry. It is true that both countries built their militaries at a rate exceeding the aforementioned threshold of 8% military spending or personnel increases.<sup>1</sup> The context of this rivalry and time period will show how this is not an arms race, as well as how all four factors associated with arms races were diminished for Egypt and Iran. By looking at the Egypt-Iran relationship where rivalry did not produce an arms race we can perhaps identify factors that mitigate such a possibility in future rivalrous relationships.

Egypt has a distinct place in both the history of the Arab world as well as the world at large. As an ancient country, the citizens of Egypt have had a chance to contribute to human development throughout thousands of years. Beyond building extraordinary structures such as the pyramids, Egyptians have contributed to the modern world through developments in medicine, science, and mathematics amongst other contributions. The multi-millennium long history of Egypt contributes to a strong sense of pride and Egyptian nationalism.

Iran has similar attributes in its connection to the ancient Persian Empire. As an ancient empire, Persia contributed heavily to the sciences,

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<sup>1</sup> Douglas M. Gibler, Toby J. Rider & Marc L. Hutchison, "Taking Arms Against a Sea of Troubles: Conventional Arms Races During Periods of Rivalry\*," *Journal of Peace Research*, vol. 42, no. 2, 2005, 139.

with developments in algebra, chemistry, and the harnessing of wind power. There are many other Persian contributions in the fields of medicine, philosophy, and human rights. Modern Iranians, although citizens of a nation state born out of the 1979 Iranian Revolution, have a strong connection to their Persian past. Similar to Egypt, Iranian nationalism is heavily influenced by a strong connection to a glorious past.

Today, Egypt and Iran are two of the most populous countries in the Middle East. Both countries boast modern and professional workforces that have made socio-economic contributions to their respective nations and regions. Both Egypt and Iran perceive themselves to be leaders of the Arab and Persian worlds respectively. Although they do not share a border that would create an immediate security concern, these self-perceptions as former great powers create favorable conditions for rivalry, especially when outside influence is present.

As a British protectorate since the late 1800s, Egypt was aligned with the U.S. by default after WWII. The period of time as a protectorate influenced Egyptian government as it adopted a constitution and a parliamentary system. This influence combined with the British foreign interests in the Suez Canal provided ample motivation for political opponents able to wield nationalist sentiments. Gamal Abdel Nasser channeled this nationalism in order to seize power in the 1952 revolution in Egypt, maintaining power until 1970.<sup>2</sup> Arab nationalism motivated much of his actions, such as the nationalization of the Suez Canal in 1956, as he sought to extricate foreign influence.

On one level, the actions of President Nasser followed a certain national logic. On the international level, his actions followed the logic of international politics. Britain was aligned with the West and the United States against the Soviets in the Cold War. By ending the inter-state

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<sup>2</sup> Egypt and Iran: The 30-year estrangement, [www.mpec.org](http://www.mpec.org)

relationship with the British as a protectorate state, alignment with the USSR within the Cold War context only made sense. However, these same actions seeking to increase national status and shifting Cold War alliances, combined with Arab nationalism and Pan-Arabism, created the conditions for rivalry with Iran.

First, by abandoning status as a British protectorate, Egypt raised its status internationally just as losing influence in Egypt hurt British status. Regionally, this change in Egyptian status increased tensions with Iran because Egypt was no longer subject to the West. As a more independent state, Egypt was free to act in its own best interest to a greater extent. This act alone increased the chance of rivalry with opposing or neighboring states. As Iran watched Egypt free itself from British influence by weaponizing Arab nationalism for independence, leaders in Tehran were wondering what might be the possible extent of these changes.

Second, as Arab nationalism fueled the rise of Nasser to power, it also fueled Arab politics writ large in the 1950s and 1960s.<sup>3</sup> Pan-Arabism, formed in Arab-majority lands during Ottoman reign, continued past the empire's dissolution and only strengthened with Britain's support for the establishment of Israel in Arab Palestine after WWII. That two states could unite under the concept, as did Egypt and Syria in the United Arab Republic from 1958-1971, illustrates this power. From Iran's perspective, the Arab world in this period was uniting under the groundswell of a transnational political ideology based on ethnic identity that excluded Persians. Nasser and Egypt's role in pushing the Pan-Arab movement only served to exacerbate the Iran-Egypt rivalry.

Third, aligning itself with the USSR, while logical, only served to heighten the rivalry with Iran. The Pahlavi regime of Iran was aligned

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<sup>3</sup> Barry Rubin, "Pan-Arab Nationalism: The Ideological Dream as Compelling Force," *Journal of Contemporary History*, Vol. 26, No. 3/4, 1991, 536.

with the United States, Israel, and conservative Arab states.<sup>4</sup> In addition to the increase in relative Egyptian power and the influence of Arab nationalism, the Cold War alignment between the U.S. and Iran deepened the rivalry. It was not until Nasser's death in 1970 that the tensions in the rivalrous relationship between Egypt and Iran could thaw.

After the death of President Nasser, the succeeding leadership of Anwar Al-Sadat drastically changed Egyptian foreign policy. Of prime importance, Al-Sadat ended Egypt's alliance with the Soviet Union, thus extricating itself from the great power politics influence on its relationship with Iran. After Nasser's death, Arab nationalism and pan-Arabism ceased to be the driving factors in Arab politics. The political union of Egypt and Syria under the United Arab Republic broke up in 1971, illustrating just how much Nasser pushed the ideology. Nasser's death and the corresponding downplay of Arab nationalism was another critical factor allowing for rapprochement between Tehran and Cairo.<sup>5</sup>

The Iranian perspective of this rivalry is important to consider as well. After WWII, Iran was a country divided into three parts including the main territory of Iran, as well as the Soviet influenced states of the Republic of Azerbaijan and the Republic of Mahabad. The 1946 Iran Crisis, which eventually saw Iranian state integrity restored, was one of the first Cold War struggles as the Soviets sought to extend their influence in the post WWII world order. The response from the U.S. was the Truman doctrine which increased economic and technical assistance to Iran. Western efforts notwithstanding, Iranians were determined to have a say in their own future.

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<sup>4</sup> James Dobbins, Alireza Nader, Dalia Dassa Kaye, and Frederic Wehrey, *Coping with a Nuclearizing Iran*, RAND Corporation, 2011 Chapter 2, 5.

<sup>5</sup> Egypt and Iran: The 30-year estrangement, [www.mpec.org](http://www.mpec.org)  
Wezārat-e omūr-e k āreja, Edāra-ye haštom-e siyāsī, *Barrarsī-e ejmālī-e kešvar-e jomhūrī-e  
' arabī-e Meş r*, 1353 Š./1974, pp. 86-93. <http://www.iranicaonline.org/articles/egypt-vii>

The trends of nationalism and nationalization found in Egypt were also present in Iran. Prime Minister Mohammad Mosaddegh nationalized the Iranian oil industry in 1951. This expelled the Anglo-Persian Oil Company which had been a bulwark of British control over Iranian oil since 1908. From a Western perspective, this put Iranian oil and its supply to global markets at risk. The 1953 Iranian coup d'état, which overthrew Mosaddegh with assistance from Britain and the U.S. in favor of Shah Mohammad Reza Pahlavi, diminished these concerns. The Shah aligned Iran with the West against the Soviets. While this made sense as a reaction to past Soviet actions oriented around influencing Iran as evidenced in the 1946 Iran Crisis, it ran counter to the trends of nationalism and self-determination occurring in Egypt during the same time period.

During this rivalry period between Egypt and Iran, from 1964 to 1970, the two states built up their military arms and personnel at a rate exceeding 8% per year.<sup>6</sup> They however, never engaged in an arms race or buildup as a response to the other part of their dyad. External forces from their Cold War alignments strongly influenced their military acquisitions. For Iran, the U.S. encouraged them to use their oil revenues in order to purchase and develop military arms aimed at constraining the regional presence of the Soviets.<sup>7</sup> The Egyptian military spending meanwhile, came into ready use regarding Egypt's primary security concern at the time, Israel. Both nations' military expenditures therefore, were not aimed at the other. The result was no dyadic arms race, but instead a military arms buildup fueled by Cold War alignments and the creation of the state of Israel.

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<sup>6</sup> Douglas M. Gibler, Toby J. Rider & Marc L. Hutchison, "Taking Arms Against a Sea of Troubles: Conventional Arms Races During Periods of Rivalry\*," *Journal of Peace Research*, vol. 42, no. 2, 2005, 139.

<sup>7</sup>William L. Cleveland, . *A History of the Modern Middle East*. 1999.

The nations of Egypt and Iran have a distinct sense of pride in their heritage and historical significance to the world. Egyptians view themselves as leaders in the Arab world and Iranians view themselves similarly as leaders of the Persian world. Had Israel not have presented a considerable security concern, and the Cold War's fueling of an arms buildup could have resulted in a dyadic arms between Egypt and Iran. Emergence of Egypt from Western influence could have easily caused a regional struggle between Egypt and Iran and possibly an arms race had a few conditions not been present. Overarching these conditions was the presence of Israel, the central grievance and security concern for Egypt and the Arab world.

#### *Israel, Security dilemma, Grievance*

The existence of the state of Israel dislodged many of the traditional factors associated with arms races between Iran and Egypt. This is because although the rivalry between the two states was very real, there is a circular nature by which the state of Israel both created and redirected the energies of this rivalry. Nasser, Egypt, and the Arab world opposed creation of the state of Israel in 1948. Nasser was personally familiar with this development as a member of the Egyptian envoy sent to negotiate the 1949 formal armistice with Israel. The Arab nationalist and Pan-Arab responses to Zionism freed Egypt from British control and unified Arabs within revisionist Arab nations. While this could have created a security dilemma for Iran in other circumstances, the Arab world directed its primary security concerns towards its main grievance, Israel. Israel, the primary security concern therefore, alleviated secondary security concerns between Iran and Egypt, whose rivalry was largely induced by the disparate stances of the two governments on Israel's existence.

Consideration of a counterfactual argument illustrates this point further. Had Nasser and the other Arab nations, unified by pan-Arab

sentiment, been successful in the efforts to retake Palestine, the subsequent security concerns of Iran would have been more acute. The opportunities for perceived threats, misperceptions or disputes over territory or prestige would have been magnified with a united Arab front having taken care of their primary security concern. This of course hypothesizes that after the elimination of Israel, the leaders of Arab states could maintain consensus without that central motivation.

### *Security Dilemma*

Despite their different alignments in the Cold War between the two poles of the U.S. and the USSR, Egypt and Iran did not have much of a security dilemma. A security dilemma is comprised of threat and grievance. Grievance is clearly present in this case, but the threat was absent. Since Egypt's primary threat was Israel, Egyptian leaders focused on the Israel problem instead of the grievance formed by their support from Iran. Conversely, Iran perceived little threat from Egypt due to the Egyptian preoccupation with Israel. Threat therefore, was lacking as a necessary ingredient of a true security dilemma for Egypt and Iran.

### *Territory or Prestige*

Another factor lacking in the Egypt-Iran case is the presence of any territorial dispute. One of the most likely causes for an arms race is perception of threat, but that perception must take place over a stake salient enough to merit the costs associated with arms races.<sup>8</sup> As we established earlier in our discussion of the histories of both Egypt and Iran, both nations have legitimate claims to prestige. This notwithstanding, the probability of them entering into an arms race is

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<sup>8</sup> Rider, Toby J., *Understanding Arms Race Onset: Rivalry, Threat, and Territorial Competition*, 692

vastly reduced by their lack of territorial disputes. Recent research by Toby J. Rider shows that out of 70 strategic rivalries studied that resulted in arms races, less than 15% took place without the presence of a territorial stake.<sup>9</sup>

### *Uncertainty and Rivalry*

Since Israel embodied the primary security concern for Egypt, this downplayed the uncertainty for Iran. Knowing that Egyptian displeasure at Iranian support for Israel would fall second to the existence and actions of Israel itself, Iran could rest easy knowing that Egyptian security concerns caused by Iran took on a secondary nature. For both parties therefore, the primacy of Israel as a security concern simultaneously absorbed Egyptian energies while downgrading Iranian concerns. The lack of uncertainty in this case proved an integral factor in diminishing the chances of an arms race between the two rivals, as well as diluting the importance of their rivalry itself.

### *Conclusion*

The presence of rivalry between Egypt and Iran in the 1950s and 1960s was very real; however, the traditional factors associated with arms races such as the security dilemma, composed of threat and grievance, territorial dispute, or uncertainty were redirected at the state of Israel. It is interesting that the central grievance, Israel, could both cause and absorb the discord between the two rivals, Iran and Egypt. Although rivalry is a significant factor in arms races, this factor is mitigated when the root of the rivalry can be eliminated, or as seen in this case, the target one state's security efforts.

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<sup>9</sup> Rider, Toby J., *Understanding Arms Race Onset: Rivalry, Threat, and Territorial Competition*, 701.

This lesson illuminates the importance of the Egypt-Iran case with respect to a discussion of the U.S. and China. Are the primary security concerns of the U.S. and China salient with respect to their relationship with one another, or are the issues that trouble their relationship insignificant when compared with primary or even secondary security concerns? It is entirely possible that the rise of China and its behavior on the international stage obfuscate the true security concerns of the U.S., upgrading a security concern from ancillary to primary. As in the case of Egypt and Iran, if the U.S. and China recognize the security concerns between them as being secondary to another primary security concern, this recognition may provide the vehicle for de-escalation, rivalry notwithstanding. That said, it is time to examine a relationship that is troubling today, and may define the 21st century, that of the U.S. and China.



## Chapter 5

### The United States and China

*China is, as was imperial Germany, a resurgent continental power; the United States, like Britain, is primarily a naval power with deep political and economic ties to the continent.*

Henry Kissinger

Much has been written about the implications of the relationship between the United States and China. As the two great powers of the twenty-first century, it is fair to say the relationship between the two nations will shape the near future and could have enduring impact beyond that timeframe. While this is true due to their economic power and reach, it is also true because their strategic interactions will have implications for the future structure of regional, if not global alliances. The question for this analysis, however, is tailored to the discussion of outer space and arms races. In order to tackle this topic, it is important to briefly look at the historical strategic dispositional change in arms in China. These changes help illustrate Chinese perception of U.S. actions. It is then possible to analyze the presence of factors that are associated with arms races as in the other case studies. As the presence of these factors increases the probability of arms races, their analysis can provide a further understanding of the U.S. China relationship. First it is important to understand the historical context surrounding this relationship.

Five centuries ago, China was most powerful and modern nation of the day. Technologically, Chinese inventions of the compass, gunpowder, and papermaking predated European adoption of these technologies by almost a millennia.<sup>1</sup> Chinese cultural heritage contained beautiful and proud traditions. Fine Chinese products such as silk and porcelain would become highly desired in trade with the outside world. The Ming dynasty however, would develop a closed approach to international relations and trade.

The dynasty developed a robust nation and a large navy as a reflection of its power. As that fleet toured the world, it exacted Chinese hegemonic tribute upon its neighboring states under the command of Admiral Zheng He. These voyages simultaneously expressed Chinese commercial, military, and political might. Additionally, they expressed the control and power of the Chinese state over sea trade since private shipbuilding had been heavily restricted by the Emperor. In addition to the restriction of maritime trade, the Ming policies extended to other protection against foreign influence such as the expansion of China's Great Wall. The Ming dynasty eventually turned inward, reflecting both a desire to control against foreign influence, as well as a sense of superiority over neighboring nations.

Chinese control over foreign influence and trade continued into the Qing dynasty. Under the Qing, the Chinese developed the Canton System of trade. This system controlled foreign trade under the rigorous system of trade inspection and supply chain management at the singular port of Canton, or Guangzhou. This system, however controlled, could not account for imbalances in supply and demand. The imbalance between British demand for tea and Chinese demand for any Western product led to massive displacements of silver into China since the Chinese had little

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<sup>1</sup> European interactions with China in the 16th century shed light on these inventions not having been European breakthroughs, but instead of longstanding Chinese origin

interest in any other form of payment. In order to reverse this international trend of Chinese silver absorption, the British East India Company (EIC) devised a plan to sell a product of higher demand than that of other British products, Indian opium.

The Opium Wars, 1839-1842 and 1856-1860, mark the first in a long-standing series of grievances between China and the West. Instead of reinforcing Western values of free and open trade, the EIC coerced the sale of opium into China through military force. To make matters worse, after the swift defeat of Qing forces, the EIC moved to open new ports, expanding the Canton System beyond one port control. They further negotiated concessions such as the territory of Hong Kong. Perhaps the most egregious of the negotiated concessions was the institutionalization of extra-territoriality laws, by which Western citizens could not be prosecuted according to Chinese law for crimes committed on Chinese soil. Instead, they were swiftly extradited without justice for their crimes. These Western misdeeds inflicted an injustice on the Chinese that clouded Chinese perceptions of Western actions. The Opium wars punctuated the beginning of a time period extending past WWII known as the “century of humiliation.”

The Taiping Rebellion and the Boxer Rebellion were rebellions internal to China, but outside influence in these rebellions can create powerful narratives that contribute to the “century of humiliation.” In 1850, Hong Xiuquan launched the Taiping Rebellion. This was a normal rebellion in the sense that it was a vie for power and a change from the Qing dynasty status quo. The exceptional part of this rebellion is that Hong adopted, and then weaponized, the western concept of God in order to incite a peasant revolution.<sup>2</sup> At the root of the argument that the outsiders influenced the Taiping rebellion are the facts that Hong

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<sup>2</sup> Kwang-Ching Liu, “World View and Peasant Rebellion,” *Journal of Asian Studies*, vol. XL, No. 2, 1981, 301.

adapted the teachings of a missionary from Kentucky to start his cause, and that the U.S. government would get involved in the fighting. Although initially hesitant of involvement, the U.S. government eventually aided the Qing government in putting down the rebellion. Modern propaganda efforts seek to establish a linkage between the influence of outside religion and unrest that resulted in the deaths of approximately 30 million Chinese.<sup>3</sup> After the Sino-Japanese War, the Boxer Rebellion signified another revolt against Western influence, colonialism, and ideas. The peasant uprising saw the killing of hundreds of missionaries and their families as well as tens of thousands of Chinese Christians. Chinese sentiments in the early 20th century calcified as clearly anti-Western and perhaps even anti-foreigner.

The conclusion of WWI offered perhaps the best opportunity to reverse the trend of more than seventy years of actual and perceived embarrassment of the Chinese at the hands of the Western powers. China was not a strong nation at the time, but nonetheless offered to assist with the war effort. Since Japan had taken Chinese territory from Germany during the war in 1915, it pressed its advantage with China forcing a treaty that acquired Shandong and Manchuria. Chinese leaders reasoned that if it helped with the Allied war effort, as a *quid pro quo* arrangement, the Allies would help it restore Chinese territorial sovereignty at the end of the war. President Woodrow Wilson presided over the Paris Peace Conference in 1919, and since China had entered into a complicated web of secret treaties, China required a separate peace treaty in order to retain the Shandong province. That the Japanese retained other Chinese holdings and that the Western Treaty of Versailles did not return the Shandong province perpetuated the perception of betrayal at the hands of the West in general, and the United States in

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<sup>3</sup> Pamela Kyle Crossley, "Xi's China is Steamrolling its Own History," *Foreign Policy*, Jan 29, 2019.

particular. The outgrowth of the May Fourth Movement by Chinese students in the wake of the Treaty of Versailles in 1919 popularized this notion of betrayal. Although the May Fourth Movement is an expression against the Chinese system of the day as well as a response to foreign affairs, the CCP highlights its outgrowth from this movement. The unjust loss of the Shandong province notwithstanding, the CCP can point to the May Fourth Movement and simultaneously vilify the West, while claiming to be the historical “answer” for the formation of a new China.<sup>4</sup>

WWII offered an opportunity for the Chinese and the United States to work on their relationship and forge a lasting partnership; however, such efforts were hampered by China’s nascent state as a nation. The United States funded and trained the Chinese nationalist forces led by Chiang Kai-shek, but the President of the Republic of China faced opposition from Mao Zedong from before the war began. While President Chiang Kai-shek received assistance from the United States, he knew he needed to save his troops and resources for the impending war with Mao and his communist followers after the conclusion of WWII. Chiang Kai-shek and the then Republic of China’s primary security concern therefore was from within. This dynamic severely limited opportunities of repairing the Chinese-American relationship. Mao Zedong’s defeat of Chiang Kai-shek and the nationalists eliminated any further chance of an improving dynamic between capitalist America and communist China in the Cold War context.

In the middle of the Cold War, the Korean War punctuated U.S. and China relations. President Truman reacted to North Korea’s 1950 invasion of South Korea with U.S. and United Nations military action. In response, Mao diverted troops preparing for an invasion of Taiwan to

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<sup>4</sup> Aris Teon, “China and the May 4th Movement,” *China Journal*, April 3, 2017. <https://china-journal.org/2017/04/03/china-and-the-may-4th-movement/>

North Korea, thereby forcing a stalemate that exists even today.<sup>5</sup> This event played, and continues to play, a formative role in Chinese self-perceptions. The Chinese Communist Party perpetuates the idea that Mao's "victory" in 1950 ended the century of humiliation at the hands of Western powers.<sup>6</sup> The idea is that China had finally stood up to its oppressors.

It was not until the 1970s, after the Korean War, and deep into the Vietnam War that China and the United States had cause for common interest. After WWII, the United States and the communist world locked themselves into an ideological battle. The Sino-Soviet border conflict of 1969 proved a fissure in the unity of the communist world as the Chinese could no longer view the USSR as a reliable ally. For the Nixon administration, this fissure provided the possibility of resolving two problems simultaneously. Rapprochement with China would disjoint the communist world, therefore weakening the USSR. It would further provide a diplomatic mechanism to gain certainty of potential Chinese reactions to American military actions in the Vietnam War. In 1972, rapprochement with China achieved these precise objectives and allowed the United States to extricate itself from Vietnam. It further allowed access to the Chinese market and for both countries to develop their economies with new trade possibilities. This liberalization of trade is perhaps one of the largest factors in the rapid development of China from this period to the modern day.

While the modern day relationship between the U.S. and China is largely defined by 1972 rapprochement, the history between China and the West denotes a much more troubled past. This is problematic for the security environment because this history has sown seeds of distrust

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<sup>5</sup> Michael M. Sheng, "The Psychology of the Korean War: The Role of Ideology and Perception in China's Entry into the War," Vol. 22, No. 1, 2002.

<sup>6</sup> William A. Callahan, "National Insecurities: Humiliation, Salvation, and Chinese Nationalism," *Alternatives*, Vol. 24, 2004, 199-218.

that are difficult to overcome. Even with overt signaling measures from the U.S. in attempts to communicate benign intentions, the Chinese have palpable historic examples from which to derive mistrust that can undermine even well-intentioned actions. With this history in mind, we can begin to look at the modern era of U.S.- China relations as well as the factors at play in a potential space arms race.

### *Security Dilemma*

As threat and grievance comprise essential characteristics of the security dilemma, it is important to consider Chinese perception of U.S. actions independent of U.S. intentions. U.S. intentions were aimed at restoring and enforcing the rules based international order in Operation Desert Storm and addressing security and nuclear proliferation concerns in Operation Iraqi Freedom. U.S. actions in both operations unveiled revolutionary military capabilities. U.S. actions not only demonstrated the capability to infringe on the sovereignty of other nations, but the willingness to do so. While the U.S. intends to maintain the rules-based international order and address its primary security concerns, its actions present a latent threat. Building up the Integrated Air Defense System (IADS) illustrates that the Chinese perceive a threat and have taken appropriate defensive measures.

Another threat to China is U.S. nuclear posture. While U.S. strategists understand their doctrine of nuclear deterrence as a defensive posture, Chinese criticize it as offensive.<sup>7</sup> This is because Chinese thinking on nuclear doctrine is one based upon a no-first-use policy and minimum deterrence aimed at strategic stability. Historically, U.S. nuclear doctrine has been based on the optimum instability. This state is achieved by holding one's opponent at risk while preserving a second-

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<sup>7</sup> Li Bin, "Chinese Thinking on Nuclear Weapons," *Arms Control Today*, December 3, 2015.

strike capability. Two states in this condition achieve a stability of optimum instability because while both sides create instability by possessing first-strike capabilities, the surety of retaliation by a second-strike capability optimize the instability in this system. The pursuit of missile defense and withdrawal from the Anti-Ballistic Missile Treaty only serve to prompt an expanding Chinese nuclear arsenal such that it has to have enough warheads to sustain first strike losses.<sup>8</sup> Ironically, the U.S. pursuit of a defensive capability has an offensive threat element that acts as a logical trigger for arms buildups.

Beyond the latent threat of U.S. military capabilities and the incompatible nuclear doctrines between the two, the Chinese would not have a security dilemma without the presence of grievance. Grievances are easy to come by, especially if you expand the time horizon. One need only look back at the century of humiliation to find examples of where Western and imperial powers disadvantaged the Chinese. While the U.S. was not one of these powers, it is possible to see how these past injustices could be projected onto modern day relations. U.S. sanctions in 1989 after Tiananmen Square, the 1999 U.S. bombing of the Chinese embassy in Yugoslavia, or the 2001 mid-air collision of a Chinese and U.S. Navy military plane can all be perceived as grievances. More modern examples are pessimistic interpretations of the Obama administration's pivot to the Pacific, the China-less Trans-Pacific Partnership, or other attempts to hem in growing Chinese influence in the region. All of these events, when viewed upon the historic Chinese Exclusion Act, or the more recent exclusion of China from NASA and space cooperation as per 2011 law, create potential problems.<sup>9</sup> Add in the enduring issue of

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<sup>8</sup> Liping Xia, "China's Nuclear Doctrine: Debates and Evolution," *Carnegie Endowment for International Peace*, June 30, 2016.

<sup>9</sup> Vidya Sagar Reddy, "U.S.-China Space Cooperation: Balancing Act between the U.S. Congress and the president," *The International Journal of Space Politics & Policy*, Vol. 15, No. 3, 2017, 236.

Taiwanese unification and it is easy to see that from the Chinese perspective, there are various grievances to choose from.

Threat and grievance from the U.S. perspective are very different. The primary threat from China is not one of trans-Pacific attack or direct threat to US territories, though those are possible future outcomes. The primary threat posed by China at this time is to the international order upheld by the United States and its post-WWII polity. The building of artificial islands in the South China Sea and creation of an Air Defense Identification Zone (ADIZ) in the East China Sea pose a direct threat to international law and order, but only an indirect threats towards American security per se. The larger threat is one to the credibility of American defense agreements with its allies in the area as well as the credibility of American global leadership.

U.S. perceived grievances at the hands of the Chinese are both few and recent. The Chinese test of a direct ascent ASAT in 2007 which created thousands of pieces of orbital debris garnered much attention. More recently, members of defense, media, and political establishments have focused on the extralegal Chinese acquisition of U.S. technologies as well as the country's "unfair" trade practices. There are other U.S. security concerns with respect to China that are notable, but the common characteristic amongst them is that they are recent. They are recent because before China began developing substantial state capacity at the end of the 20th century, it did not have the power to generate grievances for the U.S. Once the world recognized the rise of China and incorporated it into the World Trade Organization (WTO), it had both the power to do so, and the U.S. began paying attention.

### *Territory*

There are no traditional territorial contiguity concerns in the relationship between the U.S. and China since they share no borders; however, territory plays an important role as related to prestige. Chinese territorial claims, whether to islands in international waters or to other sovereign territories such as Taiwan, point at the same time to past grievances, access to natural resources, defense in depth, and ultimately prestige. Chinese maritime claims of sovereignty are linked to past grievances because despite being on the victorious side of WWII, their territorial claim to the “Nine-Dash Line,” a vague geographic area encompassing nearly all of the South China Sea, were not ratified at the end of the war. These same claims are linked to natural resources as the United States Geological Survey estimates natural gas and oil reach potentialities of 70-290 trillion cubic feet and 5-22 billion barrels respectively.<sup>10</sup> The Chinese National Offshore Oil Company (CNOOC) estimates even more, 500 trillion cubic feet of natural gas and 125 billion barrels of oil.<sup>11</sup> The territory in the South China Sea also creates valuable defense in depth as illustrated in the creation of the ADIZ. These factors combined embody the prestige associated with being able to reclaim historic territories as well as the material and immaterial benefits those territories bring.

### *Prestige*

For the Chinese, prestige is clearly a factor. Looking back to the century of humiliation, the Chinese are looking to regain what has been lost by reclaiming what was rightfully theirs. Beyond this, however, lies the need to be recognized internationally as not just a rising power, but also a great power. This need extends to even being recognized as a

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<sup>10</sup> U.S. Energy Information Administration report, 2013.

<sup>11</sup> U.S. Energy Information Administration report, 2013.

regional and global leader. This dynamic is very similar to that of the rise of Germany before WWI. Just as Germany pursued a more active foreign policy and pursued military technology commensurate with its rise in state power, China's rise in turn corresponds with its development of the state which includes military and economic capabilities. While this is a logical progression, perhaps the most alarming aspect of Chinese prestige is the strong linkage between national self-actualization and victory in battle. The CCP points to the Chinese "victory" in the Korean War as the moment when Mao stood up to the Western Powers. The question remains how much prestige is enough for a rising China.

### *Uncertainty*

The natural increase in Chinese power creates the possibilities for U.S. misperceptions. When states grow in power, they are naturally drawn to providing for their own security and misperceiving that natural increase in power can lead to unilateral buildups. So far, U.S. perceptions of the rise of China have not triggered a unilateral buildup or an arms race. Nevertheless, the U.S. has continued its consistent efforts "to achieve meaningful and enduring strategic advantages."<sup>12</sup> This notwithstanding, the possibility for U.S. misperceptions of Chinese actions is acute. Chinese military actions until now have been primarily defensive in nature. Their investment in IADS, their minimum deterrence nuclear posture, and even their direct ascent ASAT capability are inherently defensive capabilities.<sup>13</sup> Even the building of artificial islands in the South China Sea, while a violation of international waters and a de facto land grab, has been pursued to bolster an Anti-Access/Area Denial (A2AD) environment and build defense in depth.

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<sup>12</sup> Matthew Kroenig, *The Logic of American Nuclear Strategy: Why Strategic Superiority Still Matters*, (Oxford: Oxford University Press, 2018), 143.

<sup>13</sup> Xia, Liping, *China's Nuclear Doctrine: Debates and Evolution*, 30 June, 2016.

Despite these facts, U.S. military professionals, academics, and strategists frequently hypothesize a Thucydides Trap drawing the U.S. and China into conflict.<sup>14</sup> The Thucydides Trap, characterized by political scientist Graham Allison, explores the likelihood of conflict when a rising power challenges a currently dominant one. This likelihood is based upon two realist processes. First, the established power perceives the intent of the rising power by extrapolating intent from rising power capabilities. Then, the established power bases this extrapolation of intent in human emotion. Thucydides wrote, “the growth of the power of Athens, and the alarm [fear] which this inspired in Sparta, made war inevitable.”<sup>15</sup> The Thucydides Trap therefore illustrates how when we base our analysis of power dynamics between states upon emotion and we assume intent from capability, we run the risk of war when war may not be necessary.

Whether the hypotheses of U.S. military professionals, academics and strategists are based upon fear and assumed intent is not the point of this discussion. These hypotheses instead illustrate that strategic minds are perceiving or misperceiving Chinese actions on some level. This perhaps is enough evidence to suggest that the two nations are now locked in a rivalry. Before discussing the burgeoning U.S.-China rivalry, however, it is important to consider the Chinese perspective with respect to the topic of misperception.

In a variety of ways, Chinese actions show that they have made security-related decisions and acquisitions upon clearly demonstrated capabilities. As earlier discussed, U.S. foreign policy interventions abroad demonstrated both American military capability and the political will to use it. Chinese efforts to build its military capabilities so far have been largely based on the defense against revolutionary military capabilities

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<sup>14</sup> Graham Allison, *Destined for War*, (New York: First Mariner Books, 2018), 140.

<sup>15</sup> Thucydides, *The Landmark Thucydides* (New York: Free Press, 1996), 16.

demonstrated by the U.S. and its allies in Operation Desert Storm and Iraqi Freedom, amongst others. Further, U.S. foreign policy actions have sent a clear message that it will hedge against China's rise and even pursue some iteration of a containment strategy, similar to that used against the Soviets in the Cold War. Demonstrating this trend are the 2014 Enhanced Defense Cooperation Agreement (EDCA), which has an initial ten year term, as well as the inclusion of the disputed Senkaku/Diaoyu Islands under Article 5 of the U.S.-Japan Defense Treaty.<sup>16</sup> In these respects, China has little opportunity to misperceive U.S. actions. As the rising power, China has been able to observe the hegemonic activity of American global leadership while developing defensive capabilities. Further, hedging and even containment can be extrapolated from historic examples as well as clearly seen in U.S. foreign policy actions. When discussing the relationship between these two countries in space, the opportunities for misperception increase. It is first important to discuss the factor of rivalry present between the U.S. and China.

### *Rivalry?*

The relationship of most pairs of states tends to be located around the center of a continuum that operates across the spectrum of cooperation and conflict.<sup>17</sup> Since states interact in a variety of ways across the domains of the instruments of power, a useful way to identify where a pair of states lie on this spectrum is to conceptualize the behavior of states in a proverbial "special relationship" as opposed to the behavior of states in open conflict. The relationship between the U.S. and Britain is a useful example. Despite a decline in the British Empire in the

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<sup>16</sup> Suisheng, Zhao, "A New Model of Big Power Relations? China-US strategic rivalry and balance of power in the Asia-Pacific," *Journal of Contemporary China*, Vol. 24, No. 93, 2015, 377-78.

<sup>17</sup> William R. Thompson, "Identifying Rivals and Rivalries in World Politics," *International Studies Quarterly*, Vol. 45, 2001, 559.

lead-up to WWII and its dissolution afterwards, the British ceded power to the U.S. and cooperated in the forming of the post-war world order. These acts, and those that followed it for decades even until today, create a picture for what cooperation looks like. William R. Thompson gives us a picture of the juxtaposition of rivalry and cooperation when he says that “strategic rivalries might be thought of as the reverse image of the cooperative special relationships.”<sup>18</sup>

Even with this perspective in mind, the exact nature of the relationship between the U.S. and China is not clear. In some areas such as trade, the two states embody a type of “special relationship” due to highly interdependent trade economies, although trade negotiations over tariffs may change this dynamic. Perhaps the best characterization for the relationship between the U.S. and China since 1972 is encapsulated in the post-Cold War U.S. strategy, “engage but hedge.”<sup>19</sup> This strategy engaged China in areas such as trade, finance, technology, and education. On occasion, the U.S. organizations governing these spaces have questioned unfair Chinese practices, yet the underlying strategy has continued along the practice of engagement.

In contrast, the defense and intelligence communities spend the majority of their time and efforts in attempts to hedge against the growth of Chinese defense capabilities. They accomplish this through direct investment in technologies, capabilities, and allies that should enable to collectively deny, deter, and defeat Chinese forces. It is possible that the tide is turning and that new trade negotiations will shift other national instruments of power to hedge against Chinese growth in a manner similar to the defense community’s approach. If this comes to pass, the new strategic direction could quickly steer the relationship towards one of rivalry. One simple analysis seems to point to this eventuality, that

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<sup>18</sup> Thompson, “Identifying Rivals and Rivalries in World Politics,” 560.

<sup>19</sup> Andrew T. H. Tan, *Handbook of US-China Relations*, (Northampton, MA: Edward Elgar Publishing, 2016), 222-42.

China will “insist on being accepted as China, *not* as an honorary member of the West.”<sup>20</sup>

### *Case Study Comparison*

The case of rivalry without an arms race, characterized by the Egypt-Iran rivalry, seems to be the poorest fit for the current relationship between the U.S. and China. While both cases exhibit rivalry, the Egypt-Iran case is diminished by a few factors. First, the security concerns in this rivalry were diminished by the conflict between Egypt and Israel. Second, the lack of territorial contiguity between the states further diminished security concerns. Third, the context of the Cold War forced nations to align with either side, which in some ways artificialized the rivalry. The trends of nation forming after WWII via coup d'état and nationalization of industry to both consolidate power and limit foreign interest in both Egypt and Iran illustrate the two states had more in common than not. Cold War alignments and the West's stance on Israel played a powerful role in both creating and limiting the rivalry.

The U.S.-China case is similar to that of the U.S. and the USSR in a few ways. Both cases exhibit nuclear capable great powers with considerable regional if not global influence. They share commonalities in that there existed a security dilemma in each case which was composed of both threat and grievance. Territory in both of these cases was secondary in importance to prestige. However the biggest difference in these cases is in the category of uncertainty. While there is an argument that Chinese intentions include increased influence, perhaps on a global scale, it is the covert nature of these intentions that cause the cases to differ. In the Cold War the U.S. and the USSR overtly struggled for a position of global leadership. Although Beijing has impressive and ambitious plans for Chinese development, it is the lack of this

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<sup>20</sup> Graham Allison, *Destined for War*, (New York: First Mariner Books, 2018), 220.

competition over the position of global leadership that causes these cases to differ.

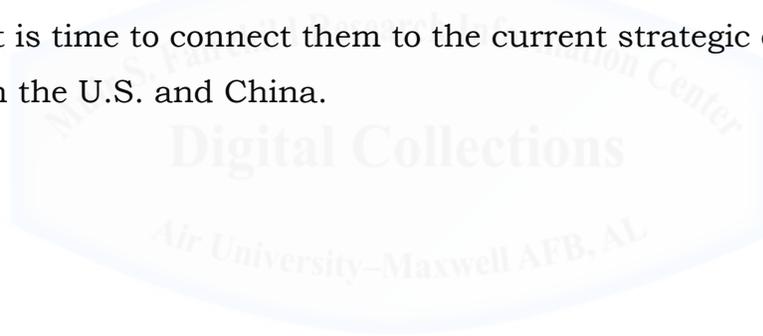
The Anglo-German case most closely mirrors that of the relationship between the U.S. and China. In both cases territory is of a secondary concern. The security dilemma is tied to the threat that the rising power poses to the position of the established power. Both cases also exhibit a developing rivalry. As the power of the emerging state rose, the established power focused more and more attention to the actions of the challenger. As Britain expended little energy on the actions of Germany before the foreign policy implementation of *Weltpolitik*, the United States showed less concern over Beijing's actions after rapprochement in 1972 until the significant rise in Chinese power in the 1990s and beyond. Thus, the comparative power between the states had a big influence on the inter-state relationship changing overtime.

The biggest difference between the two cases lies in the categories of prestige and uncertainty, they are intertwined in a way. Beijing has not overtly challenged the United States for a role in global leadership, although this could be a covert intention. This is diametrically opposed to how *Weltpolitik* shaped an increasing German competition with the other colonial European powers. Although competition can be inferred in the case of the U.S. and China, we lack the overt behavior of a global scale positional rivalry as seen in the case of the U.S. and the USSR. There is, however, a regional positional rivalry developing as China's rise challenges the traditional security arrangements between the U.S. and regional players such as Japan and South Korea.

### *Conclusion*

Similar to the case of Germany and Britain, the U.S. and China were not always in a rivalry. The British operated as offshore balancers of the European continent in the late nineteenth and early twentieth centuries, and the U.S. has operated as the security guarantor for Pacific

countries since the end of WWII. Just as Germany's growth in power and assertiveness disrupted the British strategy for preventing continental hegemony, China's similar emergence threatens the status quo in the region and the U.S.'s position and security arrangements. These changes in Beijing's power, particularly in the 1990s, have yielded a complicated relationship that in the security environment has taken the form of rivalry. Subsequent Chinese actions, therefore, receive more scrutiny and suspicion in the U.S. This has not evolved into a strategic arms competition in the realm of nuclear weapons. However, a space arms race could emerge in light of Chinese growing space capabilities. As the United States' national strategy has changed to reflect a greater emphasis on this rivalry, so too has the language used with respect to the space domain. In light of the factors that contributed to past arms races, it is time to connect them to the current strategic context of rivalry between the U.S. and China.



## Chapter 6

### Conclusion

*Speed of progress in the satellite project cannot be taken as an index of our progress in ballistic missile work. Our satellite program has never been conducted as a race with other nations. Rather, it has been carefully scheduled as a part of the scientific work of the international Geophysical Year.*

President Dwight D. Eisenhower  
1957 Press Conference

*It is important to first realize that the United States and the People's Republic of China (PRC) are not in a "space race," as was the case between the United States and the Soviet Union from 1957 through at least 1969. The Chinese are not competing with the United States to set new "firsts." Instead, the PRC is pursuing a methodological program of space exploitation, building upon its own experiences, and those of the United States, the Soviet Union, Russia, and Europe.*

Senior Research Fellow Dean Cheng  
Congressional Testimony, 2016

The U.S. military's perceptions of the space domain as an international commons are changing. U.S. strategy refers to space as "contested, congested, and competitive."<sup>1</sup> Another linguistic change is from terms such as sanctuary to battlefield.<sup>2</sup> Some argue that these changes to rhetoric are aggravating and destabilizing the competition between the U.S. and China in space, potentially leading to a space arms race. Proponents of this view are quick to point out the advancements

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<sup>1</sup> Competing in Space, NASIC, 2.

<sup>2</sup> Eldridge Colby, *From Sanctuary to Battlefield: A Framework for a U.S. Defense and Deterrence Strategy for Space*. Washington, DC: Center for a New American Security, 1-39, 2016.

made by the Chinese in both military capability and space exploration and draw causation back to U.S. rhetoric about the domain.<sup>3</sup> Based on the previous analysis, these claims are unfounded. In this chapter, I will show that these changes in strategic language are instead internal tools to mobilize national efforts towards a continuing strategic advantage in space which have parallels in past cases. Further, the motivators for escalation or a space arms race have to do with the factors associated with arms races outlined in the previous chapters. Finally, it is worthwhile to rethink the link between rhetorical changes and rivalry.

Changes in U.S. rhetoric with regard to space are not themselves escalatory nor do they drive some sort of a space arms race. Instead, they are better conceptualized as strategic tools to motivate national-level changes in spending and bureaucracy. The “Bomber Gap” did not cause the Cold War arms race, instead it served as a political tool to motivate U.S. defense spending. The “Missile Gap” similarly motivated national-level efforts to develop a strategic response in capability to Soviet developments after Sputnik. In the same vein, U.S. advantages in space capabilities vis-à-vis China has been the norm until recent years. Now that Chinese capabilities have developed to a point of concern, strategists have altered strategic language with respect to space in order to invigorate efforts for strategic advantage in that domain.

The concept that altering strategic language can be quickly and easily extrapolated out to an escalatory response also ignores the nature of space and the problem with mirror imaging. Historically, the U.S. has bifurcated space, and its corresponding rhetoric, into the realms of peaceful exploration under NASA and military capability under the DOD. The reality is that space is actually fragmented further. The National Oceanic and Atmospheric Administration has space assets. The intelligence community has assets under the NRO including both Central

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<sup>3</sup> Johnson-Freese, *Space Warfare in the 21st Century*, 180.

Intelligence Agency (CIA) and National Geospatial-Intelligence Agency (NGA) assets. Beyond the national government's assets, there is the entire commercial sector. All of these assets can be leveraged against an adversary since space assets are inherently dual-use. In the same way that Western strategists think of all Chinese space efforts being lumped under the control of the Communist Party of China (CPC), it is easy to see how the fragmented nature of space prevents Chinese perceptions of U.S. actions in space fitting neatly into certain subdivided categories. These challenges render strategic rhetoric less potent as a tool for signaling towards other nations as opposed to a motivating tool for internal national audiences.

Further impeding the argument for the impact of strategic rhetoric is the fact that China did not develop space capabilities because the U.S. talked differently about the domain. China developed as a space-faring nation from Deng Xiaoping's Four Modernizations and eventually developed a mature space industry by the start of the twenty-first century.<sup>4</sup> During this period however, Sino-American relations were of secondary importance to the Cold War tensions between the U.S. and the USSR. While the US and the USSR developed legal regimes regarding manned space flight and arms reductions treaties to govern their rivalry, China developed its space program outside of a rival relationship with the US. Part of this development in isolation is due to Congress' decision to exclude China from space activities. Since the 1990s, the US Congress has limited US-China space cooperation in both satellite launch and participation in the National Aeronautics and Space Administration (NASA).<sup>5</sup> Therefore China has had to develop its own capabilities. It became clear that these strategic capabilities were critical after the U.S.

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<sup>4</sup> Reddy, Vidya. "U.S.-China Space Cooperation: Balancing Act between the U.S. Congress and President," 237.

<sup>5</sup> Reddy, Vidya. "U.S.-China Space Cooperation: Balancing Act between the U.S. Congress and President," 236.

demonstrated their impact on the battlefield during Operation Desert Storm. Ten years of development later, the 2001 Rumsfeld Commission warned of a potential “Space Pearl Harbor” and only after this point did the strategic rhetoric about space begin to change.<sup>6</sup> At this point, space superiority, control, and dominance started to enter into the strategic dialogue.<sup>7</sup> It is therefore fallacious to argue that strategic rhetoric will nullify or reverse nations’ attempts to provide for their own security or strategic advantage. Strategic rhetoric is important, but its power over the security concerns of another sovereign nation is limited.

We see therefore from the case between the U.S. and China with respect to the development of the space domain that changes to strategic rhetoric are correlated to changes in the arms dynamic, not its cause. Similar to the Anglo-German, U.S.-USSR, and Egypt-Iran case studies, strategic rhetoric was not a causal factor. Instead, actors sought to overcome strategic disadvantages or maintain advantages. Similarly, when actors did not engage in arms races it was not due to the softening of strategic rhetoric. Instead, in the case of Egypt, its primary security concern diverted strategic concerns away from its rivalry with Iran. Strategists should therefore not become overly concerned with strategic rhetoric to the point where they attribute it as a causal factor in a potential arms race between the U.S. and China. When looking at the timeline of events in Chinese space capability, it is clear that strategic rhetoric is only a correlation of arms race behavior, not a causal factor.

Instead of strategic rhetoric, we should look at the factors that could lead to escalation or a space arms race as put forth in previous chapters. We can expect the increased probability of a space arms race and more rapid development of space technology as either nation deploys capabilities that nullify strategic advantages of the other. Chinese ASAT

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<sup>6</sup> Report of the Commission to Assess United States National Security Space Management and Organization, 2001.

<sup>7</sup> Joint Doctrine for Space Operations, 2002.

technology has spurred theorizing and research about how to mitigate the threat it poses. From a theoretical perspective, new taxonomies emphasize resilience in the constellation as to limit the impact of an adversary's attempt to degrade or destroy U.S. satellites.<sup>8</sup> The allure of large constellations and the so-called "smallsat revolution" is that higher numbers of smaller satellites can provide this resiliency.<sup>9</sup> As technology advances, we can expect both nations to leverage it for strategic advantage, even if that strategic advantage renders a response from the other nation.

The current strategic context lacks sufficient legal regimes limiting the behavior of the U.S. and China in space. This lack of regime influence could foster a security dilemma and a potential spiral. Although the legal regimes of the Anti-Ballistic Missile Treaty (ABM) and the Intermediate-Range Nuclear Forces Treaty (INF) were Cold War constructs, and bilateral agreements between the U.S. and the USSR, they provided some limiting power on nuclear forces. Backing out of these agreements may be the more strategically sound move in the long run, but in the short run it removes the governing apparatus that can reduce uncertainty and limit a potential spiral. The desire to monitor these arsenals and warn of their launch ensures continued investment in the absence of treaties such as the ABM. Likewise, space based interceptors or direct energy systems would force China to deploy additional ICBMs with new countermeasures.<sup>10</sup> The uncertainty introduced by absent legal regimes therefore is another factor that could contribute to a space arms race.

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<sup>8</sup> Space Domain Mission Assurance: A resilience Taxonomy, 2015.

<sup>9</sup> Jacqueline Klimas, "A Small Satellite Revolution?," *Politico*, January 9, 2019.

<sup>10</sup> James, N. Miller and Frank Rose, "Bad Idea: Space-Based Interceptors and Space-Based Directed Energy Systems," *Center for Strategic International Studies*, December 2018.

Lastly, the uncertainty associated with the prestige of global leadership plays a role in a potential space arms race. Despite the statements of Dean Cheng, it is possible that U.S. perceptions of Chinese actions will be that Beijing wants to compete with the U.S. in the realm of prestige or global leadership, despite actual or perceived obfuscation of such intentions. The recent landing of a Chinese Chang'e 4 spacecraft on the far side of the moon was not met with immediate speculation by a number of news agencies that there was a new space race brewing between China and the U.S. While this speculation may be exaggerated, it is demonstrable as a manifestation of the rivalrous relationship between the U.S. and China.

The U.S.-China rivalry is at the root of this discussion of arms races and space. The question is if the rivalry can be managed. President Eisenhower downplayed the Soviet achievement of Sputnik, but such actions did not diminish the rivalry between the U.S. and the USSR. Being each other's primary security concern during the Cold War ensured that the rivalry endured beyond the power of rhetoric. Egypt and Iran's rivalry and lack of an arms race similarly was ensured by the overwhelming security concern presented by Israel. At this time there is no clear tertiary security concern that will automatically limit the rivalry between China and the U.S. The rising power of Germany posed a threat to the other European continental powers and forced Britain, the offshore balancer, to hedge against its rising power. Through their African colonial proto-rivalry and naval arms race they developed a rivalry of their own where one did not exist prior. These historical examples illustrate the complicated relationships between emerging and established great powers, the impact of primary versus secondary security concerns, and how rivalry complicates these relationships.

In 2012 one could assess that in every arena other than space the U.S. and China were building towards peace.<sup>11</sup> As competition between the two nations has expanded into the economic arena through new trade negotiations and threats of tariffs, this statement no longer holds. If a space arms race breaks out between the U.S. and China, it will not be because the United States creates a Space Force or because in so doing, space is now militarized. A space arms race will emerge because of the factors commonly associated with historical arms races: a security dilemma, disputed territory or prestige, uncertainty, and rivalry. A relationship of rivalry only serves to amplify these factors. As strategists guide U.S. national military strategy, they should carefully consider these factors when deciding how closely to embrace strategic rivalry with rising powers in general, and China in particular.



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<sup>11</sup> Everett Dolman, "New Frontiers, Old Realities." *Strategic Studies Quarterly*, Vol. 6, No. 1, 2012, 82.

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