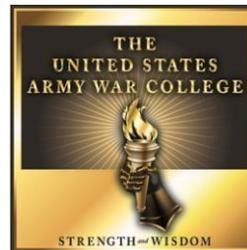


Unwriting the Future: Decoding the Next Strategic Shock

by

Colonel Sean Hunt Kuester
United States Army

Under the Direction of:
Professor William Braun



United States Army War College
Class of 2018

DISTRIBUTION STATEMENT: A

Approved for Public Release
Distribution is Unlimited

The views expressed herein are those of the author(s) and do not necessarily reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

REPORT DOCUMENTATION PAGE			Form Approved--OMB No. 0704-0188		
The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 01-04-2018		2. REPORT TYPE STRATEGY RESEARCH PROJECT		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Unwriting the Future: Decoding the Next Strategic Shock			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Colonel Sean Hunt Kuester United States Army			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Professor William Braun			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army War College, 122 Forbes Avenue, Carlisle, PA 17013			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution A: Approved for Public Release. Distribution is Unlimited. I understand this document will be included in a research database and available to the public. Author: <input checked="" type="checkbox"/>					
13. SUPPLEMENTARY NOTES Word Count: 8787					
14. ABSTRACT Strategic shocks are predictable and the trend for the next defense relevant strategic shocks are extant and discernable. Specifically, gray zone exploitation, enhanced by technological advances, are elevating the probability of confrontation between the US and competitor states, and erosion of the liberal world order. To avoid the next shock the US must assess gray zone competition and contest gray zone actors through a whole of government approach. Rival states are increasingly emboldened to exploit the gray zone and take advantage of outmoded US security policy and legacy defense concepts. The US defense establishment must prioritize efforts to replace these strategy documents with ones that match the reality of the current and projected security environment.					
15. SUBJECT TERMS Gray Zone, Policies, Defense, Concepts, Paradigms, Security, Revisionist, China, Russia					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 39	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU			19b. TELEPHONE NUMBER (w/ area code)

Unwriting the Future: Decoding the Next Strategic Shock

(8787 words)

Abstract

Strategic shocks are predictable and the trend for the next defense relevant strategic shocks are extant and discernable. Specifically, gray zone exploitation, enhanced by technological advances, are elevating the probability of confrontation between the US and competitor states, and erosion of the liberal world order. To avoid the next shock the US must assess gray zone competition and contest gray zone actors through a whole of government approach. Rival states are increasingly emboldened to exploit the gray zone and take advantage of outmoded US security policy and legacy defense concepts. The US defense establishment must prioritize efforts to replace these strategy documents with ones that match the reality of the current and projected security environment.

Unwriting the Future: Decoding the Next Strategic Shock

The danger is not that we shall read the signals and indicators with too little skill, the danger is in a poverty of expectations.

—Thomas Schelling¹

Section I – Introduction and Terminology

Issuing the code words “Climb Mount Niitaka” on December 7th, 1941 the Empire of Japan radically altered the trajectory of World War II and 20th century history thereafter a textbook attack on the U.S. naval base at Pearl Harbor, Hawaii.² In 1989 emancipated citizens of Europe began dismantling the Berlin wall. Then, on December 25, 1991, the iconic hammer and sickle flag of Soviet Russia bedecked the Kremlin for the last time, officially signaling an end to the Cold War. Nine years and 8 months following that momentous event, 19 radicals weaponized ordinary, ubiquitous and ostensibly benign instruments of transportation recasting what safety and security mean within the borders of the United States and for much of the world. Like the attack on Pearl Harbor and the dissolution of the Soviet Union, the September 11th 2001 attacks had sweeping shock and transformative effects not just on the protagonists, but on the international system as well. The deadly strike, a strategic shock, ushered in a new era of conflict and distrust whose hallmarks are terrorism and simmering cultural undertones that Samuel P. Huntington terms a “Clash of Civilizations.”³ The reverberations of all three experiences, punctuated most notably by the initial strategic shock they delivered, resonate to this day. What is the thread these seemingly unrelated shocks share? In a word – predictability. Each of the above was foreshadowed by a series of distinct markers that over the course of years, often decades, conveyed a clear trend and at least in the cases of Pearl Harbor and 9/11 – intent.

As the examples will illustrate, strategic shocks are predictable. More significantly, the trends for the next mid-to-long term defense relevant strategic shocks are already extant.⁴ Revisionist and opportunistic states are increasingly emboldened to exploit the gray zone and take advantage of outmoded US policy and legacy defense concepts and paradigms. This trend of gray zone exploitation, enhanced by technological advances, is elevating the probability of confrontation between the US and these states, and erosion of the international system that advantages the US.⁵ It is therefore probable that the next strategic shock will emerge from within the gray zone.

Shock versus Surprise

The examples above, particularly the assault on Pearl Harbor and the 9/11 attacks, are two classical strategic shocks, although they are rarely identified using the term shock. The moniker of surprise is more customary. What exactly then qualifies as a strategic shock and is shock the same as surprise? Doctrine and academia are wanting here. Possibly, the dearth of research is attributable to the false impression that strategic shocks, while perplexingly inevitable, are beyond forecast and devotion of time and resources toward their discovery is wasteful.

However, in an increasingly lethal and chaotic world, the US defense sector cannot afford to discount what to this point has largely been an academic niche. One of the primary challenges of strategic shock forecasting is coming to grips with the value of trend identification, while recognizing that exact prediction is seldom possible. Correctly identifying and pinpointing the thunderbolt strike of a strategic shock may not be possible; but identifying trends associated with the gathering storm is. Identifying trends and preparing for a range of scenarios is preferable to the paralysis associated with a

desire for one hundred percent certainty. Given the increasing lethality of options adversaries possess, we must rise to the occasion.

The US Office of the Secretary of Defense Policy Planning offers a definition from a policy perspective. As part of a 2007 “Strategic Shocks and Trends” research undertaking, they classified strategic shock as,

...an event that punctuates the evolution of a trend, a discontinuity that either rapidly accelerates its pace or significantly changes its trajectory, and, in so doing, undermines the assumption on which current policies are based... Shocks are disruptive by their very nature, and ... can change how we think about security and the role of the military.⁶

We have to approach one nuance of this definition with caution; that is, the use of the word discontinuity. The Japanese were not shocked by the attack on Pearl Harbor, nor was Usama bin Laden shocked by 9/11. For these actors, the shocks they triggered represented a natural progression or manifestation of their intended continuity. This is a salient point illustrating the need to find the trend with an aim toward thwarting the shock. At the other end of the definition spectrum, Peter Schwartz and Doug Randal offer a simpler yet excellent distillation of this concept. According to Schwartz and Randall, at its most elementary level, a strategic shock is a “game changing event.”⁷ Shock events require the affected organization to transform.

Dr. Helene Lavoix adds further clarity, expanding the definition with a view respecting urgency and compulsion toward decision making, “...strategic shocks are unexpected changes occurring in a society’s or polity’s environment and to which actors will and must react...”⁸ A final characterization offered by Professor Freier will serve as the benchmark, “Strategic shocks jolt convention to such an extent that they force affected institutions to fundamentally reorient strategy, strategic investments and mission.”⁹

Topical literature incorrectly uses the word surprise and shock interchangeably. Professor Freier argues that, “There is no scientific break point between strategic shock and strategic surprise.”¹⁰ To the contrary, the two terms are not the same in this context. A shock is more severe both in initial impact and ramifications. A shock necessarily impels an action, whereas a surprise might impel action. The developments resultant from surprise can be addressed using preexisting resources, doctrines, intellectual models and policy. Conversely, and this is the crucial discriminator, a shock requires “...affected institutions to fundamentally reorient strategy, strategic investments and mission.”¹¹ Broadly speaking, a shock requires immediate and more consequential change, compelling organizational adaptation to avoid an existential consequence.

The Black Swan

Also found within the body of literature is the idea of “black swans.” Black swans are those rare shocks that defy analysis and operate unattached from discernable trends. The 2011 Fukushima nuclear plant accident is a contemporary example of a black swan. *Curiosmatic* illustrates this point, “With a high sea wall, backup generators and extensive emergency planning, the Fukushima nuclear plant seemed ready for anything. It wasn’t. On March 11, 2011 a massive tsunami struck, resulting in the partial meltdowns of three reactors.”¹² A.J. Masys describes the phenomenon most simply and succinctly, “Black swans represent the unpredictable.”¹³

This essay will not address or strive to anticipate black swans. By their nature they are unpredictable. Therefore, devoting resources to their prediction is folly. Strategic shock, however, is predictable. Preparing for shocks will reap strategic security benefits, even if the preparation is for a general phenomenon and not a specific event.

The Gray Zone

The gray zone, according to Freier and others is "...a broad carrier concept for a collection of sometimes dissimilar defense-relevant challenges."¹⁴ The authors go on further to state, "...A coherent whole-of-government concept for combatting gray zone challenges would be ideal. However, it is likely not forthcoming. Thus, the DoD should not wait for definitive national-level guidance on countering gray zone competition before thoughtfully considering its own options."¹⁵ However, this definition wholly understates that at its' core, the gray zone is a space where adversaries hope to advance political ends by employing all instruments of power in traditional, unconventional and unpredictable ways. Freier et. al. acknowledge this, but shied away from addressing it in detail and thereby restricted gray zone challenges to a mostly military sphere.¹⁶ The authors' consistent trajectory toward the military instrument of power and forfeiture of national level coordination is antithetical to efficient corporate practice and leads to a misconception of the gray zone.

According to Michel J. Mazarr, employing gray zone approaches,

Pursues political objectives through cohesive, integrated campaigns;
Employs mostly nonmilitary or nonkinetic tools; Strives to remain under
key escalatory or red line thresholds to avoid outright, conventional
conflict; and, moves gradually toward its objectives rather than seeking
conclusive results in a specific period of time.¹⁷

Employed by US challengers, gray zone strategies: use all instruments of power;
conspire to bypass US traditional advantages like military hegemony, domain
overmatch, and strict adherence to international law and accepted norms.

Section II - The Argument for Trends Preceding Strategic Shocks

Section II examines historical shocks and makes the case for their detectability. Through this examination it will become clear that each shock was preceded by large

bodies of observable data. What will also become clear is that when assembled, this data constituted trend lines indicating the impending shock. Section III will buttress this argument and reconcile the tension between the ease with which one may analyze a past shocks versus the challenge of predicting future shocks.

Shock Example 1: Pearl Harbor

As mentioned previously, presence of a trend line is the discriminating factor between a strategic shock and a black swan. The following three examples illustrate the predictability of these historic shocks. The actual attack on Pearl Harbor lasted only 2 hours.¹⁸ Yet the brief duration of the physical assault belies decades of political signaling; years of deteriorating Japanese-US relations; and a gradual but evident uptick in Japanese aggression in Southeast Asia and the Pacific. Significantly, the aggression noticeably heightened in the weeks preceding the attack. The US met each act of perceived hostility or aggression with countervailing moves that Japan thought unjust. By 1941, Japan felt existentially threatened by the US.

However, the horror and suddenness of the assault result in a consistent focus on the day of the attack, not its lengthy and visible build up. This factor combined with the American narrative of a “surprise attack” and “...a date which will live in infamy...” obfuscate the underlying causes.¹⁹ This last point too is instructive; it indicates that Americans may be predisposed to short-termism, viewing events as discrete occurrences versus episodes along a continuum.²⁰

As early as 1932, US military wargames identified the vulnerability of Pearl Harbor to carrier borne aircraft. In these wargames, the adversary was understood to be Japan.²¹ As Larry Hancock tells us, by January 1940, “The strategic threat of Japanese surprise attacks...was not something the American military missed.”²² Gordon Prange,

author of the gold standard account of Pearl Harbor, describes conclusively the net result of trends stretching back into the previous century coupled with the code breaking system known as Magic when he concludes, “Make no mistake about it, Japan was going to war, and those with access to Magic knew it.”²³ The trend supporting an impending shock was clear.

Shock Example 2: Demise of the Soviet Union

Contrary to popular conceptions, the Soviet Union did not collapse. It crumbled steadily, and visibly, the way a sea cliff crumbles under the relentless pressure of the surf. Naturally, foretelling the dissolution of a state as vast as the USSR is more difficult than detecting a single discreet attack such as Pearl Harbor. Nevertheless, the sign posts for this dissolution were abundant. In their piece, *The CIA Vindicated*, Berkowitz and Richelson illustrate that the CIA, in the decade prior to 1991, began raising the issue of Soviet state fragility. Specific trends were identified in policy decisions, economic factors, and adjustments by the security apparatus that all supported the CIA's primary conclusion; “...the communist order was finished.”²⁴

In his work, *Everything You Know About the Collapse of the Soviet Union is Wrong*, Leon Aron tells us that the 1991 dissolution of the Soviet Union was the “...greatest of surprises” and that “...virtually no Western expert, scholar, official or politician foresaw the impending collapse of the Soviet Union...” He then ironically lists a myriad of indicators pointing toward a broad and universal sickness of the state spanning nearly every sector, weakly caveating each infirmity as being essentially non-fatal.²⁵ In the end, he paradoxically makes a highly persuasive case for the utter predictability of the Soviet Union's downfall in 1991. The USSR's demise effectively ended the Cold War. Such an abrupt expiry enabled the rise of more plentiful and

powerful non-state actors, denoting the beginning of a new and more complex security paradigm.

Shock Example 3: Attacks of September 11, 2001

Within the aforementioned multi-state security paradigm, it is easy, but incorrect, to claim that a proliferation of non-state actors will make detection of trends and approaching shocks more difficult to discover. The September 11th 2001 attacks are the clearest example refuting the myth that the proliferation of non-state actors make prediction impossible. The 9/11 strikes were part of an established Al Qaeda (AQ) pattern. Some of the precursor incidents occurred in close proximity to the final attack provide ominous foreshadowing, or what intelligence analysts term, indicators, that establish trends.

In his work, *Intelligence and Surprise Attack: Failure and Success from Pearl Harbor to 9/11 and Beyond*, Erik J. Dahl makes a solid case for the trends that unequivocally indicated AQ's intent to strike the US. The strategic warnings were prolific and, as in the case of Pearl Harbor, intensified immediately preceding the final blow. Dahl lays out an explicit trend line dating back as far as 1995.²⁶ Stephen Marrin illustrates a similar case and reinforces the point that was crystal clear to the intelligence community; AQ was not just plotting attacks, they were prosecuting them in an ever more lethal fashion. While the attacks were chiefly overseas against US installations such as embassies and warships, it was undeniable that AQ was resolved to strike the US on its own soil. While it is debatable whether or not all the 9/11 hijackings and separate strikes could have been thwarted, the fact that AQ intended to target the US with a high profile, mass casualty producing attack employing aircraft, was substantiated by ample, credible intelligence.²⁷

Section III – Why These Shocks Went Undetected

It is now evident that each of the aforementioned shocks were not black swans. Each shock was preceded by observable incidences and data whose constituent parts formed obvious trends. The logical question to pursue is why governments, academia, and the assemblage of stakeholders failed to see the signals and synthesize this data into action, averting the shock. Unfortunately, there is no answer that will categorically satisfy this question for any of the examples. What this section offers is an insight into the predominant reasons for failure, and those causations which maintain relevance to the next strategic shock. Before addressing this, however, the topic of futures versus hindsight pattern recognition must be discussed.

Critics will certainly stress that following an event it is easy to sift and pick data to reconstruct the pattern of an impending shock and thereby misrepresent the true difficulty in forecasting said event. There is no argument that after the fact, analytical reverse engineering is possible. By no means, though, does this diminish the ability to conduct predictive analysis. In fact, there is strong historical precedent of the US being capable in this field, greatly enabling past policy makers. The National Indications Center (NIC) achieved notable success in 1962 with accurate forecasts regarding the Cuban missile crisis and again in 1967 during the Arab-Israeli war.²⁸ The Central Intelligence Agency (CIA) like their colleagues in the NIC, also foretold the 1967 Six-Day War.²⁹

The reality is analytical failures garner more attention than successes. Also, consequences of repeating failure fuel a worthy desire to prevent recurrence. Finally, fixation with failure is attributable in part to human psychology. As Kathryn Schulz states in her book, *Being Wrong*, "...we positively excel at acknowledging other people's

errors. In fact, if it is sweet to be right, then – let’s not deny it – it is downright savory to point out that someone else is wrong.”³⁰

Pearl Harbor and “Noise”

We often associate the phrase “information overload” with our modern era, marked by computers, the internet, email, mass and social media, etc. However, humankind’s capacity to absorb and synthesize information has always been finite while our penchant for exceeding this capacity has been an increasing feature of the 20th and 21st centuries, exacerbated by technological developments.³¹

In the case of Pearl Harbor, as Stephen Marrin tells us, there existed “...a body of evidence which could have been pieced together to warn national leaders.”³² What then, went wrong? If the necessary information was available, why was the garrison at Pearl Harbor not fully prepared for the Japanese onslaught? A major reason is, in addition to the highly valuable intelligence possessed by analysts and decision makers, the former was burdened with sifting through what has come to be known as “noise.” Noise is background information that while related to the case, is for all practical purposes, irrelevant and does not assist analysts or decision makers. In fact, noise is debilitating because it diverts attention from ascertaining the crux of an issue.

What’s more, the Pearl Harbor case revealed that the noise phenomenon is being exacerbated due to increasing volume in what Dahl describes as a “...sea of extraneous noise.”³³ Further, the Pearl Harbor attacks occurred in an era that experienced increased use of radio and trans-oceanic cable communications. This foreshadowed that technology was on the cusp of rapidly accelerating not just the volume, but the velocity of communication. As Dahl illustrates in numerous case studies from Pearl Harbor in 1941 to the 2012 attack on the US embassy in Benghazi, analysts

now confront the challenge of sweeping increases in the sheer quantity of information. Amongst such vast troves of data, unearthing the truly precious material is arduous.

The Soviet Union and US “Paradigm Paralysis”

For a quarter century now, the US has suffered from what P. Michael Phillips describes as “paradigm paralysis.”³⁴ The paradigm embraced by the US throughout the Cold War and into the first decade of the 21st century was derived from: the policy of containing Soviet inspired communism; sustained in a bi-polar Westphalian state centric order led by the US. This paradigm relied on the threat of conventional military force as the primary vehicle to ensure compliance with the global status quo. Paralysis and stagnation of strategic defense relevant paradigms became evident after the demise of the Soviet Union. Unfortunately, this was the very moment new paradigms were required given the radical alterations occurring in global geopolitical calculus.

At the conclusion of the Cold War the world was thought to have shifted from a bi-polar to unipolar construct.³⁵ Only for a short time was this truly the case. Almost immediately, conditions began forming allowing a multi-polar world to take shape.³⁶ Additionally, the rise of non-state actors as a significant facet of the global security landscape was another notable development.³⁷ This emergence is remarkable in two ways. First, it signals a challenge to the Westphalian notion of state supremacy in the international system. Secondly, one of the more virulent expressions of this challenge became radical Islam. From a US lens this latter hazard eventually emerged as the fundamental ideological threat, as Communism used to be. In spite of these shifts, initiated over twenty-five years ago, the US national and defense policy making enterprises are only now waking from a self-imposed moratorium on development of new defense related conceptual frameworks and paradigms. The solidification of legacy

national defense paradigms began shortly after World War II (WWII). Viewed in this light, it is logical they are proving so difficult to reorient.

Since the release of National Security Council Paper 68 (NSC 68) in 1950 until, at least 1991, the overarching US national security and defense policy was to contain the spread of Communism. As NSC 68 summarized, the defeat of Japan and Germany combined with the simultaneous demise of the British and French empires created a bipolar global distribution of power with the US and the USSR at the poles.³⁸ Over the course of decades, the ways and means in which containment was achieved shifted at times, but maintained as one of its primary components, classical, conventional warfare, seeking decisive battle against the Soviet state. Communism, with the USSR as its global proponent, was the principal ideological and existential threat to the US.

Each great power existed and was gaining strength not in spite of, rather, because of the other. In the US, this long-term connection produced entrenched dogmas about the national and the defense establishment's purpose and best means of employment. If the war of this era was cold, the strategic thinking became frozen over the decades. NSC-68 infused a bias toward strategies designed to defeat communism utilizing classical Westphalian style, state versus state, warfare. Generations of leaders formed careers and fostered a culture grounded in conducting their tradecraft one specific way. As such, it is not surprising that the demise of the Soviet Union, as momentous as it was, did not immediately unbridle a new national security paradigm, defense doctrines and concepts. Having defeated all contenders, the US maintained those methods and concepts that delivered its supremacy, unable or unwilling to consider other possibilities.

The primary vehicle for further crystallizing legacy US defense paradigms leading into the 21st century was the 1991 Gulf War. This conflict was to defense concepts what the demise of the USSR was to US grand strategy as defined by NSC 68.³⁹ The Gulf War was that validating event whose resounding success allowed a false sense of security, overconfidence and complacency to seep in. If there was any doubt following the demise of the Soviet Union as to who the global hegemon was, this lightning war ended the argument.⁴⁰

The rest of the world took note of the Gulf War's results. States and non-state actors alike easily grasped that a head to head classical military confrontation with the US would be ill-advised; new methods were required.⁴¹ Conversely, having subdued Saddam Hussein and with no peer competitors, the West was content. The Gulf War validated the dominance of conventional forces and doctrines; Air Land Battle was the supreme warfighting concept and was even updated in 1993.⁴² Moreover, the 1991 Gulf war followed closely on the heels of the fall of the Berlin Wall; Western states desperately thirsted for a long-sought peace dividend. Confident and assured in proven methods and concepts, western military and security related thinking stagnated.

US defense doctrine, strategic theory and security thinking became anachronistic. Put another way, these models were ideally suited for the most dangerous forms of aggression (and the most preferred), but not the most likely. Victor Davis Hanson in his 2009 edition of *The Western Way of War*, captures the essence of the fatal flaw of mirror imaging. This defect sees one preparing for what one most desires, that manner of conflict for which he or she is best suited. Hanson describes the western predilection for classical direct combat as a "...narcotic we cannot put away."⁴³

9/11 and New Conceptions of Warfare

A deficiency of imagination prevented the US defense and security establishments from predicting the 9/11 attacks. They were looking for a different kind of threat. The establishment failed to realize that the nature of warfare was changing and Gulf War era defense concepts were mismatched for emergent threats. The 9/11 attack definitively marked the pivot to a new appreciation for the emerging threat. Since those attacks, numerous other events have solidified this evolution toward new conceptions of warfare.

However, in 1989, even before the Gulf War, a small team of military thinkers posited that the character of warfare was, in fact, entering a new phase. These theorists saw clear trends developing in the security environment and referred to this latest evolution as Fourth Generation Warfare (4GW).⁴⁴ Envisioning that US technological and material dominance would necessarily drive competitors to avoid such strengths, this team predicted a rise in unconventional off-setting methods as major features of the 21st century operational environment (OE). Some of the characteristics of this new OE they presaged were: ideological based movements using low tech means to contest high tech forces; the desire of adversaries to collapse enemies from within, avoiding military might altogether and attacking enemy society at home; adversary use of democratic state freedoms against that state; direct attacks against a state's culture; a "...blurred distinction between war and peace..." and reliance of "non-national or transnational" ideological support.⁴⁵ Today, these characteristics are all too clear in the visage of terrorism and those nations exploiting the gray zone.

Yet, the bureaucratic defense establishment during this era was unable to imagine a new paradigm or conceive that the nation with the globe's premier military

could be appreciably wounded. As stated above, the categorical success seen by US and other Western forces in the 1991 Gulf War against a linear array of conventional forces further solidified the unflagging belief in established doctrine and defense concepts.

Yet, the nineteen 9/11 attackers were a loosely confederated group of terrorists driven by ideology, employing methods that did not conform to Westphalian conceptions of warfare and operated on US soil. AQ represented an entirely different sort of enemy whose practices and structure presented a challenge ill-suited for DoD's mostly conventional wherewithal and conceptions of adversaries and how to confront them.

In short, one major reason the 9/11 attacks occurred was because the terrorist archetype was not the preferred adversary the DoD was purpose built to oppose. The 9/11 attack was the unfortunate validation of 4GW. It demonstrated that the US was vulnerable to new unconventional forms of attack that mitigate traditional advantages, particularly military strength. The nearly two decades since have illustrated that the US has yet to address this fact. Larry Hancock describes the depth of institutional, and intellectual malaise at the time of the 9/11 attack,

National Security Advisor Condoleeza Rice...testified...that very few government or military officials had considered that hijacked planes might...be used as weapons...no one had ever even contemplated commercial aircraft being used as weapons in attacks on American cities.⁴⁶

The 9/11 commission report provided the most damning judgement of all, however, when it stated, "...the most important failure was one of imagination."⁴⁷ A corollary to the 9/11 attack, that further illustrates a western lethargy in grasping new adversarial models, is the Russian initiated strategic shock of 2014; the annexation of Crimea. Like 9/11 and Pearl Harbor, this event was a deliberate, well planned and

highly orchestrated action with ample warning signs. There were clear indications Russia would act boldly to maintain sway over those areas it considers within its sphere of influence. Bebler tells that Russian intentions toward Ukraine became known as early as the 1990's with contingency plans to annex this region. Ukrainian leaders issued warnings of the same in the late 2000's.⁴⁸ In 2008, the Russian foreign minister stated, "...we will do all we can to prevent Ukraine's and Georgia's accession into NATO..."⁴⁹ In that same year Russia actually invaded Georgia. With NATO and the US consumed in Iraq and Afghanistan the timing was highly calculated and opportunistic. The fact that Georgia was not a NATO member ensured blowback on Russia would be an acceptable risk.

Six years after the Georgia invasion Russia deftly seized Crimea. To do so, Russia exploited the gray zone, employing multi-domain and whole of government actions below the threshold of armed conflict representing a mixture of hybrid, unconventional and conventional warfare. The annexation saw no massing of troops on international borders or a declaration of war. Rather, Russia exploited Ukrainian domestic politics and populations, inflamed internal grievances, manipulated social media and saturated the information domain with misinformation. Confronted by a new conception of warfare, the west was outmaneuvered. Yet, like 9/11, this shock had a trend line. Russia was heavily invested in understanding the inner workings of the Crimea; the West was not. As Stephen Blank explains, "Russian intelligence, military, economic, informational, ideological, and other forms of penetration of the Crimea in anticipation of an overall nullification of Ukraine's de facto...sovereignty over the area

have been long apparent.”⁵⁰ Russian actions were years in the making, but awareness of this 21st century gray zone exploitation is relatively nascent.⁵¹

Section IV – The Projected Strategic Environment

What is the strategic context in which we will face the next mid-to-long term strategic shock? Volumes could be dedicated to this question. This section merely provides a basic framework with which to contextualize recommendations. There are seven main variables with which to describe the environment. Most significantly, the global balance of power is shifting from a unipolar construct dominated by the US to an increasingly multi-polar system punctuated with the rise of a revisionist China and a resurgent opportunistic Russia as two of the most significant actors.⁵² Further, there are increasing regional nuances with what Fareed Zakaria calls, “The Rise of the Rest,” indicating the likelihood of a further expansion of this multi-polar world order.⁵³ The rise of China combined with an assemblage of other lesser, yet ascendant nations could present the US defense sector with a scenario equivalent to strategic swarming. That is, multiple simultaneous regional shifts might overwhelm US ability to respond and address each flash point in a timely and adequate manner.

One way the “rest” are rising, in part, is through manipulation of the gray zone. Freier et. al. identify four gray zone “archetypes” each with a different end game in mind, each with differing gray zone techniques, but all similar in having identified systematic weakness and exploitability in US policy and defense strategy. The future strategic context will see sustained employment of approaches that exploit the gray zone and nullify US and western historic advantages and reliance on the rules based international order. These challenges to US hegemony will be most acute in US – China

relations in Southeast Asia and US-Russia relations in Europe, as manifested by opportunistic Russian behavior.⁵⁴

Secondly, states are experiencing challenges in governing, brought about in part by the growth of technology enabled non-state actors and technology enabled-activism. The contemporary examples are ubiquitous: there are the recent color revolutions in Europe and Central Asia; the Arab Spring; hydra like entities such as AQ and Daesh and the hacktivist group Anonymous. The power of technology and social media as part of this phenomena is evidenced by government restrictions on the internet in certain more repressive countries.⁵⁵ The rule seems to be that these organizations span national, cultural, ethnic and even technological boundaries. They operate outside of traditional solution space accessible to governments and independent from the norms inherent to the international system.

Thirdly, the US will have to navigate a security environment where its long time and taken-for-granted technological and military overmatch is receding. It is difficult to overstate the long-term detriment that the wars in Iraq and Afghanistan, coupled with the incalculable damage the Budget Control Act (BCA) have wreaked upon the defense establishment.⁵⁶ It is not hyperbole to assert that the combined impacts of these wars and the BCA have lost the US at least a decade of research, development and modernization.⁵⁷ While near peer competitors focused on modernization, anti-access and area denial and gray zone strategies, the US devoted energies at the tactical level of warfare. Many key US strategy documents acknowledge that in certain areas the United States will be on the back foot for at least the short term. The 2017 National

Security Strategy (NSS) is particularly realistic about the challenges facing the defense sector,

Instead of building military capacity...the United States dramatically cut the size of our military.... Instead of developing important capabilities, the Joint Force entered a nearly decade long “procurement holiday” ... The breakdown of the ...Federal budgeting process...further contributed to the erosion of America’s military dominance...⁵⁸

Fourth, another major feature of the projected environment will be the influence of technology as an equalizer. The ability of small groups, even individuals, to shape global events is rising at an ever-faster pace. At the tactical level of war this feature has been revealed during US operations in Iraq and Afghanistan. These wars illustrate the enemy winning the cost-ratio war using inexpensive technologies like improvised explosive devices to defeat sophisticated, expensive systems like tanks. The 2007 cyber-attack on Estonia is a harbinger of the weaponization of the internet. The Chinese shoot-down of their own weather satellite in that same year portends that US technological advantages such as sophisticated networked communications and precision guidance for platforms and weapons that rely on space-based systems are not guaranteed. Lastly, many of these capabilities will be available to non-state actors in the future. Should US technological overmatch continue to truncate, future US strategic bargaining strategies will be less convincing.

Fifth, the relationship between the ever-quickenning velocity of change, also enabled by technology, and global interconnectedness will cause high speed ripple effects. Take for example the hack of the Associated Press Twitter account, allegedly by the Syrian Electronic Army. A fake tweet was issued claiming an attack against the White House wounded the President. Although the bogus tweet was quickly revealed, in

the three tense minutes before this occurred, the “fake tweet erased \$136 billion in equity market value.”⁵⁹

Sixth, rising urbanization and demographic shifts will feature prominently on the future landscape. Urbanization will collocate throngs of disparate peoples in close proximity. This will possibly lead to tension, perhaps violence. These masses of people and the sustainment of civil society will be highly dependent on reliable, predictable infrastructure and logistics systems and on sustained resource flows. Interruption of key services and systems like the power grid, for example, may expose major vulnerabilities and precipitate chaos. Ramifications of crises, natural disasters or man-made crisis, will be more complex in urban settings. Urbanization will have implications on military operations and tactics as well.⁶⁰

Demographic changes may shift power dynamics in societies locally and create trans-regional strife.⁶¹ The projected rapid population growth in Africa, for example, may trigger local crises, but might just as easily spill outside the region. China is currently experiencing a phenomenon of a massive bubble of unmarried men. By 2020 the number is expected to be 15 million and rise to 30 million by 2050.⁶²

Implications from demographic changes are far ranging but could take the form of mass migration. Although not due to demographic shifts, the impact of mass migration was recently felt by Europe in 2015-16 resulted primarily from conflict in the Mideast and North Africa. The sudden arrival of millions of culturally dissimilar refugees and migrants put European nations under extreme logistical pressure, posed security dilemmas and created political fissures whose impacts are still being felt. The implications of great numbers of unmarried Chinese men are less clear. However, it is

not too difficult to understand that millions of men frustrated at being unable to find life partners could pose a major security threat depending how their frustration is directed or mitigated.⁶³

Joint Operating Environment 2035 (JOE 2035) written by the US joint staff describes a projected world order,

...defined by twin overarching challenges. A range of competitors will confront the United States and its...interests. Contested norms will feature adversaries that credibly challenge the rules and agreements that define the international order. Persistent disorder will involve certain adversaries exploiting the inability of societies to provide functioning, stable, and legitimate governance...⁶⁴

The current world order and international system greatly advantages the US. Most prominently, the global financial structures born out of the Bretton Woods agreements following WWII give the US huge influence in global economic trends and sway in sustaining a liberal world order.⁶⁵ John Mearshimer states this most succinctly, "...economic might is the foundation of military power...and a reliable way to gain military advantage over rivals."⁶⁶ In a world growing ever more multi-polar the US will struggle to remain the global hegemon for security and economic issues. Regional powers will rise, subvert the current liberal system, exploit chaos and crises in the OE and begin subsuming the US role as arbiter on security and economic matters. This will possibly lead to an erosion of influence and threaten structures such as the Bretton Woods system that are so vital to US power.

Lastly, the sum of these factors will result in the present world order being persistently challenged. A similar challenge occurred during the Cold War, but with a major difference. The Cold War was essentially waged between the US and the USSR and respective proxies. The bi-polar nature of this competition allowed a measure of

focus for each rival to plan against and remained in the bounds of state versus state engagement. This is not the case today. The US is being confronted by multiple rising states and non-state actors.

If revisionist and opportunistic challengers such as China, Russia, and Iran and North Korea achieve regional realignments of the status quo in their favor, this will naturally alter the global status quo. Non-state actors will likely also continue challenging state authority. Equally important, non-state actor's disruptive efforts will divert focus from more existential threats presented by state actors. The attendant loss of US influence in key regions will possibly result in a world order where the US is less able to secure its vital interests.

While those who claim the US is rapidly declining are arguably alarmist at present, their forecasts are plausible in the long term. State primacy as the driving force behind international relations is being contested. Non-state actors, activist groups, social movements, international corporations, etc. are proving both forceful in demanding and realizing power, and effecting change. To maintain its position as global hegemon and ensure the most favorable world order possible, the US defense sector must be prepared for these sweeping changes.

Section V – Analysis: Character of Future Shocks and Relevant Deductions

With what is known regarding the dominant characteristics of strategic shocks overlaid onto the emerging trends and the projected strategic security environment, what does this suggest about future strategic shocks? Two major observations and one deduction emerge. First, legacy, outdated national level defense policies, concepts and paradigms, are being rendered moot by evolving regional security environments. Secondly, technology and the velocity of change have the capability to catalyze “tipping

points” that reduce leader decision space. As Malcom Gladwell said in his book entitled *Tipping Points*, “...ideas and products and messages and behaviors spread like viruses do.”⁶⁷ This factor will likely intensify and hasten, rather than create strategic shocks.

Lastly, and as an outgrowth of these two observations, it may be deduced that emergence of a “gray zone” approach is gaining preference by US challengers and presenting the defense sector with asymmetric dilemmas it is ill-structured to grapple with. US security policy since the fall of the Soviet Union has been chronically short-sighted and overly reliant on Westphalian style state versus state practices to preserve the liberal international order. While Westphalian practices are still relevant, they are being avoided by challengers. Prosecution of the wars in Iraq and Afghanistan have now produced a security gap. This security gap is manifested in outmoded defense concepts and paradigms as well as a widening capability gap in defense technology and innovation. That gap is directly tied to state and non-state challengers who exploit coercive strategies to counter US interests in the gray zone. The sophistication and proliferation of ubiquitous technology is being weaponized in ways that continue to make US rivals more effective in the gray zone competitive environment.

Sow the Wind, Reap the Whirlwind

National security policies and defense concepts and paradigms that were successful in the past are now outmoded and fostering conditions that could threaten US interests. As the 2017 NSS states, following the Cold War, “Success...bred complacency...As we took our...advantages for granted, other actors steadily implemented their long-term plans to challenge America and to advance agendas opposed to the United States, our allies, and our partners.”⁶⁸ While the NSS goes on to describe a path aimed at remediating remnant shortfalls, negative trends are extant.

The US stance toward the Democratic People's Republic of Korea (DPRK) is an example of the paradigm paralysis phenomenon described in section III. The decades of conciliation, appeasement and strategic patience were only effective at delaying DPRK attainment of a nuclear weapon. Yet, the period of delay is apparently almost over. The US is now faced with a major alteration in the Asian security framework. This has ramifications for the US homeland, territories, the relationship with China and global influence in general. The result is an increasing US reliance on China to serve as a rheostat on the DPRK. Such perceived dependence by the global hegemon necessarily cedes influence to China.

Another notable passé strategy is that of NATO expansion. The openness toward NATO accession that the US led alliance has embraced is a failed dogma, and directly contributed to the Russian invasion of Georgia in 2008 and Ukraine crisis in 2014. It has fostered a bitter, antagonistic relationship between the US and Russia. This dysfunction is a strategic distraction. The bellicose stance China has taken in the South China Sea is another example of failed delaying policies. China continues to build its "string of pearls" around this vital maritime domain and flagrantly disregard international norms. The longer their actions go unanswered the greater the detriment to international norms and coalescing of conditions in their favor. Just as the old adage states, an insurgent does not have to win he just has to avoid losing; the Chinese need only maintain their current footing and strategy of incrementalism. Who has the will at this point to induce them to abandon these new holdings? Their physical establishment of sites confutes any legal ruling they will most certainly challenge or politely ignore.

Each example above represents an inflection point where the US has elected to forfeit the strategic initiative. The US must come to grips with the changes in the strategic environment and recognize the trends and patterns inherent in the current coercive competition with rivals. Only by adapting to the new security environment and challenger's strategies can the US avert a strategic shock.

Welcome to The Gray Zone

A subsidiary effect of the shifting security environment is the rising trend of adversarial exploitation of the gray zone. The gray zone represents a manifestation of the new conceptions of warfare phenomenon offered in section III. Adversaries are executing strategies in the gray zone for which the defense establishment is not prepared conceptually, doctrinally or materially. Gray zone competition allows state and non-state actors to challenge US interests with minimal risk of triggering a US military response.

Freier et. al make three major contributions to understanding the gray zone and arguments for its solidifying presence as part of the strategic landscape for the mid to long term. First, the gray zone is something best described versus defined. It is too fluid and too "...context dependent..." to support a neat, fixed definition.⁶⁹ The means by which China, Russia and Iran, for example, will prosecute their campaigns in the gray zone are necessarily different. Each practitioner of gray zone approaches offers the US a unique suite of dilemmas. Secondly, in describing the myriad gray zone potentialities three common features arise: hybridity; mitigation of the military instrument and; frustration of US risk calculus. Gray zone approaches employ "hybridity," combining diverse ways and means that confound US temporal concepts of peace and conflict and challenge current legal and authorities constructs. Gray zone techniques, by design,

avoid the US military instrument of power. This both avoids the US's most decisive reservoir of influence, and places on the shoulders of the defense establishment an unorthodox conundrum. Gray zone methods confront US leaders with "...profound risk-confusion...risk associated with action and inaction appears to be equally high and unpalatable."⁷⁰ The third major contribution that Freier and his colleagues make is to underpin the reality that gray zone approaches are the "new normal."⁷¹

Many actors are already exploiting the gray zone. China, a revisionist actor, has for decades been engaging a whole of government "campaign" like approach to unseat the US as the Southeast Asia arbiter and provider of security, and possibly as the global hegemon. China's blended approach to achieve long range goals has, "...enabled China to...achieve warlike aims without resorting to warlike violence."⁷² Russia is more opportunistic, as demonstrated by their interventions in Georgia in 2008, Crimea in 2014, and Donbass later in 2014. All these interventions saw successful manipulation of the gray zone in conjunction with conventional force. The upward trend in gray zone competition indicates this is where we should be searching for an emergent strategic shock.

Not Your Grand Daddy's Internet

Advanced communications are a modern evolution of the noise example seen during the lead up to Pearl Harbor and represent the most challenging feature of future shocks. Technologically enabled, deeply networked high velocity communications now have the potential to rapidly propel volatile situations past their tipping points. Beyond these tipping points, leaders will be confronted with vastly reduced decision-making time. Use of social media as a crisis accelerant is not a new trend. In 2001 Philippine President Joseph Estrada was deposed in large measure to mass protests incited by

forwarded text messages.⁷³ The Moldovan Communist party failed to retain its hold on authority in 2009 also due to mass protests coordinated via social media.⁷⁴ What is new is the level of internet saturation. More and more people, including in the developing world, now have access to this resource and the trend is still rising.

As a more recent example, Peter Jones brilliantly captures the salient point of the Arab Spring's emergence and momentum, "What surprised everyone...was the trigger for the events, the rapidity of developments, and the connections between events in one country and those in others."⁷⁵ It was partly this rapidity of action, which in 2011 brought such heavy pressure on Hosni Mubarak, the ousted Egyptian leader.⁷⁶ The catalyst and the medium by which the momentum was sustained, not the underlying causes for the Arab Spring was the unexpected development. Analyzing the Arab Spring in Morocco, Brouwer and Bartels explain how social media reduces solution space for governments. It is not through any sort of direct digital lever such as hacking; rather it is what these authors describe as a relationship between activists and populations' online and offline activities. It is not social media as a stand-alone force that is powerful; rather it is social media's unexpressed, coiled potential to suddenly mobilize physical action that is threatening to leaders and governments.⁷⁷

Social media provides a platform for far reaching voice. Access to it provides a means for ordinary citizens to equalize the power differential between themselves and government. When these voices are combined and agree to match actions with words the results may occur quickly, be volatile and most certainly, unpredictable. As an enabler to the upward trend in gray zone competition, the defense sector should be aware of and monitor those high velocity mediums and social media networks that will

allow competitors to foment unrest, gradually subvert governance and accelerate crises in their favor.

The aftereffect we see at the nexus of outmoded US defense policy, concepts, and paradigms, rival's gray zone exploitation, and high-speed communications and social media is a security framework where adversary risk calculus is steadily becoming less restrained. Challenger skill and US inability in the gray zone dictate that the next strategic shock will highly likely emerge there.

Section VI – Defense Sector Recommendations

National level leaders must acknowledge the US is being positively outmaneuvered in the gray zone. Adversaries are operating off of long-term highly calculated grand strategies, seizing opportunities by circumventing global convention and essentially rewriting the rule book. Continuation of these negative trends threaten the current liberal international system that advantages the US. The 2017 NSS is a good start in acknowledging the shifting dynamics. Accompanying this acknowledgment must be radical defense policy and paradigm shifts that deliver and synchronize whole of government authorities that decisively contest and deter adversary use of gray zone practices.

Concomitant to any defense policy adjustment to mitigate gray zone competition must be a conspicuous reinforcement of the existing international system. After all, the maintenance of an international order that advances US interests is what the broader political jockeying and gray zone exploitation is about. The US approach should be to recast adversary gray zone coercion as being contrary to the international system and leverage that system to penalize offenders. Exercising a whole of government approach, the US must seek to publicly illuminate actors using the gray zone and

assemble international support against them. In confronting adversary gray zone use, the US must be highly circumspect in response. The temptation to fight fire with fire and counter with US gray zone contrivances will be strong and sometimes necessary, making the temptation that much greater. Such usage should be the exception not the rule and characterized as defensive in nature. The US must exercise care not to conduct any action that will inadvertently undermine the very system it is striving to buttress.

An effective gray zone policy and strategy will fail if the US security leadership, military and civilian, don't adopt a more strategic perspective with a view toward long-term implications. To complement this long-term approach, the US must learn to rely less on the military instrument of power as it is the least preferred to combat gray zone actions. However, the US has an extensive legacy of becoming militarily embroiled in flashpoints that do not necessarily correlate to vital national interests. Further, the US has an established pattern of involvement in foreign crises with only opaquely described purpose and indefinite disengagement criteria. Such imprecision naturally lends itself toward incrementalism or self-perpetuating endeavors absent strategic aims. The contemporary archetype of this flaw is the US' continued involvement in Afghanistan, now in its seventeenth year. The sum of these structural defects is a strategic freneticism that diverts finite institutional focus, energy, and resources away from core issues.

National security policy and defense concepts and paradigms must be modernized to reflect new realities of the security environment. The defense sector must develop options for how to employ the military instrument in the gray zone,

although it may not always be the preferred instrument. The 2016 draft Concept Capstone for Joint Operations: Joint Force 2030 (CCJO) is the Joint Force' primary document describing how the Joint Force is employed. However, the CCJO avoids options for gray zone competition. This must be corrected; the CCJO should specifically address strategies for gray zone competition. To its credit, however, the CCJO does at least recognize that a whole of government approach will be essential in achieving policy and defense aims. Subsequent defense strategic documents such as the National Military Strategy (NMS) should encourage coordination mechanisms that unify military and political understanding of adversary actions to obtain a whole of government response and shoring of the international system.

As information, intelligence and noise are increasing in volume and being delivered at greater velocity, investments in the analytics enterprise must be made to ensure leaders make informed, timely decisions. Here, the CCJO exactly hits the mark in addressing the intelligence function. The CCJO recommends the Joint Force "Improve the Synthesis of Big Data."⁷⁸ Such a move is entirely congruent with and supportive of an increasing prevalence of gray zone actors and one of their preferred tactics – manipulation of the information space. The US should focus its analytic resources against gray zone actors and identify salient data to forecast coercive behavior. The US must become expert in surveying critical regions' social media developments, particularly as crises unfold. Doing so will enable crisis mitigation decision-making, and permit a richer understanding of root cause, next key steps, messaging and counter-messaging.

Section VII - Conclusion

The proven efficacy of adversaries competing with the US in the gray zone virtually guarantees its place in the future strategic security environment. As such, it is from within the gray zone that the next strategic shock will likely occur. In spite of this, history is instructive in showing that strategic shocks are nearly always discernable and emerge from clear trends. Imagination, focus, and skilled defense institutions are the necessary instruments to identify these signs. Fortunately, the US possesses all three in abundance. Logically then, the US must effectively assess gray zone competition and aggressively orient effort and resources toward gray zone actors to avoid the next shock. For now, Chinese and Russian behavior presents the greatest challenges in the gray zone.

The US defense establishment must prioritize efforts to replace outmoded policy concepts and paradigms with ones that match the reality of the current and projected OE. Correcting these outdated security tools requires acknowledgement and action on the part of all senior leaders; that has unfortunately not been a feature of US foreign policy in the past three decades. Complicating matters, but not rendering the situation hopeless, is the omnipresent hand of technology. Here too, the US possesses all necessary and sufficient resources to achieve primacy. Achieving primacy is a matter of prioritization, vision and commitment to be unapologetically dominant.

Endnotes

¹ Bradley Graham, *By His Own Rules: The Ambitions, Successes and Failures of Donald Rumsfeld* (Sydney, Australia: Accessible Publishing Systems Pty Ltd, 2009), 284.

² Pacific.war.org, "Japanese Preparations for the Attack on Pearl Harbor," <http://www.pacificwar.org.au/pearlharbor/prepsforattack.html> (accessed December 20, 2017).

³ Samuel P. Huntington, "The Clash of Civilizations and the Remaking of World Order," *The Washington Post*, <http://www.washingtonpost.com/wp-srv/style/longterm/books/chap1/clashofcivilizations.htm> (accessed December 20, 2017).

⁴ For the purposes of this study, mid-term is 7-10 years and long term is 10-20 years.

⁵ This essay aims to address specifically defense relevant strategic shocks. For the sake of brevity the phrase "strategic shock" will be used.

⁶ Dr. Helene Lavoix, "Looking Out for Future Shocks," <https://www.scribd.com/document/97940575/Looking-Out-for-Future-Shocks-in-Resilience-and-National-Security-in-an-Uncertain-World-Ed-Centre-of-Excellence-for-National-Security-Singapore-C> (accessed December 21, 2017).

⁷ Nathan Freier, *Known Unknowns* (Carlisle, PA: Strategic Studies Institute, US Army War College, 2008), 5 <http://www.StrategicStudiesInstitute.army.mil/> (accessed December 21, 2017).

⁸ Dr. Helene Lavoix, "Multiplicating Crises: Strategic Surprises or Strategic Shocks," October 11, 2017, linked from *The Red (Team) Analysis Society*, <https://www.redanalysis.org/2015/09/21/multiplicating-crises-strategic-surprises-or-strategic-shocks/> (accessed December 21, 2017).

⁹ Freier, *Known Unknowns*, 2

¹⁰ Ibid.

¹¹ Ibid.

¹² Curiousmatic, "Five Top Black Swan Events in History," <https://curiousmatic.com/top-black-swan-events-recent-history/> (accessed December 21, 2017).

¹³ A.J. Masys, "Black Swans to Grey Swans: Revealing the Uncertainty," *Disaster Prevention and Management* 21, number 3 (2012): 320, [Black Swans to Grey Swans](#) (accessed December 21, 2017).

¹⁴ Nathan P. Freier, et. al., "Outplayed: Regaining Strategic Initiative in the Gray Zone," *Strategic Studies Institute*, (June 2016), 4.

¹⁵ Ibid., 78.

¹⁶ Ibid., 4.

¹⁷ Michael J. Mazarr, *Mastering the Gray Zone: Understanding a Changing Era of Conflict*, Monograph, (Carlisle Barracks, PA: U.S. Army War College, Strategic Studies Institute, December 2015), 58.

¹⁸ Pearl Harbor, "How long did the battle last?" <https://pearlharborpro.wordpress.com/2008/12/07/how-long-did-the-battle-last/> (accessed December 22, 2017).

¹⁹ Melissa Chan, "A Date Which Will Live In Infamy; Read President Roosevelt's Pearl Harbor address," *Time Magazine*, December 7, 2016, <http://time.com/4593483/pearl-harbor-franklin-roosevelt-infamy-speech-attack/> (accessed February 10, 2018).

²⁰ Steven Metz, "To Create Order the US needs a Strategic Vision," *World Politics Review*, December 12, 2014, <https://www.worldpoliticsreview.com/articles/14647/to-create-order-the-u-s-needs-a-strategic-vision> (accessed December 24, 2017).

²¹ Larry Hancock, *Surprise Attack: From Pearl Harbor to 9/11 to Benghazi*, (Berkeley, CA: Counterpoint Berkeley, 2015), 2-3.

²² *Ibid.*, 3.

²³ Gordon Prange, *At Dawn We Slept: The Untold Story of Pearl Harbor* (New York, NY: Penguin Books, 1981), 372.

²⁴ Bruce D. Berkowitz, Jeffrey T. Richelson, "The CIA Vindicated; The Soviet Collapse was Predicted," *The National Interest* (Fall 1995): 42.

²⁵ Leon Aron, "Everything You Think You Know About the Collapse of the Soviet Union is Wrong," *Foreign Policy* (July / August 2011): 65-66.

²⁶ Erik J. Dahl, *Intelligence and Surprise Attack: Failure and Success from Pearl Harbor to 9/11 and Beyond*, (Washington, DC: Georgetown University Press, 2013), 135.

²⁷ Stephen Murrin, "The 9/11 Terrorist Attacks: A Failure of Policy Not Strategic Intelligence Analysis" *Intelligence and National Security* (May 2011): 184-187.

²⁸ John A. Genry and Joseph S. Gordon, "US Strategic Warning Intelligence: Situation and Prospects," *International Journal of Intelligence and Counterintelligence*, Volume no. 1, 31 (December 8, 2017): 22.

²⁹ Bruce Riedel, "The CIA's overlooked intelligence victory in the 1967 War," Brookings Institute blog entry posted May 30, 2017, <https://www.brookings.edu/blog/markaz/2017/05/30/the-cias-overlooked-intelligence-victory-in-the-1967-war/> (accessed February 11, 2018).

³⁰ Kathryn Schulz, *Being Wrong: Adventures in the Margin of Error* (New York, NY: Harper Collins, 2010), 8.

³¹ David Bawden, Clive Holtham, Nigel Courtney, "Perspectives on Information Overload," *Aslib Proceedings* Volume 51, no. 8 (September, 1999): 249.

³² Stephen Murrin, "Preventing Intelligence Failures by Learning from the Past," *International Journal of Intelligence and Counterintelligence* (August 2010): 658.

³³ Dahl, *Intelligence and Surprise Attack*, 8.

³⁴ P. Michael Phillips, "Deconstructing Our Dark Age Future," *Parameters* (Summer 2009): 95.

³⁵ William C. Wohlforth, "The Stability of a Unipolar World," *International Security*, 24, no. 1 (Summer 1999): 5.

³⁶ Matthew Burrows, Roger George, "Is America Ready for a Multipolar World?" *National Interest*, January 20, 2016, <http://nationalinterest.org/feature/america-ready-multipolar-world-14964> (accessed February 19, 2018).

³⁷ Trevin Stratton, "Power Failure: The Diffusion of State Power in International Relations," *Infinity Journal*, no. 1 (November / December, 2008): 2-3.

³⁸ University of Missouri, "A Report to the National Security Council – NSC 68," https://www.trumanlibrary.org/whistlestop/study_collections/coldwar/documents/pdf/10-1.pdf (accessed February 20, 2018).

³⁹ Norwich University Online, "Consequences of the Collapse of the Soviet Union," <https://graduate.norwich.edu/resources-mah/articles-mah/consequences-of-the-collapse-of-the-soviet-union/> (accessed February 12, 2018).

⁴⁰ William Thomas Allison, *The Gulf War, 1990-1991* (New York, NY: Palgrave Macmillan, 2012), 161.

⁴¹ *Ibid.*, 161.

⁴² GEN George W. Casey, "Full Spectrum Operations in Army Capstone Doctrine," linked from the *2008 Army Posture Statement Home Page*, https://www.army.mil/aps/08/information_papers/transform/Full_Spectrum_Operations.html (accessed February 12, 2018).

⁴³ Victor Davis Hanson, *The Western Way of War: Infantry Battle in Classical Greece* (Berkeley, CA: University of California Press, 2009), 13.

⁴⁴ Antulio J. Echevarria II, "Fourth Generation Warfare and Other Myths," *Strategic Studies Institute* (November 2005).

⁴⁵ William S. Lind, et al., "The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette* (October, 1989): 25-26.

⁴⁶ Hancock, *Surprise Attack: From Pearl Harbor to 9/11 to Benghazi*, 379-380.

⁴⁷ Phillip D. Bougen and Pat O'Malley, "Bureaucracy, Imagination and US Domestic Security Policy," *Security Journal*, no. 22 (2009): 101.

⁴⁸ Anton Bebler, "The Russian-Ukrainian Conflict over Crimea," *Tejoria in Praksa Ljubuljana*, volume 52, issue 1/2, (2015): 202-03.

⁴⁹ "Russia Talks Tough in Response to NATO's Eastward Expansion," *Deutsche Welle*, April 11, 2008, <http://www.dw.com/en/russia-talks-tough-in-response-to-natos-eastward-expansion/a-3261078> (accessed February 18, 2018).

⁵⁰ Stephen Blank, "From Eurasia With Love," *American Foreign Policy Interests*, volume 36, number 3 (June 27, 2014): 163.

⁵¹ Bebler, "The Russian-Ukrainian Conflict over Crimea," 202-203.

⁵² US Joint Chiefs of Staff, *Joint Operating Environment 2035*, Joint Publication JOE 2035 (Washington, DC: US Joint Chiefs of Staff, July 14, 2016), ii, 4, 5, http://www.airuniversity.af.mil/Portals/10/CMSA/documents/Required_Reading/Joint%20Operating%20Environment%202035%20The%20Joint%20Force%20in%20a%20Contested%20and%20Disordered%20World.pdf (accessed February 18, 2018).

⁵³ Fareed Zakaria, "The Rise of the Rest," May 12, 2008, <https://fareedzakaria.com/2008/05/12/the-rise-of-the-rest/> (accessed January 1, 2018).

⁵⁴ Freier, et. al., "Outplayed: Regaining Strategic Initiative in the Gray Zone," 29.

⁵⁵ Najmeh Bozorgmehr, "Iran Blocks Social Media After Protests Spread Nationwide," December 31, 2017, <https://www.ft.com/content/b444d098-ed94-11e7-b220-857e26d1aca4> (accessed January 1, 2018).

⁵⁶ Jim Mattis, "Senate Armed Services Committee Written Statement for the Record," *Congressional Record* (June 13, 2017): 1-4, https://www.armed-services.senate.gov/download/mattis_06-13-17 (accessed February 18, 2018).

⁵⁷ Joseph F. Dunford, *Posture Statement of 19th Chairman of the Joint Chiefs of Staff*, Posture Statement presented to the 115th Congress, Senate Armed Services Committee, (Washington, DC: US Department of Defense, June 13, 2017), 5-7, 11, https://www.armed-services.senate.gov/imo/media/doc/Dunford_06-13-17.pdf (accessed February 18, 2018).

⁵⁸ Donald J. Trump, *National Security Strategy of The United States of America* (Washington DC: The White House, December 2017), 27, <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf> (accessed December 29, 2017).

⁵⁹ Max Fisher, "Syrian Hackers Claim AP Hack That Tipped Stock Market by \$136 Billion. Is it terrorism?" *Washington Post Online*, April 23, 2013, https://www.washingtonpost.com/news/worldviews/wp/2013/04/23/syrian-hackers-claim-ap-hack-that-tipped-stock-market-by-136-billion-is-it-terrorism/?utm_term=.3e906dd91084 (accessed January 3, 2018).

⁶⁰ Jeffrey Becker, "Contexts of Future Conflict," *Joint Force Quarterly* (3rd Quarter 2014): 18.

⁶¹ Thomas S. Szayna, et al., *Conflict Trends and Conflict Drivers: An Empirical Assessment of Historical Conflict Patterns and Future Conflict Projections* (Santa Monica, CA, Rand Corporation, 2017), 66-67, https://www.rand.org/pubs/research_reports/RR1063.html (accessed February 18, 2018).

⁶² "China to have 30 Million Single Men by 2050," *GB Times*, February 13, 2017, <https://gbtimes.com/china-to-have-30-million-single-men-by-2050> (accessed January 6, 2018).

⁶³ Kevin Lee, "China's Growing Problem of Too Many Single Men," *Forbes Online*, (May 13, 2011): <https://www.forbes.com/sites/china/2011/05/13/chinas-growing-problem-of-too-many-single-men/#548cac8375d8> (accessed February 18, 2018).

⁶⁴ US Joint Chiefs of Staff, *Joint Operating Environment 2035*, ii.

⁶⁵ World Economic Forum, "Strengthening the Liberal World Order," http://www3.weforum.org/docs/WEF_US_GAC_Strengthening_Liberal_World_Order_White_Paper_US.pdf (accessed February 19, 2018).

⁶⁶ US Joint Chiefs of Staff, *Joint Operating Environment 2035*, 28.

⁶⁷ Malcom Gladwell, *Tipping Point: How Little Things Can Make a Big Difference*, (New York, NY: Little Brown, 2000), 7.

⁶⁸ Trump, *National Security Strategy of The United States of America*, 2,.

⁶⁹ Freier, et. al., "Outplayed: Regaining Strategic Initiative in the Gray Zone," 4.

⁷⁰ Ibid.

⁷¹ Ibid., 5.

⁷² Ibid., 33.

⁷³ Clay Shirky, "The Political Power of Social Media," *Foreign Affairs* (January / February 2011): 1-2.

⁷⁴ Ibid.

⁷⁵ Peter Jones, "The Arab Spring: Opportunities and Implications," *International Journal* (Spring 2012): 448.

⁷⁶ Olesya Tkacheva, et al., "Cyberactivists, Social Media, and the Anti-Mubarak Protests in Egypt," in *Internet Freedom and Political Space* (RAND, 2013), 43-44.

⁷⁷ Lenie Brouwer, Edien Bartels, "Arab Spring in Morocco: Social Media and the 20 February Movement," *Afrika Focus* volume 27, number 2 (2014): 9.

⁷⁸ United States Joint Staff, *Capstone Concept for Joint Operations: Joint Force 2030 Pre-Decisional Draft*, (Washington, DC: US Joint Staff, June 28, 2016), 10.