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WARNING INTELLIGENCE IN NUCLEAR CRISIS MANAGEMENT: AVOIDING CATASTROPHIC MISCALCULATION

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WARNING INTELLIGENCE IN NUCLEAR CRISIS MANAGMENT:
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A DISSERTATION APPROVED FOR THE
DEPARTMENT OF POLITICAL SCIENCE

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Abstract

Despite efforts to reduce nuclear weapons proliferation and the general norm against nuclear weapons use which has survived since 1945, the threat of nuclear war between the United States and Russia continues. The United States and the Soviet Union were involved in two nuclear crises, the Cuban Missile Crisis of 1962 and the Soviet War Scare of 1983, which came perilously close to escalating to nuclear weapons use. Strategic and tactical warning intelligence played a critical role in shaping the current situation assessments senior military and political leaders used to manage events which nearly led to a catastrophic nuclear exchange. But this raises the following questions: 1) What factors contribute to accurate situation assessments? 2) How important is quality strategic and tactical intelligence? 3) How significant is the intelligence – policymaker relationship in accurately assessing the threat? 4) What prevents senior leaders from objectively interpreting intelligence? 5) Could a "Russian War Scare of 20XX" occur in the future? This study examines the relationship between intelligence professionals and the senior political leaders they serve, and the role warning intelligence plays in helping leaders accurately assess the current situation as part of the crisis response decision making process. Using a comparative case study approach, I found intelligence quality, leadership receptivity towards intelligence, and objective interpretation of intelligence are key factors which increase the probability senior leaders will accurately assess the threat during nuclear crises.

Keywords: warning intelligence, nuclear weapons, current situation assessment, nuclear crisis

CHAPTER 1 – INTRODUCTION

The end of the Cold War in 1991 caused public fear in the United States of sudden, catastrophic, nuclear annihilation to subside, but the threat of nuclear war persists. Two decades into the 21st century, nine states possess nuclear weapons and despite the promise of nuclear non-proliferation based on the Nuclear Non-Proliferation Treaty (NPT) and international norms, the number of nuclear armed states continues to grow.[1] Although the norm against nuclear weapon use has thankfully survived from the Hiroshima and Nagasaki bombings until today, the nuclear threat continues. In the United States, the direct threat comes from states such as Russia with a large nuclear arsenal, from China which is expanding and modernizing its nuclear capabilities targeting the United States, and from lesser regional power such as North Korea and potentially Iran.[2] North Korea has captured the most recent focus given the accelerated pace of nuclear weapon and ballistic missile development in 2017 under Kim Jong-un. North Korea, which has conducted six nuclear tests between 2006-2017, has successfully developed an intercontinental ballistic missile capable of targeting the continental United States and is making rapid progress towards weaponizing their nuclear weapons program. Their final steps to reach a fully weaponized capability include

[1] The nuclear armed states are: The United States, Russia, the United Kingdom, France, China, presumably Israel, India, Pakistan, and North Korea. Israel does not confirm or deny its possession of nuclear weapons in a policy known as strategic ambiguity.
[2] The Iranian nuclear program is currently regulated under the Joint Comprehensive Plan of Action which was negotiated to prevent the Iranian development of nuclear weapons in exchange for suspension of international economic sanctions.

developing and testing a survivable re-entry vehicle and perfecting warhead guidance systems.[3]

Iran, although currently constrained by the Joint Comprehensive Plan of Action (JCPOA), has made substantial progress in enriching uranium for a potential nuclear weapon. The nuclear threat from states with established nuclear weapons programs is also evolving. India is considering revising its military doctrine to emphasize early, first-strike use of nuclear weapons in a future conflict between India and Pakistan (Shah, 2017). Pakistan continues to emphasize nuclear first use in its doctrine to offset India's conventional military superiority (Shankar & Paul, 2016). Finally, and perhaps most dangerous to the United States and our North American Treaty Organization (NATO) allies, Russia is modernizing its nuclear weapons arsenal (Doyle, 2016, p. 10), and has revised its nuclear doctrine to place a greater emphasis on nuclear weapons use. This doctrine includes a concept known as "escalate to de-escalate—a strategy that seeks to de-escalate a conventional conflict through coercive threats, including limited nuclear use" (Work & Winnefeld, 2015, p. 4). In fact, Russia now believes it may be possible to use one or a few nuclear weapons to consolidate territorial gains or discourage US/NATO intervention in a conflict near Russia (The Growing Russian Military Threat in Europe, 2017, pp. 20, 42, and 51).

These complex, evolving nuclear developments make nuclear warning intelligence more important than ever. Iran and North Korea do not represent the

[3] Recent events in East Asia signal the possibility of an end to a nuclear North Korea. However, such signals of rapprochement have come from the North Korean regime in the past. This issue is unresolved at the time of this writing (spring 2018).

end of regimes which might seek nuclear capabilities. Other, unknown state or irregular actors will doubtlessly seek nuclear capabilities in the future. Therefore, a better understanding is required of how leaders make current situation assessments of imminent nuclear threats based on warning intelligence.

To advance our understanding in this area, I develop and present an in-depth, comparative case study of warning intelligence presented to senior US decision makers during the October 1962 Cuban Missile Crisis and to Soviet decision makers during the November 1983 Soviet War Scare. This research is intended to increase our understanding of the role intelligence played in influencing U.S. and Soviet threat perceptions during these two extremely dangerous nuclear crises.

Research Problem

This study seeks to determine the role warning intelligence plays in influencing senior leader current situation assessments during nuclear crises.[4] Studying how warning intelligence influences such assessments of nuclear threats is important because it provides insights regarding how leaders accept and evaluate intelligence under extreme duress.

The world was fortunate to avoid nuclear catastrophe during the Cold War. The United States and Soviet Union came perilously close to nuclear conflict on several occasions, most notably, during the October 1962 Cuban

[4] Senior leaders in this study are the senior most civilian and military national leaders, with special emphasis on the President of the United States and the General Secretary of the Communist Party of the Soviet Union.

Missile Crisis and the 1983 Soviet War Scare. During the Cuban crisis, US leaders suffered from an initial strategic warning failure, however, subsequent tactical warning intelligence analysis greatly aided Kennedy Administration decision makers in formulating effective national security policies which successfully ended the crisis peacefully largely on US terms. In contrast, the Soviet Union became increasingly fearful of US/NATO conventional and nuclear military capabilities in the early 1980s and launched a special intelligence warning operation (Operation RYAN)[5] to improve their intelligence collection and analytic capabilities against this threat. Although nuclear conflict was avoided, Soviet warning intelligence was deeply flawed which exacerbated Soviet fears of an imminent US/NATO nuclear attack. Perhaps most interesting is the fact that the US Intelligence Community failed to recognize the real, genuine level of Soviet fear during this period, and did not provide US senior leaders proper warning of this dire situation facing the United States and NATO.

These past crises prompt several relevant, contemporary questions concerning nuclear warning and international security.

1. What factors were most important in providing accurate intelligence warning which led to nuclear crisis de-escalation and which were most important in contributing to fears which led to nuclear crisis escalation?

[5] Different documents refer to this special intelligence warning effort as either RYAN or VYRAN which is an acronym for the Russian words vnezapnoe raketno yadernoye napadeniye – meaning sudden or surprise nuclear missile attack.

2. Today, given the growing tension between the US/NATO and Russia, Russia's increased emphasis on modernizing their nuclear capabilities, and their revised nuclear warfighting doctrine, is a "Russian War Scare" scenario plausible in the future?

3. What can be done to improve nuclear warning intelligence to reduce to potential for nuclear weapons use based on miscalculation between Russia and the United States?

This study seeks to fill gaps in our existing knowledge about warning intelligence in nuclear crisis management and its impact on situation assessment. The following three key questions are based on the elements required for senior leaders to make accurate current situation assessments. Decision makers must first have quality intelligence. This is a critical input in the process. A faulty intelligence input at the beginning of the process will almost certainly result in a false or skewed assessment. The second research question revolves around leaders' attitudes towards intelligence. Do they trust the veracity of the information? Do they trust the organizations and the leaders of those intelligence agencies providing them warning intelligence? Is there a sense of urgency which compels them to act? In summary, how receptive are senior leaders to the intelligence provided? The third research question addresses how leaders interpret crisis warning intelligence. Even if leaders receive quality intelligence and are receptive to the warning, they are still capable of misinterpreting the intelligence; such a failure will also result in a faulty current situation assessment. These three questions are important because they reflect three major elements in

the intelligence – policymaker relationship required for leaders to make accurate situation assessments.

Q1 – Warning Intelligence Analytic Products - Did the US Intelligence Community provide senior US leaders quality intelligence warning during the Cuban Missile Crisis?[6] Did the Soviet Committee for State Security (KGB) provide Soviet leaders quality intelligence warning during the Soviet War Scare?

Q2 – Senior Leader Use of Warning Intelligence – How receptive were US leaders to intelligence warning during the Cuban Missile Crisis? How receptive were Soviet leaders to intelligence warning during the Soviet War Scare?

Q3 – Senior Leader Interpretation of Warning Intelligence – How did US leaders interpret this warning? How did Soviet leaders interpret this warning?

Conceptual Framework

Assessing threats to national interests is one of the most fundamental missions of national intelligence services. Warning intelligence is a formal methodology the US Intelligence Community uses to monitor indicators of pending military attack (Joint Publication 2-0, 2013, pp I-18 and GL-12). The Soviet KGB and GRU also used a formal, indicator-based analytic methodology to assess the US/NATO threat during the Soviet War Scare of 1983 (President's Foreign Intelligence Advisory Board Report [PFIAB Report], *The Soviet War*

[6] Quality intelligence is defined in this dissertation based on U.S. Joint Chiefs of Staff Publication 2-0, *Joint Intelligence*.

Scare, 1990, p. v). This type of intelligence is designed to avoid both strategic and tactical surprise. Other national intelligence services have also developed formalized, analytic intelligence methodologies to aid in their assessment of enemy threat levels. As James Wirtz states in his article *Indications and Warning in an Age of Uncertainty:*

> Indications and warning intelligence is an important and time-tested methodology employed by intelligence analysts to warn military officers and policy makers about changes in an opponent's operations posture which indicates that the likelihood of dangerous or aggressive activity is increasing. (Wirtz, 2013, p. 550)

According to US joint intelligence doctrine, "Warning provides a distinct communication to a decision maker about threats against US security, interests, or citizens. Warning carries a sense of urgency, implying the decision maker should take action to deter or mitigate the threat's impact" (JCS Publication 2-0).[7] The goal of warning intelligence is not to specifically predict future events, since that is beyond human capability, rather it is to accurately gauge trends which indicate increased threat.

The warning intelligence analytic framework rests on prior identification and careful assessment of the systematic steps an enemy state or other non-state actor (such as a terrorist group) must take to prepare for an attack. The systematic prior identification of the various steps a given state must take to launch an attack

[7] Traditionally, this type of intelligence has been known as "Indications and Warning Intelligence." The US Joint Staff has modified this concept to simply "Warning Intelligence" as of its most recent doctrinal publication on the subject in 2013.

involves carefully thinking through the sequential preparations it must undertake to engage in an attack. These preparatory steps provide detectable intelligence signatures called indicators. Quality indicators are observable and thus susceptible to routine, standing intelligence collection. Warning analysts must be thoroughly familiar with the set of warning problems under their responsibility. They must also have a very thorough understanding of the various indicators and the intelligence collection plan associated with each warning problem. Warning analysts must then monitor the raw intelligence flow to determine if enemy activities are sufficient to activate their corresponding indicators, analyze the situation, given the context of events, and if necessary, to develop and communicate careful, precise, clear warning assessments to senior military and civilian leaders.

Recognizing the importance of surprise and secrecy as key components of victory, states usually attempt to conceal their political, economic, and military preparations for an attack. Leaders may openly use political rhetoric and/or military exercise activity as overt measures to conceal a pending attack. But they can also engage in denial and deception operations to throw enemy threat assessments off course. For these reasons, state actors need intelligence services to collect and analyze classified information to make warning intelligence assessments. Implicit in this methodology is an assumption that foreign intelligence organizations can also effectively collect information using either technical collection systems or human intelligence sources.

This study will examine warning intelligence produced by the US Intelligence Community, the East German Ministry for State Security (Stasi), and the Soviet Committee for State Security (KGB) to detail how senior military and political leaders used intelligence to assess the current situation during nuclear crises. Following the warning intelligence input, senior leaders must be receptive to intelligence. This may seem intuitive; however, it is also possible for leaders to dismiss intelligence warning or fail to fully recognize the validity of the warning. Such instance can occur following a serious intelligence failure, such as the 2003 Iraq WMD failure, which primes leaders to not trust intelligence assessments. Senior leaders can also dismiss intelligence warnings, if warning officers make frequent, warning that end up as false alarms, also known as "crying wolf" (Wirtz, 2017, pp. 3, 9). This represents a challenge, as intelligence professionals must continuously balance their duty to provide warning with the potential for threat desensitization based on continuous or ambiguous warnings. I have incorporated the concept of leadership receptivity from fellow intelligence professional and scholar Erik Dahl. Dahl further discusses the issue of leadership receptivity extensively in both his 2008 dissertation *Preventing Terrorist Attacks: Intelligence Warning and Policy Response* and in a 2013 article, *Why Won't They Listen? Comparing Receptivity Toward Intelligence at Pearl Harbor and Midway*.

Finally, nuclear crisis decision making requires senior leaders to objectively evaluate and integrate intelligence into their overall current situation assessment. While this too may seem self-evident, Mikhail Alexseev, points out a

combination of factors can emerge which shape senior leader perceptions based on the foreign intelligence assessments they receive. Alexseev observes in *Without Warning: Threat Assessment, Intelligence, and Global Struggle*, during the Soviet War Scare of 1983, the Kremlin was "preoccupied with hostile imperialist intentions and competing ideologies in the global power arena" and this "set the stage for an unprecedented intelligence alert (Operation RYAN) in 1983 over the possibility of a NATO surprise nuclear attack" (Alexseev, 1997, p. 255). He goes on to state that senior Soviet leaders including the aging Soviet Politburo became increasingly reclusive and fearful of the West based on its superior economic and military strength. "In the absence of public debate and alternative information sources, Soviet leaders fell prey to conspiracy theories of NATO preparations for a nuclear missile attack" (Alexseev, 1997, p. 256).

Theory

The theory of successful warning intelligence in nuclear crises presented here is based on three factors: quality warning intelligence, leadership receptivity towards that intelligence, and policy makers' objective interpretation of that intelligence. To test this theory, I will compare cases of success and failure in current situation assessment using a qualitative analytic case study approach.

The theory is developed based on the critical need for intelligence professionals and senior-level policy makers to cooperate to ensure intelligence organizations effectively produce and communicate warning intelligence and to ensure decision makers are receptive and correctly interpret the warning. Therefore, this dissertation fulfills an empirical and practical need of importance

to the profession. For the purposes of explanation, the theory appears to be a recursive, linear process. However, it is a cyclical, iterative, interactive process between intelligence professionals and senior leaders. It is therefore non-recursive in that all information is considered simultaneously and changes through time.

The following offers a theory of intelligence warning and situation assessment. The theory posits the following - If intelligence professionals provide senior leaders quality warning intelligence and if senior leaders are receptive (accept the intelligence as valid) and objectively interpret the warning, they are more likely to accurately assess the situation. Conversely, if intelligence professionals provide poor quality warning intelligence or if senior leaders reject or misinterpret the warning, they are more likely to inaccurately assess the crisis. The model presented below describes this relationship between intelligence professionals and senior, national political and military leaders responsible for using intelligence to more fully understand the current situation in nuclear crises.

My argument can be summarized as a theory of accurate situation assessment which is critical to successful nuclear crisis decision making. If 1) intelligence professionals develop and communicate accurate, objective intelligence warning, and 2) senior national leaders are receptive towards that intelligence, and 3) senior national leaders objectively interpret intelligence warning, then they are more likely to make an accurate situation assessment.

While this may seem obvious, errors in each of these three elements of my argument can and have occurred which have skewed situation assessments and

exacerbated extremely dangerous nuclear crises in the past. To the extent this theory is made explicit and better understood through historical analysis, the likelihood of inaccurate situation assessments may decrease, improving decision making and potentially avoiding inadvertent, catastrophic nuclear war.

Hypothesis

I postulate the following hypotheses based on my theory and an initial review of the literature on warning intelligence theory and specific intelligence related to the Cuban Missile Crisis and the Soviet War Scare:

H1(a) – Intelligence Quality - Senior US leaders received quality warning intelligence of the Soviet threat prior to and during the Cuban Missile Crisis which contributed to an accurate current situation assessment.

H1(b) – Intelligence Quality - Senior Soviet leaders received inaccurate and/or highly biased intelligence reporting prior to and during the Soviet War Scare of 1983 which contributed to a distorted current situation assessment.

H2(a) – Leadership Receptivity - US leaders were receptive of the threat warning and their receptivity increased over time based on the strength of the intelligence evidence which contributed to an accurate current situation assessment.

H2(b) – Leadership Receptivity - Soviet leaders were highly receptive of the threat warning to the extent that it led to an inaccurate, distorted current situation assessment (irrational fear of imminent US nuclear attack).

H3(a) – Objective Interpretation - US leaders objectively interpreted warning intelligence during the Cuban Missile Crisis which contributed to an accurate current situation assessment.

H3(b) – Objective Interpretation - Soviet leaders did not objectively interpret warning intelligence during the Soviet War Scare which contributed to an inaccurate, distorted current situation assessment.

Variables

This study seeks to assess the accuracy of senior leader situation assessments based on intelligence warning. Based on the theory above, key factors which influence the current situation are the quality of the warning intelligence product, the leaders' receptivity towards intelligence, and their objective interpretation of the intelligence warning. Thus, I will use the following dependent and independent variables in this study.

Dependent Variable – Senior Leader Current Situation Assessment - Accurate senior leader crisis situation assessment (based on warning intelligence input, leader receptivity, and interpretation of warning intelligence). This will be assessed in terms of strategic intelligence provided prior to the crisis and tactical intelligence during the crisis.

Independent Variable 1 – Warning Intelligence – Quality of the warning intelligence input to the decision maker

Independent Variable 2 – Senior Leader Receptivity – Leadership receptivity towards intelligence

Independent Variable 3 – Senior Leader Interpretation – Leadership objective interpretation of intelligence

Model

This dissertation suggests a combination of three factors, quality warning intelligence, leadership receptivity, and objective interpretation of intelligence yields accurate current situation assessments. The following model represents a theory of actionable intelligence for nuclear crises.

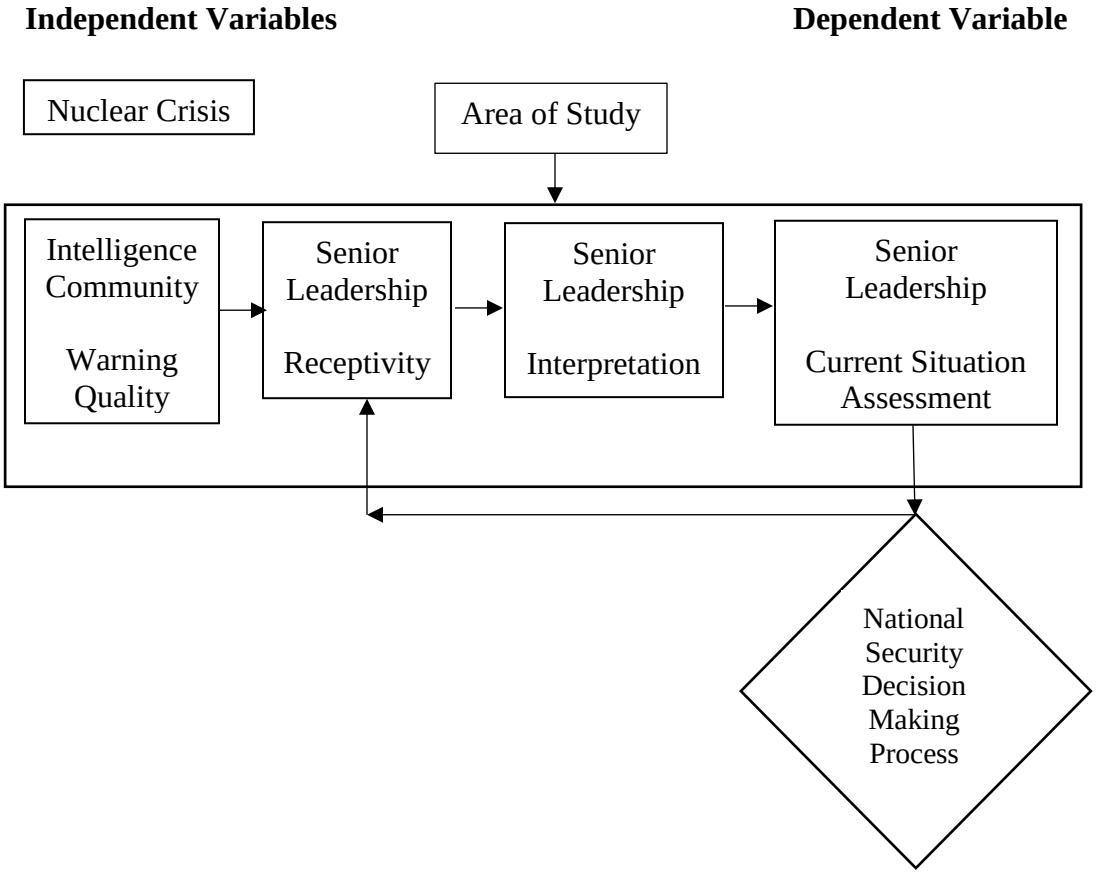


Figure 1 – Warning Intelligence and Situation Assessment

Scope

This theory is intentionally limited in scope. The focus is on the interaction between intelligence professionals and decision makers and does not attempt to explain the complete decision making process during nuclear crises. Therefore, it focuses on a critical information seeking and formulation stage of the decision process. I seek to concentrate specifically on the role warning intelligence plays in nuclear crisis decision making, how leaders value or discount that information, and how other, pre-existing beliefs may bias their assessment of the current situation during a nuclear crisis.

Methodology/Procedures

To answer the research questions, I use a qualitative, comparative case study method centered on structured, focused comparison as described in George and Bennett's (2005) classic work, *Case Studies in Theory Development in the Social Sciences*. This study will differ from the current literature which focuses almost exclusively on intelligence failures by including a case of successful tactical warning in the Cuban Missile Crisis.[8] Additionally, while other scholars, such as Graham Allison, have focused on various decision making theories and devised organizational, psychological, or bureaucratic models to explain various national security decisions (Allison & Zelikow, 1999), I will concentrate on determining the accuracy of the warning intelligence provided to senior leaders

[8] Must of the literature on intelligence warning focuses on case studies of warning failures. Examples include: The U.S. failure to warn of the Japanese attack against Pearly Harbor, Israeli warning failures associated with the Yom Kippur War, and the US failure to foresee the terrorist attacks of 9/11.

and how that intelligence influenced their current situation assessments. The Cuban Missile Crisis represents a case of successful tactical warning, which provided President Kennedy and his Executive Committee of the National Security Council (EXCOMM) the intelligence and time to take diplomatic and military measures which defused the crisis. The Soviet War Scare is an example of how inaccurate, distorted warning intelligence, and biased interpretation of intelligence contributed to Soviet fears of the U.S. and NATO which nearly led to nuclear war in 1983. The following three sections describe how I will analyze each of the three variables (warning intelligence quality, leadership receptivity, and objective interpretation of intelligence).

Analyzing Quality Warning Intelligence

Based on the model above, I will first study and assess the quality of warning intelligence products the intelligence communities of the United States and Soviet Union provided to their most senior political and military leaders. To assess the quality of warning intelligence provided to these decision makers, I will use the Attributes of Intelligence Excellence defined in US Joint Chiefs of Staff (JCS) Joint Publication 2-0 (*Joint Publication 2-0 - Joint Intelligence*, 2013, pp. II-7 - II-8). Quality warning intelligence is defined in *Joint Publication 2-0* as having the following features and attributes:

- Anticipatory – Intelligence professionals must anticipate information needs of decision makers. Intelligence analysts must identify and fully understand current and potential missions and adversary courses of action.

- Timely – Intelligence must be available when decision makers need it. It must warn leaders to avoid surprise. There is an inherent tension between timeliness and completeness which should be resolved in favor of timeliness.
- Accurate – Intelligence must be factually correct, portray the situation as it exists, and provide an understanding based on rational judgement of available information. It should account for possible denial and deception efforts. It should place greater emphasis on information from the most reliable sources.
- Usable – Intelligence must be tailored to the decision maker's needs and suitable for immediate comprehension. Decision makers operate under various constraints in a crisis and may not be able to analyze complex intelligence. Therefore, quality intelligence must present the "bottom line" up front, it must be understandable, oral presentation should be direct, and common terminology should be used to effectively communicate intelligence.
- Complete – Intelligence must answer decision maker questions about the adversary to the extent possible. It must also communicate intelligence gaps. Intelligence must identify alternative enemy courses of action (COA) and identify the most likely and most dangerous enemy COAs.
- Relevant – Intelligence must be relevant to the issue at hand and contribute to the decision maker's understanding of the adversary but not become a burden, laden with trivial information.

- Objective – Intelligence assessments must remain objective and independently developed. Analysts and intelligence leaders must be on guard against biases that shade, slant, or frame assessments that favor a perceived preference for a certain course of action or any other preconceived decision maker notion. Analysts much recognize each situation is unique and avoid the analytic pitfalls of mirror imaging and cultural bias.
- Available – Intelligence must be accessible to decision makers. Intelligence professionals should maximize consumer access, while protecting sources and methods of intelligence collection and analysis.

While this is a US-centric approach to intelligence evaluation, these principles are sufficiently broad and relevant to effectively evaluate products of any intelligence service. This first section focuses on how intelligence professionals produce quality warning assessment for senior leaders, the primary consumers of intelligence warning products.

The second major element of my analysis focuses on how leaders use warning intelligence. For warning intelligence to be effective, leaders must 1) be receptive to the warning intelligence professionals provide and 2) objectively interpret the warning intelligence.

Analyzing Policy Maker Receptivity Toward Intelligence

Senior political and military leaders must be receptive towards intelligence. Receptivity is a combination of belief in the seriousness of a threat

and trust in the intelligence being provided. Leaders may or may not be receptive to warning intelligence based on their level or respect for the role intelligence plays in the national security policy making process or their knowledge of and experience with successful or failed policy outcomes based on intelligence inputs.[9] Erik Dahl argues leadership receptivity to warning intelligence is of critical importance for leaders to make accurate intelligence assessments to prevent terrorist attacks. He contends leaders are especially receptive to intelligence warnings when "previous intelligence failure serves as a focusing event to concentrate the attention of both the intelligence community and policy makers" (Dahl, 2008, p. vii). Receptivity is also a factor in the intelligence-policy maker relationship during nuclear crises. While there may not necessarily be a focusing event in a nuclear crisis as included in Dahl's theory on intelligence support to counterterrorism, the powerful destructive nature of nuclear weapons and the immediate threat of nuclear conflict is certainly, in and of itself, sufficient to focus decision makers on the crisis. Of more importance for this study, concerning receptivity, is the level of trust decision makers have in the intelligence agencies, their leaders, and the quality of the intelligence these organizations are providing for leaders to formulate current situation assessments. To assess leadership receptivity towards intelligence, I will assess the professional relationship between the senior-most decision maker in each crisis and his senior

[9] Such as President Kennedy's distrust of the Central Intelligence Agency immediately following the failed Bay of Pigs Invasion of April 1962, the George W. Bush Administration's cautious view of intelligence in the wake of the Iraq WMD intelligence failure of 2013, or President Trump's distrust of the US Intelligence Community related to Russian interference in the 2016 US presidential election.

intelligence officer. This includes the level of trust and respect at both the individual leader level and in the agency providing the warning intelligence (at the organizational level).

Analyzing Objective Interpretation of Intelligence Warning

Objective interpretation is the third necessary element for leaders to make accurate situation assessments. Objective interpretation of intelligence warning is especially difficult because leaders have a tendency to understand their enemy's behavior in light of their own perception of the situation (Wirtz, 2017, p. 15). Objectivity can be defined as "relating to external facts as opposed to internal thoughts or feelings" (Dunne, Kurki, & Smith, 2010, p. 29). Dunne further expand the concept of objectivity as "not influenced by personal opinions or prejudices" (Dunne et al., 2010, p. 30). I will assess both leadership receptivity and objective evaluation of intelligence in this study. To assess leadership interpretation of intelligence I will analyze potential biases and other psychological factors that may influence a leader's interpretation of intelligence.

Accurate, Current Situation Assessment

The fourth element of this study involves making an overall assessment, based on a combination of the major elements above, to determine if senior leaders accurately assessed the current situation. Based on my theory, an accurate situation assessment is based on: 1) quality warning intelligence, 2) leaders' receptivity to the warning, and 3) their objective interpretation of the intelligence. Ultimately, leaders must accurately understand the current threat situation to formulate policies and direct actions which best serve the national interest.

Using the comparative case study method which George and Bennett outline in *Case Studies in Theory Development in the Social Sciences*, I will collect data to answer a structured set of questions using the 1962 Cuban Missile Crisis scenario and the 1983 Soviet War Scare scenario to draw conclusions about the quality of warning intelligence, senior leader receptivity, and objective interpretation of that intelligence to assess their ability to accurately assess the current situation during periods of extreme duress. This systematic methodological approach will allow me to test my theory regarding the role warning intelligence plays in nuclear crisis situation assessment.

Case Selection and the Logic of the Study

I examine two case studies which represent the two most significant cases of nuclear crises in United States history. The Cuban Missile Crisis is widely recognized as the point in which the United States and the Soviet Union came closest to the brink of nuclear confrontation. The 1983 Soviet War Scare, as we have recently learned, is potentially the closest point the Soviets came to launching a nuclear attack against the United States, although we did not fully realize it at the time. Fortunately, there have been few nuclear crises between the two superpowers. These two crises provide interesting and appropriate cases for this study. The Cuban Missile Crisis has been widely studied and with the passage of time, primary source archival data has been declassified and is available to researchers to test my theory of intelligence warning and current situation assessment. The Soviet War Scare of 1983 is appropriate because it is the closest case we are aware of when the Soviets believed the U.S. and NATO

were prepared to launch a preemptive nuclear attack. Additionally, the recent declassification of the 1990 PFIAB study provides formerly deeply classified US insights into Soviet thinking and concrete military reactions to US/NATO actions. The PFIAB report sheds light on how Soviet leaders used intelligence to formulate their current situation assessments and react to NATO activities. Given the secretive nature of the Soviet system and the current closure of most Soviet-era archives one cannot rule out the possibility that other cases exist in which the Soviets genuinely feared a pending US/NATO nuclear attack against their country.

Selection of these two significant cases does not suggest these are the only cases in which one state has made either an explicit or implicit threat of using nuclear weapons against another state.[10] While there have been many threats to use nuclear force, fortunately, there have been relatively few, sustained nuclear crises. The study of intelligence in nuclear crisis decision making requires using a time dimension longer than an episodic nuclear threat. This study specifically seeks to investigate nuclear crises between the two major superpowers. The focus on nuclear confrontation between the U.S. and the Soviet Union allows one to

[10] Many nuclear armed states have threatened nuclear weapons use as a coercive foreign policy tool. The US reminded the Soviets of American nuclear capabilities during the Berlin Airlift and threatened to use nuclear weapons during the Korean War. Soviet Premier Khrushchev made a brazen threat to use nuclear weapons during the Suez crisis of 1956 and boasted this nuclear threat forced the British, French, and Israelis to abandon their effort to re-take the Suez Canal from Egypt. The US threatened the Soviets by raising the Defense Condition during the 1973 Arab-Israeli War to deter direct Soviet military intervention in that conflict to rescue their Egyptian allies. There have also been instances of nuclear threats between India and Pakistan and between China and the U.S. and North Korea and the U.S. None of these incidents rose to same level of danger as the Cuban Missile Crisis or the Soviet War Scare of 1983. Additional study of intelligence and nuclear crisis management would further expand our knowledge of the relationship between warning intelligence professionals and senior political/military decision makers regarding how intelligence is interpreted to make current situation assessments.

draw conclusions which may be applicable to avoiding catastrophic miscalculations in a potential future nuclear crisis between the US/NATO and Russia. There is sufficient variation in the factors which form my theory to compare the two crises and draw conclusions.

The Cuban Missile Crisis of 1962

The Cuban Missile Crisis of 1962 is generally assessed as the most dangerous crisis in U.S.-Soviet relations during the Cold War. In the crisis which culminated in October 1962, the Soviet Union deployed offensive strategic nuclear missiles and bombers to Cuba. Soviet First Secretary Khrushchev ordered this deployment for several potential reasons including: 1) as an attempt to defend a new, key communist ally in the Western Hemisphere from a future US attack designed to overthrow the Castro regime, 2) to quickly rectify the strategic nuclear balance which heavily favored the U.S., 3) to serve as a bargaining chip to force Western withdrawal from Berlin, or 4) as a distraction to mask other Soviet offensive moves in other regions of the world. U.S. intelligence played a critical role monitoring the Soviet buildup of defensive and offensive arms on Cuba. President Kennedy masterfully conducted an inter-agency decision making process using the Executive Committee (EXCOMM) of the National Security Council to analyze his policy options, and communicate, execute, and oversee the implementation of his decisions. This case is considered a hallmark of successful nuclear crisis management. The crisis was resolved after 13 tense days, on October 28, following a US naval quarantine of Cuba. Soviet First Secretary Khrushchev announced the Soviet Union would withdrawal their nuclear weapons

from Cuba. President Kennedy publicly pledged to not invade Cuba and secretly agreed to withdraw US Jupiter nuclear missiles from Turkey.[11]

The Soviet War Scare of 1983

The Soviet War Scare of 1983 is arguably the second most dangerous nuclear crisis between the U.S. and Soviet Union during the Cold War. The U.S. failed to recognize the high level of danger at the time of this crisis but gradually learned of the intensity of Soviet fear of sudden nuclear attack. This crisis was precipitated by a combination of factors in the U.S., Europe, and the Soviet Union. In the U.S., President Reagan had ratcheted up anti-Soviet rhetoric, initiated a massive US defense buildup, engaged in provocative military psychological operation against the Soviet Union to test their defenses, and announced a new program, the Strategic Defense Initiative (SDI), which Soviet leaders feared would further degrade their strategic nuclear deterrent. In Europe, the US/NATO were deploying new, highly capable Pershing II intermediate range nuclear missiles and Ground-launched Cruise Missiles which the Soviets feared could quickly reach and destroy the senior Soviet military and political leadership. In the Soviet Union, fear and paranoia gripped a series of aging Soviet political leaders (Brezhnev, Andropov, and later Chernenko) who were aware of the deteriorating strategic nuclear balance, presided over a moribund economy, and demonstrated unimaginative political leadership with bleak prospects for improvement. Based on the deteriorating situation and the fear of a US/NATO

[11] For additional information on the Cuban Missile Crisis please see the "Context" section of Chapter 3.

nuclear attack, the Soviets developed and implemented a special intelligence collection and analysis program called Operation RYAN in 1981. This effort was designed to develop and executive an indications and warning system to systematically assess US/NATO preparation for a sudden nuclear attack against the Soviet Union/Warsaw Pact. Against this backdrop, NATO conducted Exercise Able Archer 83, an annual nuclear command and control exercise, which the Soviets came to believe was a cover for actual NATO preparations for a preemptive nuclear first-strike against the Soviet Union.[12]

Using these two case studies, I will examine the quality of intelligence warning provided at the time of each crisis (Cuban Missile Crisis and the 1983 Soviet War Scare). A historical, retrospective approach allows me to assess the quality of the intelligence which analysts produced and communicated to decision makers. I also will look at how senior leaders on both sides viewed the credibility of the intelligence they received and the level of trust they had in their respective intelligence agencies to determine their level of receptivity toward the intelligence they used to reach current situation assessments. Finally, I will examine how leaders interpreted the intelligence they received to assess their objectivity and determine the accuracy of their conclusions based on the available intelligence and what we now know, with the passage of time, to be the facts concerning each case. The combination of these three factors will allow me to test this theory of warning intelligence and determine which factors most influenced leaders as they

[12] For additional information on the Soviet War Scare of 1983, Exercise Able Archer and the Operation RYAN program, please see Chapter 4.

made situation assessments, under great duress, in these two nuclear crisis scenarios.

Data Sources

I conducted this research using primary-source materials from several archives. Much of the data is available via the internet in online archives. I also conducted archival research to ensure a more comprehensive data collection effort for this study. The following lists the data collection sources and types of data I collected at each source:

Online Sources

National Security Archive – This electronic archive maintained at George Washington University contains over 1,000 declassified, primary source documents in its "Able Archer 83 Sourcebook".[13] It also contains extensive primary source documentation on the Cuban Missile Crisis.

CIA Center for the Study of Intelligence – The Central Intelligence Agency has published declassified intelligence reporting on both the Cuban Missile Crisis and the Soviet War Scare. The center has also produced a study on the Soviet War Scare which served as a valuable bibliographic tool for additional primary source research.

[13] Able Archer is the name of the 1983 NATO nuclear exercise which represents the peak of Soviet fear during the Soviet War Scare period.

Government Publishing Office – Additional CIA studies and national security primary sources are available online and published through the Government Publishing Office.

Archival Sources

National Security Archive – This archive, located in Washington, DC, is open to researchers and provides access to primary-source, declassified intelligence and national security documentation. The archive, located in the George Washington University Gellman Library, specializes in obtaining key national security documentation via Freedom of Information Act (FOIA) and Mandatory De-Classification Review requests.

John F. Kennedy Presidential Museum and Library – Located in Boston, MA, this archive contains declassified intelligence and national security documentation pertaining to the October 1962 Cuban Missile Crisis which occurred during the John F. Kennedy presidential administration.

Ministerium für Staatssicherheit der Deutschen Demokratischen Republik (Ministry for State Security of the German Democratic Republic) – Contains intelligence analysis produced by the Hauptverwaltung Aufklärung (HVA-Foreign Intelligence Directorate) and other divisions of the East German Ministry for State Security as well as correspondence from that intelligence service to the Soviet Committee for State Security (KGB). The MfS-HVA was one of the main KGB partners in collecting and analyzing US/NATO military intelligence during the Cold War and was especially important part of the KGB Operation RYAN.

Secondary Sources

Books – Countless books are available which discuss the Cuban Missile Crisis. A similar, yet far less developed, body of literature is now emerging which deals directly with the Soviet War Scare. Another body of literature, including biographies and memoires of key U.S. and Soviet intelligence professionals and leaders, also contributes to better understanding the role of warning intelligence in informing senior leader current situation assessments during nuclear crises.

Journals – Key journals for the study of intelligence and especially warning intelligence including the *Defense Intelligence Journal*, the *Journal of Intelligence and National Security*, and the *International Journal of Intelligence and Counterintelligence* also address issues in this study.

Specialized Training

To enhance my knowledge and improve my ability to deliver a quality research product, I was fortunate to have attended the Wilson Center Summer Institute on Conducting Archival Research (SICAR). This institute was co-sponsored by the Wilson Center History and Public Policy Program and the George Washington University Cold War Group and ran from 30 May–2 June 2017 in Washington, DC. The goal of the seminar was to bring doctoral students from around the world together to share research ideas and to learn how to conduct archival research from some of the leading Cold War history and national security scholars in the United States. Specifically, the summer institute provided highly practical information and training on protocol and procedures for using

foreign archives, presentations on available archives in Washington, DC, including the National Security Archive, and an introduction to software tools to help organize vast amounts of research materials. I was fortunate to receive funding to attend this summer institute and to conduct the archival research described below thanks to funding from the George B. Williams Award I received from the University of Oklahoma, Department of Political Science.

Archival Research

I conducted on-site archival research at the former East German Ministry for State Security archive (Der Bundesbeauftragte für die Unterlagen des Staatssicherheitsdienstes der ehemaligen Deutschen Demokratischen Republik (BStU)) in East Berlin from 1-3 Nov 2017, at the National Security Archive in Washington, DC from 26 Feb-1 Mar 2018, and at the John F. Kennedy Presidential Museum and Library in Boston from 6-9 Mar 2018. In Berlin, I sought intelligence collection tasking directives and analytic advice from the KGB to their Stasi foreign intelligence service counterparts. I also reviewed working papers and intelligence assessments which provided insights regarding specific political and military assessments of US and NATO forces and data regarding the perceived threat levels between the Stasi and the KGB. In Washington and Boston, I worked to find intelligence warning assessments and policy working papers which provided insights on leadership receptivity toward intelligence and data on how intelligence informed their current situation assessment during the Cuban Missile Crisis of 1962 and Soviet War Scare of 1983.

Contributions and Significance

It may seem obvious that accurate crisis situation assessments are built on solid, accurate, comprehensive information that is readily received from trusted sources and objectively interpreted to reach a clear, complete understanding of current events. Certainly, intelligence professionals strive to develop and improve warning intelligence analytic frameworks. Collection, information, and communication technologies, among many other factors, have improved intelligence quality. At the human level, intelligence analysts and their leaders in both the United States and in the Soviet Union intelligence services are hard-working, dedicated, highly trained and highly educated professionals dedicated to serving the best interests of their nation. Senior political and military leaders take issues of national survival and ultimately, the fate of mankind, seriously and therefore are focused and motivated to demand quality intelligence on nuclear crisis issues. In the ideal world, high quality intelligence exists, is properly communicated to receptive decision makers who understand it and objectively use it to formulate an accurate picture of the current crisis. Unfortunately, in the real world, this process is highly dependent on fallible human beings. Intelligence can be inaccurate, leaders can be hostile and unreceptive in whole or in part to the intelligence warning assessment(s) they receive, leadership judgement is colored by ignorance of adversary military/foreign policy strategy, military capabilities and/or intentions, and finally, leaders can make grossly inaccurate assessments driven not by fact but by bias and fear. This study sheds light on how these factors played into senior-level decisions in situations of extreme duress. It helps us further refine our thinking concerning how warning intelligence impacts

leadership current situation assessments and contributes to our knowledge in both theoretical terms and in term of improving our ability to develop policies and practices to consistently improve our abilities to more accurately make current situation assessments.

More specifically, in terms of theory, this dissertation contributes to a growing body of literature on warning intelligence. It incorporates one of Erik Dahl's theoretical concepts, leadership receptivity, which he used to study the relationships between warning intelligence and successful counter-terrorism efforts. I have added additional factors such as the quality of the intelligence produced, and leaders' ability to objectively interpret this information as additional factors which influence their ability to make accurate assessments of the current situation as applied to nuclear crises. This study seeks to develop and test a theory of how warning intelligence can contribute to accurate, objective current situation assessments during nuclear crises. It is the only study I am aware of which develops this theory and tests it using two Cold War nuclear crises, the Cuban Missile Crisis of 1962 and the Soviet War Scare of 1983.

In terms of policy, this work seeks to stimulate and further the study of warning intelligence in nuclear crisis management. As the major international powers Russia and China continue to modernize their nuclear capabilities and adapt their national security strategies and military doctrines to the ever-changing international situation, the United States must also re-look and re-vitalize our strategies and capabilities in the nuclear domain. Improving our understanding of how intelligence influences senior leader threat perceptions is a critical part of

ensuring leaders develop accurate, objective current situation assessments so they can make objective, rational, informed decisions regarding nuclear weapons use during a future, high-intensity, high-stakes crisis.

Dissertation Outline

This dissertation is divided into six chapters. In chapter 1, I have laid out the importance of this topic, outlined a conceptual framework to study the key factors in using warning intelligence to reach accurate situation assessments, and discussed the sources and methods I employ to reach conclusions on how US and Soviet decision makers used warning intelligence during two key nuclear crises during the Cold War.

In chapter 2, I explain the theory of warning intelligence. Both the United States and the Soviet Union used this specialized type of intelligence to assess military and political developments. The intelligence warning framework is comprised of attack indicators, formulated over time, based on assessments of the necessary and observable steps needed to launch a nuclear attack. In this chapter, I also explain key terms and the role intelligence watch officers, more formally known as Indications and Warning Officers, play in analyzing current, raw intelligence in the context of the indications and warning analytic framework to inform senior military and political leaders of strategic and tactical military threats.

In chapter 3, I discuss the Cuban Missile Crisis. I start by providing background information on the crisis including the now declassified intelligence

President Kennedy and his advisors used to understand Soviet actions, military capabilities, and intent. I then proceed to analyze the quality of the warning intelligence President Kennedy and the EXCOMM received from the US Intelligence Community to support their policy deliberations in the face of the Soviet strategic nuclear missile and bomber deployments to Cuba. I examine the Kennedy Administration's receptivity and trust in the intelligence provided during the Cuban missile crisis considering the difficult start President Kennedy had with the US Intelligence Community in the wake of the April 1961 Bay of Pigs disaster which adversely affected his trust of the intelligence community early in his administration. I also analyze how Kennedy and his closest advisors integrated warning intelligence into their previously held beliefs towards the Soviet Union, including Soviet capability and intentions to assess their objective interpretation of the intelligence they received. Finally, I conclude that President Kennedy and his advisor made an accurate assessment of the current situation based on the three independent variables in the study.

Chapter 4 is a case study of the Soviet War Scare of 1983. Although this series of events is much less well known than the Cuban missile crisis, the Soviet War Scare case illustrates how the Soviets harbored deep anxieties and what they perceived as legitimate fears of an imminent US/NATO nuclear attack against the Soviet Union/Warsaw Pact. I use the same organizational structure and methodology as in the Cuban Missile Crisis case to systematically examine the quality of the warning intelligence the KGB, GRU, and their allied intelligence services provided the Soviet senior political and military leadership. I discuss

Soviet leadership receptivity towards the body of intelligence they used to inform their decision during this crisis and importantly, how they interpreted and integrated that intelligence, based on their fear of the United States into their assessment of the current situation. Each of these two case studies concludes with a section which examines whether senior military and political leaders developed an accurate picture of the current situation based on the three independent variables in this study.

Chapter 5 describes contemporary Russian foreign and military strategy as articulated in their current national security and foreign policy strategy documents. I also discuss trends in Russian nuclear strategy and force modernization. I conclude this chapter using Anthony Barrett's work for RAND on the potential for accidental nuclear conflict between the United States and Russia.

The dissertation concludes with Chapter 6 where I summarize my argument based on the evidence from these two case studies. I discuss the implications of this analysis for theory and for the relationship between intelligence professionals and policy makers moving forward. The study provides information on how to improve intelligence warning, intelligence-policy maker relationships/interactions, and need for objective use of intelligence to gain clear, accurate current situation assessments. This effort ultimately is designed to help senior leaders who are responsible for nuclear force employment decisions make more accurate situation assessments.

CHAPTER 2 – WARNING INTELLIGENCE

This chapter explains fundamental concepts of warning intelligence and explores the literatures of warning intelligence and intelligence-policymaker interaction. It describes warning intelligence theory and methodology as used in the U.S. but the principles are also broadly applicable to the Soviet warning system developed under Operation RYAN in the 1980s for strategic and tactical warning of a US/NATO nuclear attack against the Soviet Union.[14] The intelligence-policymaker relationship has also been the subject of much scholarly interest and is a factor in this study in terms of policymaker receptivity towards intelligence. Receptivity is a key factor for leaders to formulate accurate situation assessments. If decision makers do not believe in the seriousness of the threat, or fail to trust the intelligence community, its leaders, individual analysts, or the quality of the intelligence products they receive, they are unlikely to formulate a rich, clear, assessment of the current situation they are facing in a nuclear crisis. This chapter starts by reviewing the relevant literature on warning intelligence and continues by describing the various historical perspective on the relationship between intelligence professionals and senior government policymakers.

Senior, national-level leaders are charged with maintaining the security of their state and people. This is one of the most fundamental duties of statesmen. An element of performing this duty is avoiding surprise, specifically the avoidance of military surprise attack. To that end senior leaders demand

[14] Operation RYAN was a major Soviet effort to collect and analyze intelligence to provide warning of a US or NATO nuclear attack. Please see the case study in Chapter 4 dealing with the Soviet War Scare of 1983 for detailed information on Operation RYAN.

specialized, finished intelligence products which support critical decisions regarding national security strategy and decision making. The fate of the state rests with the ability of leaders to recognize potential threats and opportunities in the international environment, formulate policies which address those threats and opportunities, successfully execute policies to mitigate threats and capitalize on opportunities, and evaluate policy effectiveness. Warning intelligence, a specific function of intelligence, provides national-level decision makers the critical time and information they need to formulate and execute effective national security policies to protect national interests. Formerly known as Indications and Warning Intelligence, this activity aims to prevent strategic and tactical surprise and is a fundamental mission of US and foreign intelligence agencies. Senior national leaders have a deep interest in receiving and properly interpreting warning intelligence. The consequences of surprise can be devastating and threaten their most fundamental responsibility, protecting their citizens and the state from foreign attack. National security decision makers seek to avoid surprise with foreknowledge that can avert or potentially reduce the consequences of enemy action.

States have been concerned with their enemy's capabilities and intentions since the beginning of the state system. In the contemporary era, our warning intelligence effort is largely a result of: 1) The Japanese attack on Pearl Harbor which brought the U.S. into World War II and 2) The ensuing Cold War struggle with the Soviet Union from 1945-1991. Jack Davis (2007) highlights the importance of these historical events in focusing and shaping US intelligence

efforts, by summarizing, “The central mission of intelligence analysis since the post-World War II reorganization of national security structures has been to warn US officials about foreign threats to US security interests” (p. 174). The National Security Act of 1947 established a permanent, centralized intelligence structure to provide leaders advanced warning of pending foreign threats to American national security. A key goal regarding the intelligence aspects of this act was a stiff determination to avoid another Pearl Harbor-type surprise attack.

To better understand the various concepts involved in the specialized discipline of Warning Intelligence, we must start by defining some key terms. The Joint Chiefs of Staff Dictionary of US Military Terms for Joint Usage serves as a basis for providing key terms of reference and defines Warning Intelligence as “Those intelligence activities intended to detect and report time-sensitive intelligence information on foreign developments that forewarn of hostile action or intentions against United States entities, partners, or interests.” (*DoD Dictionary of Military and Associated Terms*, 2018, p. 247). This intelligence methodology relies on indications of activity, the use of the word “indicate” is apt in that it implies less than certain knowledge of developing or pending events (Grabo, 2015, p. 9). According to Cynthia Grabo (2015), a key warning intelligence thinker and practitioner who authored the definitive Defense Intelligence Agency indications and warning training manual, an indication is “a development of any kind. It may be a confirmed fact, a possible fact, an absence of something, a fragment of information, an observation, a photograph, a propaganda broadcast, a diplomatic note, a call up of reservists, a deployment of

forces, a military alert, an agent report, or a hundred other things" (p. 10). The main factor defining an indication is the ability for that piece of information to provide some insight into the enemy's likely course of action (Grabo, 2015, p. 10). A final key term, as defined by Grabo (2015), is an indicator, which is a theoretical or known step "which an enemy should or may take in preparation for hostilities" (p. 10). When discussing the difference between an indicator and an indication there is a key distinction to keep in mind. Indicators deal with our conception of what an enemy should or must do to prepare but which the enemy has not yet implemented. An indicator is activated and becomes an indication once the enemy has acted and fulfilled the indicator criteria. This is a difference between expectation and reality.

Warning Intelligence is central to national security policy planning, decision making, and policy execution. But what, more specifically, do policymakers demand of intelligence professionals when formulating long- and short-term national security and foreign policies? What do Warning Intelligence analysts provide senior policymakers? While policymakers and the public have a strong desire for specific point predictions regarding future events, such precision is often elusive and not a fundamental goal of the Warning Intelligence system. The overarching objective is for intelligence analysts to provide policymakers information and insights into overall trends in the enemy's operational posture for any given intelligence warning problem (Wirtz, 2017, p. 113). While analysts certainly strive to provide fine-grained details when possible, their primary focus is to alert decision makers of important changes in threat levels in a timely

manner to facilitate the development of effective policies and military strategies to address the threat. Sometimes, more specific warning has been possible, including the incredible intelligence success in alerting senior military leaders of the pending Japanese attack on Midway Island in World War II[15] or the tactical warning provided regarding Soviet deployment of strategic offensive nuclear weapons in Cuba before they became operational. This type of warning, although highly prized by decision makers and generally expected by the public, is exceedingly rare. Successful warning of this type, detailing the time, place, and method of attack is certainly the exception, not the rule, and importantly, as Jack Davis argues, not the true objective of the Warning Intelligence enterprise. Detecting macro-level trends is the true desired objective.

To provide timely intelligence for effective policy action, warning intelligence analysts seek to detect and monitor changes in the operational environment, specifically, changes in an enemy military's operational force posture. At the most basic level, this is accomplished by routinely and systemically observing steady-state, day-to-day military activities, and establishing an activity baseline known as the normal alert posture. Changes in adversary military force alert postures create a series of observable actions which warning professionals analyze to provide context and meaning. Based on observations taken over extended time periods, intelligence analysts catalog observable patterns of activity which are formalized as indicators. Analysts

[15] US signal intelligence professionals intercepted and decrypted secret Japanese radio transmissions which provided key information regarding Japan's intent to strike US military forces stationed on Midway Island. This is regarded as one of the great US military intelligence success of World War II which also marked a turning point in the war in the Pacific.

constantly monitor physical objects and changes in the physical environment, known as signatures, which are routinely observed using comprehensive, all-source intelligence collection strategies. All-source intelligence analysts interpret this intelligence to detect changes, departures from the operational baseline level of military activity. These changes lead to activation of specific indicators. The comprehensive evaluation of change or lack of change in various indicators allows analysts to make judgements regarding the overall threat level for a given intelligence warning problem.

Warning Intelligence – Analytic Methodology

As a major international power, the U.S. has national security interests which span the globe. In the US warning system, a warning problem is conceptualized as a top-level security issue, at any point along the spectrum of conflict, which could impact the security interests of the U.S. or our allies. As examples, warning problems include: a North Korean attack against South Korea, a Russian nuclear attack against the U.S., an Arab coalition attack against Israel, or a terrorist attack against the U.S.

Intelligence agencies must collect, process, exploit and analyze vast amounts of classified and open source data to perform the indications and warning mission. Analysts use this information along with their own insights, based on their extensive experience and expertise working a given intelligence warning problem, to make analytic judgments on the likelihood of conflict for a given intelligence warning problem. They use a well-defined analytic methodology that has been honed over decades of use to reach judgments in an environment of high

uncertainty. Warning officers, monitoring current, international events, must continuously determine if conditions warrant alerting more senior military and political officials of emerging or growing dangers to national security. The US Intelligence Community has outlined a formal framework for conducting this type of analysis, instituted training programs to teach warning methodology, and devoted tremendous human and physical resources to execute our warning intelligence strategy. The following is a discussion of how the intelligence warning system in the U.S. is structured starting with general concepts such as warning problems and ending with the interaction of the intelligence community providing warning to senior government policymakers.

Warning problems include areas in which conventional, force-on-force attacks are possible such as North Korea-South Korea, India-Pakistan, China-India, or the Israel-Arab Confrontation States. They also include potential scenarios in which strategic nuclear weapons may be used such as Russia-U.S., China-U.S., or North Korea-U.S. Terrorist and other non-state actor activities can also be analyzed using this methodology, examples include the Kurdistan Workers Party (PKK) threat to Turkey.

Once a warning problem is defined, analysts specify indicators based on a methodology consistent across most warning problems. The warning methodology includes broad categories of indicators to systematically account for different types of key political, military, economic, and social activities. Categories include: Political/military leadership, ground forces, air/air defense forces, naval forces, nuclear forces, intelligence, command and control,

communication, logistics, et cetera. The idea is to conceptualize the necessary preparations an adversarial force would have to take to prepare for conflict, determine which of those activities can be observed, and how they could be targeted using technical or human intelligence collection capabilities. The result of this analysis is a comprehensive indicator list, a list of activities which the intelligence community will routinely monitor (using standing intelligence collection strategies), assess, and report upon so analysts can formulate judgements regarding force capability, readiness, and intent. The following are examples of the type of activities (indicator categories) intelligence warning officers monitor as indicators of potential foreign attack:

> Political/military leadership (Command and Control) – Senior leaders recalled to their nation's capital, key leaders moving to and taking position in command and control facilities, activation of command and control facilities
>
> Ground forces – Stand-downs to perform equipment maintenance, movement of equipment from garrison locations to troop/equipment marshaling areas, increased exercise activity to mask force generation and improve readiness postures
>
> Air/air defense forces – Stand-downs to perform aircraft and air defense equipment maintenance, dispersal of aircraft and field deployment of air defense systems to ensure survivability, increased exercise activity to mask force generation and improve readiness postures

Naval forces – Stand-downs to perform ship, submarine, naval aircraft and air defense equipment maintenance, deployments of naval ships, submarines, and aircraft to ensure survivability, increased exercise activity to mask force generation and improve readiness postures

Nuclear forces – Dispersal of nuclear capable aircraft to enhance survivability, movement of nuclear warheads from storage facilities to strategic/tactical aircraft and tactical missile units, field deployment of road mobile strategic and tactical nuclear missiles and warheads

Intelligence – Increased airborne intelligence collection flight activity, increased communication activity between human intelligence case officers and agents, increased signal intelligence collection/reporting, deployment of tactical signal intelligence collection assets

Communication – Changes in patterns of communication, changed encryption and/or codewords, increased/decreased in communication levels, activation of alternate or deactivation of normal communication networks

Space – Measures to increase survivability of space-based communication, navigation, and intelligence collection assets; increased space surveillance activities; preparations for offensive anti-satellite weapons employment

Logistics – Increased production and stockpiling of key materials such as petroleum, oils, and lubricants; food; medical supplies; weapons; munitions

Warning officers, in close cooperation with intelligence collection managers, develop comprehensive, all-source intelligence collection plans driven by intelligence indicators. These plans must be effective in routinely collecting timely, relevant intelligence for the methodology to function properly. Collection and exploitation resources are always limited; therefore, an efficient, effective, well-thought-out collection plan is an important element in overall success. Failure to collect key pieces of information can easily result in potentially dangerous intelligence judgments where analysts fail to see the true nature or scope of the threat or, conversely, fail to detect information which would mitigate the level or nature of threat warning to decision makers.

Intelligence personnel, who man our nation's intelligence watch centers, analyze raw intelligence, and using the indications and warning methodology, their historical knowledge, as well as their ever present and developing knowledge of the current situational context, make judgments regarding enemy departures from past or expected activities. They issue reports to their higher headquarters and others involved in the warning intelligence enterprise to change the indicator status. If the situation warrants, watch centers can also change or recommend changes to the overall Watch Condition for the specific warning problem they are charged with monitoring.

In response to an escalating geopolitical situation and the consequent change in the Watch Condition, political and military leaders can take steps to meet the emerging challenge and take political or military actions to eliminate or mitigate the potential threat. Such actions include but are not limited to:

increasing the readiness posture of friendly forces as a means of signaling and to ensure defensive readiness, implementing enhanced intelligence collection plans to gain further insights on enemy activity, or engage in diplomacy to diffuse tension.

Strategic versus Tactical Warning

Warning Intelligence is designed to provide national security decision makers with both strategic and tactical warning. This distinction is important because these two types of warning focus on different goals. Tactical warning, according to Jack Davis (2007), "Focuses on specific incidents that endanger US security interests, such as military attack, terrorism, developments regarding weapons of mass destruction (WMD), illicit transactions, and political crises abroad" (p. 175). Tactical warning detects and deters specific, near-term attacks. The objective is to avoid incident-level surprise and prevent or mitigate damage (Davis, 2007, p. 173).

It is important to note that tactical surprise can be reduced but never eliminated (Davis, 2007, p. 176). Many intelligence failures are tactical warning failures vice strategic warning failures. In contrast, strategic warning deals with perceived dangers which span longer time periods and cover a larger scope of issues/activities. The objective of strategic warning is to inform policy decisions on general defense and security preparedness to prevent or limit future damage to US national interests (Davis, 2007, p. 173). Strategic warning provides military and civilian defense leaders a sense of the geopolitical environment and enables them to formulate broad-scope, long-term defense strategy. This type of warning

also assists policymakers with contingency planning and defensive preparedness measures, including planning for research and development of new defense technologies, new weapons systems, more efficient logistics systems, and more robust and hardened command, control, communications and intelligence systems. Strategic warning intelligence:

> …aims for analytic perception and effective communication to policy officials of important changes in the character or level of security threats that therefore require re-evaluation of US readiness to deter, avert, or limit damage – well in advance of incident-specific indicators (Davis, 2007, p. 175).

In contrast with tactical warning, strategic warning deals with the broad scope, long-term issue of addressing changes in the probability that an adversary will strike or take other actions inimical to US interests by considering potential mechanisms for inflicting damage. Strategic warning is characterized by inferential evidence to provide a general sense of the dangers facing the United States. It is a critical component of any nation's defense effort as a mechanism for ensuring limited resources dedicated towards national defense are efficiently and effectively used. When effective, strategic warning allows states to develop, structure, and posture defense forces and develop diplomatic strategies well in advance of specific indications of danger (Davis, 2007, p. 174).

The Strategic and Tactical Warning Relationship

Having established the difference between strategic and tactical warning, let us now explore how these warning concepts are related.

Effective strategic warning is required to enable tactical warning. Strategic warning and current intelligence products enable military commanders, civilian leaders, and intelligence professionals to decide how, when, and where to best employ limited intelligence collection assets, limited exploitation resources, and limited analytic capability to provide tactical warning to senior decision makers. Jack Davis (2007) further makes the point, "Good strategic warning has the potential to enhance both the ability of intelligence analysis to provide tactical warning and the preparedness of government and society to avoid or blunt damage" (p. 176). Effective strategic warning prompts leaders to take preemptive and defensive measures that mitigate the negative consequences of tactical surprise (Davis, 2007, p. 176). Given the difficulties of specifically predicting the date, time, place, and location of an attack (the goals of tactical warning), strategic warning provides an intelligence and policy making backstop by allowing at least some measure of prepared defense against hostile actions by foreign powers.

While strategic warning is important to recognize and plan for future threats, significant issues exist which make effective warning challenging. The national security operating environment is becoming increasingly complex. This point can be made through a comparison of the current security environment with the Cold War Era. During the Cold War, U.S. and Soviet forces were arrayed against each other most directly in Europe although other significant security threats existed between the U.S. and China, North and South Korea, and the various proxy wars the two superpowers fought to gain influence in other areas of

the world. Despite periodic high-tension levels, both sides generally understood the strategy, doctrine, and operational patterns of their adversary. From an indications and warning intelligence standpoint, this allowed the development and refinement of a robust set of indicators which formed the basis for systematic intelligence collection, exploitation, and analysis efforts. In the nuclear arena, the fundamental similarities between the strategies, structures, and operational capabilities of U.S. and Soviet nuclear forces aided in establishing an effective indications and warning system of Soviet strategic nuclear attack against the United States or our allies. In contrast, today, in a world with rising great powers such as China, a more assertive Russia, and a very large number of diffuse threats from terrorist groups, rogue states seeking weapons of mass destruction, and individuals and groups (some state-sponsored and many not) wielding offensive cyber weapons, the number and complexity of threats which warning officers must monitor has significantly increased. Such complexity and uncertainty present a constant potential for error in warning assessments regarding the character, likelihood, and timing of emerging threats (Davis, 2007, p. 174).

Intelligence Challenges

Intelligence officers face countless challenges in providing effective warning for decision makers. Adversaries, recognizing surprise as an important aspect of their strategy, work to maximize their own operational security and conceal their activities from intelligence collection. They have active denial and deception campaigns to mask the true nature of their capabilities and intent from hostile intelligence services. Intelligence officers contend with limited collection

resources and are faced with competition with other competing agencies and intelligence problems. These limit collection of data or can limit or delay the processing and exploitation of that data into raw intelligence. Conversely, these analysts may also experience information overload when intelligence systems produce more intelligence then can be reasonably reviewed, analyzed, and understood.

Policymaker Challenges

Policymakers also face their own set of difficulties formulating national security policy. Senior executive branch officials, especially those with little to no federal government or military experience, may have very limited knowledge of how the US Intelligence Community operates, may fail to understand the strengths and weakness or capabilities and limitations of intelligence, or distrust the agencies or the agencies leaders responsible for providing current intelligence, intelligence estimates, and warning products. Time, especially in crisis scenarios, by definition, is limited. This time constraint, along with the tremendous pressures exerted on senior decision makers in high-stakes situations (like nuclear crises or the initiation of large-scale, regional, conventional military conflict), makes effective, rational decision making difficult. Cognitive factors which limit the processing of large volumes of complex, detailed information under duress pose a challenge. Emotional factors such as surprise, anger, fear, or betrayal can also disrupt an otherwise boundedly rational approach to a national security crisis. Decision makers, in the midst of an international crisis, are faced with numerous other policy distractions. Thus, attention becomes a key factor in maintaining

focus on the most pressing matters before government. Senior government officials are challenged with overcoming normal human cognitive biases when dealing with high-stress, crisis situations. They may not trust the quality of the intelligence presented, may not hold the presenter of critical information in high esteem, might distrust the intelligence agency providing the key intelligence assessment, or worse yet, have a very low opinion of the Intelligence Community writ large. Senior leader understanding of major, historical intelligence failures or embarrassing intelligence failures which have occurred during a current administration's term in office may significantly impact the credibility and therefore the degree of influence warning intelligence has on the policy process. Finally, responding to intelligence warning requires decision makers to take risks. Given varying levels of uncertainty in the intelligence warning assessment, leaders will be faced with the dilemma of taking action that could be considered either an under- or over-reaction. Faulty intelligence can cause leaders to pursue courses of action which exacerbate the problem rather than mitigating or eliminating it. There are always opportunity costs which must be factored in to any decision involving action against a perceived threat. The material and opportunity costs of meeting an international security challenge can be quite high. In the face of such challenges, leaders may become paralyzed and fail to decide and act. They may be pressured into making irrational decisions, may be unable to overcome their initial emotional response to the crisis, or they may rise to the challenge and exercise wise, disciplined, insightful decision making processes to make the best of a difficult, challenging situation.

A final dilemma, inherent in both strategic and tactical warning, but probably more of a problem with tactical warning is the "paradox of warning." Intelligence professionals must warn decision makers far enough in advance of a pending threat (at the appropriate decision point) to allow time for decision makers to deliberate, decide, and act to take effective counter-measures. The paradox involves the element of time. The necessary time horizon decision makers rightly require increases the level of uncertainty in the estimates intelligence professionals provide. If analysts wait to long for more conclusive evidence to arrive, it may be too late to provide decision makers the time to reach a defensive policy decision and implement that decision. Jack Davis (2007) describes this dilemma, "Waiting for evidence that the enemy is at the gate usually fails the timeliness test; prediction of potential crises without hard evidence can fail the credibility test" (p. 174). Additionally, if analysts are overly aggressive and warn decision makers too often of pending threats, leaders become desensitized to pending dangers and accuse intelligence agencies of "crying wolf". This is further exacerbated when events which were the subject of tactical warning do not materialize.

Characteristics and Benefits of Effective Warning

Given the high costs and many challenge to effective warning it is important to point out the characteristics and many benefits of effective warning. James Wirtz (2017), in *Understanding Intelligence Failures,* argues, for warning intelligence to be effective, "analysts and policymakers must both understand the philosophy and methodology that animates indications and warning intelligence"

(p. 113). It is not enough for intelligence professionals to be well versed in the warning intelligence process. Decision makers also have a significant stake in effective warning and, therefore, have a duty to improve their knowledge of warning system capabilities and limitations. "They (decision makers) not only have to comprehend its strengths and limitations, but they also must understand the part they have to play to best utilize indications and warning intelligence to deter or defend against an opponent's pending initiatives" (Wirtz, 2017, p. 113). Effective warning intelligence allows friendly forces to operate at normal, steady-state peacetime levels of readiness. Normal operational tempos are facilitated when confidence in effective strategic and tactical warning is high. Given the fact that heighten military readiness levels are expensive to maintain and not sustainable over long time periods, maintaining an effective, credible warning system allows military leaders to conduct education and training activities, perform routine equipment maintenance, grant leaves, and allow individuals to separate from military service and return to civilian life. Absent an effective warning system, these and other routine, peacetime activities would either not be possible or would entail a much higher level of risk. In terms of avoiding surprise and ensuring adequate defense, Davis highlights the benefits of warning by stating:

> The central analytic task is to peel back substantive uncertainty about the meaning of past developments and the prospects for both pending and future developments that could endanger US interests. Prescient, timely, convincing analysis regarding imminent and potential dangers would then

> be an important force multiplier for US officials by reducing the likelihood, first, of incident surprise and, second, of inadequate defensive preparedness for dealing effectively with high-impact potential threats. (Davis, 2007, p. 175)

For this to work, the warning analysts and decision making relationship must be based on mutual trust. Warning must be credible and intelligence professionals have the burden of effectively communicating, listening, and facilitating leadership decisions and actions to protect against emerging or imminent dangers.

Indications and Warning Intelligence in the Cold War

During the Cold War, the United States and the Soviet Union, along with their respective allies, devoted vast resources to the indications and warning mission. Both sides dedicated personnel, collection systems, data processing, communications systems, and intellectual resources to improve warning capabilities and to perform the day-to-day monitoring mission.

Compared with the intelligence warning challenges the United States faces today, the system was well-defined and well-understood. U.S. and Soviet forces exhibited similar military operational capabilities. The nature of the geostrategic competition between the two superpowers, although uncertain at the beginning of the Cold War, was increasingly evident and understood as the Cold War progressed. Intelligence analysts, decision makers, and academics could conceptualize the most likely and most threatening conflict scenarios in the bi-polar world of U.S. and Soviet ideological and political/military competition. On

the conventional front, the clearest example of a key indications and warning problem involved Soviet and Warsaw Pact forces facing U.S. and NATO forces along the inter-German and German-Czechoslovak border in Central Europe. Both sides had a good understanding of each other's capabilities in terms of military doctrine, force structure, equipment, and training/readiness levels. On the nuclear front, Soviet nuclear planners built a force structure similar to the US structure comprised of a triad of manned strategic bombers, intercontinental ballistic missiles (ICBMs), and nuclear-powered ballistic missile submarines (SSBNs). There were some differences which developed over time (the Soviets placed more emphasis on ICBMs in their force structure and much less emphasis on their manned bomber program than the U.S., while the U.S. developed more advanced technologies in manned bombers and SSBNs), but overall, the similarities in force structure and nuclear strategy[16] allowed both sides to effectively monitor and provide warning of nuclear threats. Large conventional and nuclear force postures facilitated detection of even small changes to overall readiness (Wirtz, 2017, p. 117).

Sustained intelligence collection and analysis over decades allowed analysts to develop a comprehensive understanding of routine operating patterns. Arms control agreements and confidence building measures which both sides adopted facilitated exchanges of military information which shed light on forces, doctrine, and standard operating procedures, increasing transparency. Although

[16] Both the U.S. and U.S.S.R. eventually adopted a strategy of Mutually Assured Destruction (MAD) in which both sides maintained a second-strike capability to hold the other sides' key, high-value targets at risk after an initial first-strike targeting military capabilities. This "balance of fear" helped maintain nuclear peace between the two superpowers.

US and allied technology was superior to Soviet/Warsaw Pact military technology, the use of similar types of weapons systems helped set the parameters for monitoring and understanding each other's military capabilities.

Finally, US indications and warning methodologies improved over time thanks to sustained academic, intelligence, and policy debate over Soviet weapons system procurement decisions, alert postures, and doctrines (Wirtz, 2017, p. 117). Despite the stable and improving prospects for indications and warning intelligence during the Cold War, there were certainly unanswered questions regarding enemy intent and how the other side would react in any given political/military crisis scenario. These questions remain a key challenge for warning officers and policymakers.

Indications and Warning Intelligence Today

The current international security environment is very dynamic in the post-9/11 world and some intelligence professionals believe former warning methodologies may be obsolete in a world of increasingly prevalent and dangerous non-state actors and rogue states. Despite the increasing number of diffuse threats facing the U.S. today, James Wirtz (2017) believes warning intelligence remains a relevant mission for our intelligence community (p. 122). Strategic Warning Intelligence serves to focus policymaker attention on the bigger picture, on the emerging threats that may materialize over the horizon. Threats which the U.S. must act against today by developing strategies to face these future challenges. This systematic focus on long-term study of emerging and existing strategic threats, allows the U.S. to better use all instruments of national power to

address major, international security concerns. It allows decision makers opportunities to develop more flexible response options, as opposed to an "all or nothing" type response to security challenges. Warning Intelligence focuses intelligence collection efforts and serves as a reminder the intelligence community must always seek to overcome deliberate foreign attempts at denial and deception as a mechanism for achieving strategic or tactical surprise against the U.S. Tactical warning intelligence remains valuable although more difficult to get right. Tactical warning intelligence focuses intelligence collection, exploitation and analytic efforts on immediate threats and works well, as long as senior leaders and the American public realize just how difficult it is to accurately predict specific events which adversely impact national security. Although the challenges of predicting specific, tactical-level events is extremely difficult, warning intelligence remains vitally important, as it was during the Cold War, as an analytic methodology for informing our senior political and military decision makers of growing threats of large-scale, conventional, force-on-force attack and nuclear conflict.

The Interaction Between Intelligence Professionals and Policymakers

An effective interface between intelligence and policy is critical for national security planning and execution. Arthur Hulnick (1987) believes "delivering intelligence to the policy system is in many respects as exciting and as important as any component of the intelligence process and therefore merits scholarly attention" (p. 129). The earliest thinkers on this topic in the modern US intelligence system (dating from the establishment of the post-World War II

intelligence community with the National Security Act of 1947), included Sherman Kent, Roger Hilsman and Harry Howe Ransom, who were highly influential in setting the tone of the intelligence-policymaker relationship in the early days of the Central Intelligence Agency. These individuals sought to define the role intelligence plays in the national security policy process (Hulnick, 1987, pp. 129-130). These early intelligence leaders clearly recognized the dilemma intelligence professionals face working with policymakers: intelligence professionals must be close to the policy community to understand the intelligence requirements necessary for effective decision making, but such a close relationship subjects them to being corrupted by that very process. The key issue came down to defining the appropriate level of closeness, the appropriate professional relationship, between intelligence analysts and senior decision makers in government (Hulnick, 1987, p. 130).

The "Traditionalist" School

The traditional view of the relationship between intelligence professionals and policymakers is one of hard separation. Intelligence analysts pride themselves on being unbiased observers and analysts of events and developing issues. They seek to remain above the political fray, to objectively evaluate the facts, free of political or ideological bias. This school advanced the thinking that "…intelligence must distance itself from policy making, reach independent judgements about world events, and avoid tailoring intelligence judgements to satisfy the ideological drive or policy preferences of decision makers" (Hulnick, 1987, p. 130). General William "Wild Bill" Donovan, a key figure in the

establishment of the Central Intelligence Agency, was also an advocate for the clear separation of intelligence and policy. According to Donovan, "intelligence must be independent of the people it serves so that the material it contains will not be slanted or distorted by the views of the people who direct operations." Intelligence professionals must remain focused on their customers' intelligence requirements but should not provide policy advice, recommendations on courses of action, or any type of foreign or defense policy prescriptions. This can sometimes become problematic when objective intelligence seems to point towards limited policy latitude for a given international security problem or from a policy evaluation perspective, paints a dim picture for an existing policy outcome. Such problems can lead analysts to tailor their assessments to curry favor with their political masters. It can also prompt policymakers to exert pressure on analysts to produce intelligence which conforms to their ideological views or preferred policy outcomes, this is known as politicization of intelligence.

Sherman Kent (1972)[17] advocated for a clear delineation between intelligence and policy. He stressed the need for detached objectivity, "It is essential that policymakers get a straight story of how things are working out so that they can judge whether to continue on course or take a different track." Despite his calls for unbiased assessments, Kent called upon analysts to remain knowledgeable of US interests and policy to best serve policymakers with high-quality intelligence products. "Without such knowledge, there is a lack of criteria for selection of developments and their meaningful interpretation." Kent (1949)

[17] Sherman Kent was a legendary CIA analyst. The CIA Center for Intelligence Analysis is named after Sherman Kent.

recognized the relationship with policymakers must be close enough, "to obtain guidance, but must maintain sufficient distance to protect the independence of judgements" (p. 180). Intelligence producers do not have to agree with policy and, in fact, do not have to have an opinion at all, but they must be able to articulate foreign reactions to American policies to better provide insights to US policymakers (Kent, 1972). Both Donovan and Kent were influential in establishing early analytic practices in the Central Intelligence Agency (CIA) and its Directorate of Intelligence and followed this traditional approach in the early days of its existence (1947-1955) (Hulnick, 1987, p. 130).

The "Activist" School

With the passage of time, some intelligence professionals began to recognize the shortcoming of the traditional approach to the intelligence-policymaker relationship. This group believed a symbiotic relationship between these two groups could develop and would result in better intelligence support to decision making. According to Anne Karalekas (1984), the rise of the activist movement among intelligence professionals in the late 1950s was driven by the CIAs concentration on current intelligence production at the expense of more in-depth, long-range intelligence assessments and due to the lack of impact intelligence was having on national security policy making (p. 69). A strong case can also be made that this philosophical change in the intelligence-policymaker relationship resulted in a stronger partnership between these two groups. According to the activist school, policymakers drive the intelligence cycle by stating their intelligence requirements as the first step in the process of producing

finished intelligence products which support decision making. Without close interaction, intelligence officers are "shooting in the dark" concerning their superior's intelligence needs. This does not mean the intelligence output, the analytic judgements, need to be tainted by political or ideological bias. Sherman Kent, an early advocate of the traditionalist school, came to advocate this approach based on his assessment that too great a distance in priorities and mindset had developed between intelligence professionals and policymakers (Davis, 2003, p. 2). Roger Hilsman, another intelligence professional, advocated in the 1950s a much more radical position than the traditionalists. Hilsman believed intelligence analysts should study and better understand the national security policy process as a means of better understanding the effects of their intelligence inputs. Although this seems obvious, he advocated that intelligence should use resources to investigate issues that are meaningful to policymakers and that a feedback mechanism must be built into the system to improve intelligence support to policy making (Hulnick, 1987, p. 131).

CIA Directorate of Intelligence official Carmen Medina argues intelligence and policymaker relationships must evolve to be productive in the 21st century. Medina (2002) argues, "Analytic detachment and neutrality are values bred of the Cold War, when foreign policy observers often compensated for lack of information with ideologically based assertions. Intelligence analysts correctly tried not to do that—they were reliably objective." Contrary to the relationship model developed during the Cold War, analysts now need to become less independent and neutral and more sensitive to tailoring intelligence to

customer (policymaker) requirements. She recognizes the evolving relationship focusing on policymaker needs has led to concern over the historical detachment from policymaking, but she rejects the notion that analysts can be both customer focused and produce neutral analysis. Selecting analytic topics based on consumer interests and analyzing those aspects of various national security problems that are most relevant to policymakers means analysts will become less neutral. She advocates moving away from analysis which focuses on events and developments at the expense of serving the needs of intelligence consumers. Medina believes analysts who act in a completely neutral and independent manner will lead to policymakers declaring intelligence as irrelevant. This is not to say that the shift away from policy neutral analysis means compromising analytic integrity. She believes intelligence must continue to raise issues which are uncomfortable for decision makers in the State or Defense Departments and present information and assessments that are not in sync with policymaker goals. She makes a hard distinction between distant neutrality and analytic integrity:

> Distance from the customer and some near mystical ability to parse the truth completely free from bias or prejudice. Integrity, on the other hand, rests on professional standards and the willingness to provide the most complete answer to a customer's question, even if it is not the answer he wants to hear. (Medina, 2002)

Medina comes down clearly on the side of analysis which impacts policymaking as opposed to analytic detachment in the name of principled objectivity.

The response to Those Advocating a Closer Relationship

With the passage of time and increasing experience, intelligence professionals came to see the need for a hybrid approach and recognized the need for closer relationships between intelligence and policy. Steven Ward responded to Carmen Medina's call for a more revolutionary change in intelligence analysis with his appeal for evolutionary change. He does not dispute that policymakers benefit from intelligence tailored to their needs, which is not a new concept. However, Ward is skeptical that policymakers want a closer relationship with intelligence analysts, "Human nature being what it is, might they not become more jealous and aloof when dealing with policy-related ideas from analysts (secrecy and surprise being valued as much by policymakers in interagency battles as by generals in wartime)?" Ward believes the traditional model in which analysts focus on events and developments directly serves customer needs for information and analysis and this has remained true in the post-9/11 era. He contends that especially in crises driven environments, the need for current situation updates tips the balance, even if only temporarily, in favor of a focus on developments vice conceptual, policy-relevant intelligence products (Ward, 2002).

Impediments to Strong Intelligence-Policy Relationships

Strong intelligence-policy relationships are difficult to forge because intelligence professionals and political leaders are guided by different motivations. Intelligence professionals pride themselves as being apolitical, objective, long-serving, subject matter experts. Intelligence analysts aspire to

remain above the political fray and serve the elected leadership to the very best of their ability regardless of their personal political viewpoints. As military personnel or civil servants, their career progression is fundamentally different than the political leaders they serve. Political leaders, who are directly accountable to the voting public, are goal oriented, ideologically motivated, generally have limited time horizons, and are under immense pressure to succeed. These same traits can be found in the executive and legislative staffs who serve their political masters (Hulnick, 1987, p. 131). Policymakers can form the following attitudes about intelligence:

- Intelligence increases, rather than reduces uncertainty about the world. Intelligence judgements are often ambiguous. Decision makers like clear-cut, definitive intelligence which points them to the most logical, rational policy course of action.
- Policymakers are often ignorant of the collection means, analytic techniques, or bureaucratic processes intelligence professionals use to produce intelligence and reach key analytic judgements.
- Policymakers, may have a relationship with the individual presenting intelligence if they have established a routine intelligence briefing schedule which involves a limited number of intelligence briefers, but they do not know the many individuals involved in collecting, researching, and analyzing the data which go into the final intelligence product they receive. This situation can lead to credibility gaps between intelligence

and political leaders, especially when the intelligence provided does not mesh with the policymakers' pre-conceived ideas.

- Decision makers are flooded with information and can suffer cognitive impairments due to information overload. Many different agencies bring information to bear on any given national security problem and leaders must read, process, understand, and synthesize all this information to develop policy objectives and potential courses of action before arriving at a decision to move forward.

Intelligence professionals have their own set of problems, which may impede a more positive, productive relationship with decision makers. Ideally, intelligence analysts are objective, independent, nonpartisan, and nonideological (Hulnick, 1987, p. 132). General Colin Powell (2012) provided intelligence professionals with the following advice, "Tell me what you know, what you don't know, and tell me what you think…always distinguish which is which." Intelligence officers pride themselves on staying outside the political debate, above the political fray. This philosophy, although seemingly admirable in terms of preserving objectivity, may lead to the following problems in the intelligence-policy relationship according to Hulnick:

- Intelligence analysts (both the individual presenting the intelligence material in a briefing format, as well as intelligence analysts who must often answer written requests for intelligence support) often know very little about the nature and scope of the policy options policymakers are considering. Thus, although aware of the general nature of the national

security problem, they do not have the full context of the situation and this limits the ability of intelligence professionals to fully support the decision making process.

- Intelligence analysis, at its best, separates facts from judgments, makes that difference explicit, and communicates judgments or key findings in terms of confidence levels and/or probabilities. Often, policymakers overlook these subtleties or do not understand the terminology involved in categorizing confidence or probability levels. The intelligence community has recognized this problem and developed more standardized definitions for confidence levels and has worked to better educate policymakers on the meanings of those terms.
- Intelligence products, delivered to customers in written and oral formats, are often produced using standardized templates. These templates guide analysts who are producing the products and help supervisors reviewing the finished intelligence to ensure quality control. Leadership decision making is facilitated by well-produced, standardized intelligence, designed to facilitate quick, efficient presentation of information. Despite these positive attributes, standardization also means intelligence may not be tailored to the style of everyone with a stake in the decision making process. The goal of intelligence is to produce information tailored to decision maker needs. This may not always be possible given the large number of actors involved in the decision process.

- Since most intelligence is produced on a pre-determine time cycle, intelligence products may not be synchronized with decision cycles. Untimely intelligence is irrelevant. Intelligence professionals, especially in the military, work to remain cognizant of the "battle rhythm" and deliberately design intelligence production cycles to ensure intelligence is developed to support specific decisions during the relevant decision window, before the key, pre-determined decision point is reached in the battle rhythm. Although this decision cycle is highly structured, flexibility remains a key component of the intelligence-military leader relationship, as military commanders still demand near real-time intelligence updates when critical events necessitate. Political decisions, in contrast, rarely follow such a pre-determined, disciplined cycle. This complicates the ability of intelligence producers to provide intelligence in a timeframe which is most useful.

Potential Solutions

Given the challenges outlined above, the inherent tension between intelligence professionals and policy makers has probably always existed. With the emergence of a greatly expanded, more centralized, professionalized corps of intelligence officers during the Cold War, the relationship between intelligence analysts and policy makers became a critical factor in the shaping of America's national security policy and how the U.S. managed the many crises of that period. Today, the U.S. faces a myriad of diverse, challenging national security issues. The requirement for improved intelligence-policy maker relationships is greater

than ever. Fortunately, the US Intelligence Community has made progress and is poised to continue improving its relationship with senior military and civilian decision makers. To guide this effort, Arthur Hulnick outlined a series of potential solutions, based on his survey work of professionals in the CIA's Directorate of Intelligence, and recommended the following:

- Analysts should establish and develop close working relationships with their worker-level counterparts in the policy community. This would allow each party to better understand the issues and challenges facing each community. Policy staff members would gain increased respect for intelligence analysts. Such interaction would allow intelligence analysts to further demonstrate their expertise which would contribute to their credibility in the eyes of policy staffers. Policy staff members could better explain the current state of flux in the policy development phase and the status of various issues which could guide improved intelligence analysis and allow for more tailored intelligence production to support decision maker needs.
- Intelligence analysts should educate their policy counterparts on the benefits and limitations, capabilities and challenges of intelligence. The policy side could better educate intelligence analysts on how presentation formats could be improved and how to improve production/delivery timing to better integrate intelligence into the decision making process.

- Finally, a tighter network would facilitate better feedback, at lower levels, concerning the quality and timing of intelligence. This would provide intelligence professionals greater insights on the value of the products they are providing which will aid in determining relevance and facilitate improvements in the intelligence input to policy.

The Intelligence-Policy Relationship Today

Over the past 30 years, intelligence professionals have adopted the recommendations Hulnick suggested. Intelligence analysts work closely with their policy counterparts and members from other staff elements in military organizations. This interaction has led to a better integration between intelligence and operation in the military or intelligence and policy when considering intelligence support to our civilian executive branch or political leadership. Formal intelligence processes, including the basic intelligence cycle, highlight the fact that intelligence is a consumer driven enterprise. Intelligence is not an end in itself. Its sole function is to support decision making. The cycle itself starts with the identification of intelligence requirements derived through direct interaction between intelligence professionals and senior policymakers. The final component of the never-ending intelligence cycle is feedback, which suggests intelligence professionals and policymakers, at least in theory, recognize the need for a continuous process which makes necessary, periodic course corrections. In practice, leaders can be very vocal and are very willing to provide feedback concerning the quality of intelligence they receive. Given the dynamic nature of national security problems, intelligence, and the fact that intelligence and policy

making are human endeavors, the potential will always exist for problems between these two communities.

While the level of interaction between the two communities has improved with time, there are still many misunderstandings regarding what intelligence can and cannot provide in terms of capabilities. Future, sustained, improvement requires active leadership in both the intelligence and policy making communities. Intelligence and policy leaders must continuously develop and execute plans for improving the vital relationships which lead to successful policy implementation based on accurate, timely, relevant intelligence.

Positive interaction between intelligence analysis and decision makers is critical in ensuring accurate current situation assessments. Productive relationships between these two communities allow intelligence professionals to better assess the information needs of policy makers and receive feedback on how they are fulfilling those needs. On the policy side, positive interactions build trust in intelligence institutions and individual analysts. Strong working relationships allow leaders to better understand the capabilities and limitations of intelligence, in what intelligence can provide and what it cannot. Productive relationships improve leadership receptivity towards intelligence in general and intelligence warning more specifically. These concepts are important in analyzing the case studies which follow in chapters 3 and 4. The intersection between intelligence and policy making is the central focus of my theory of current situation assessment. The analysis which follows in the two cases studies will seek to explain the relationship between quality intelligence, leadership receptivity to

intelligence, and interpretation of that intelligence to determine the quality of the current situation assessment leaders made during two Cold War nuclear crises.

CHAPTER 3 – THE CUBAN MISSILE CRISIS

The Cuban Missile Crisis of October 1962 represents the closest the two nuclear superpowers, the United States and the Soviet Union, came to nuclear war. Fortunately for humanity, there was only one known casualty, Major Rudolf Anderson, Jr, a U-2 pilot shot down over Cuba while collecting imagery intelligence on Soviet military activities. The Soviet move to place strategic nuclear weapons in Cuba represented a bold stroke by Soviet First Secretary Khrushchev to quickly and decisively upend the strategic balance of power between the U.S. and the U.S.S.R. The U.S. was aware of the possibility of this Soviet move but US strategic intelligence assessments downplayed this possibility and Soviet leaders denied their intention to place such weapons in Cuba. The initial intelligence evidence of Soviet activities came therefore as a surprise to President Kennedy and his advisors. Soviet leaders estimated the young president was inexperienced and could be forced into accepting the presence of Soviet nuclear weapons in Cuba under the pretext of providing defense against future US military operations designed to overthrow the communist government in power there since 1959. The president felt betrayed when he initially heard the news of the Soviet missile deployments but expertly managed the crisis over 13 dangerous and tense days.

This chapter begins with a relatively brief description of the Cuban Missile Crisis of 1962. While countless, full-length books have been written about this crisis, it is important to provide readers with a short background to offer context for the analysis of warning intelligence, how receptive senior leaders

were towards that intelligence, and how they interpreted it. It begins with Soviet plans to place strategic nuclear weapons in Cuba then follows with a description of how the Soviets accomplished that operation. The next section presents and discusses the warning intelligence President Kennedy and his staff received in the run up to the crisis and during the crisis period from October 16-28, 1962. I will also evaluate the quality of that intelligence based on the Joint Chiefs of Staff (JCS) criteria explained in Chapter 1. The chapter then turns to evaluating how receptive President Kennedy and members of the National Security Council Executive Committee (EXCOMM) were towards the intelligence warning they received. I then discuss how the president and his top advisor evaluated the intelligence to investigate how bias may have influenced their consideration of the intelligence and determine to what degree their interpretation led them to an objective evaluation of the current situation. Finally, in the concluding section, I will evaluate how all the factors mentioned above contributed to forming a clear, accurate assessment of the dire situation these senior leaders confronted.

This chapter argues President Kennedy and the senior leaders assembled in the EXCOMM to manage this crisis made accurate situation assessments. The US Intelligence Community provided quality tactical intelligence which allowed the president and the EXCOMM member to accurately assess the situation each day of the crisis, weigh the pros and cons, risks and benefits of various policy options, and ultimately decide how to proceed to force a Soviet withdrawal of their nuclear forces from Cuba. The president and his senior political and military leaders were receptive towards the intelligence the Central Intelligence Agency

(CIA) and the rest of the US Intelligence Community provided. These leaders interpreted intelligence to reach logical, objective conclusions. Finally, based on all these factors, these senior leaders developed an accurate picture of the current situation which allowed them to successfully devise, select, implement, and monitor the U.S. response to this Soviet challenge. This is not to say everything worked perfectly or the U.S. had a complete understanding of Soviet capabilities and intent. We now know there were several points during the crisis when events at the tactical level came perilously close to immediate, direct confrontation between the U.S. and the Soviet Union.

Key Events

The Cuba Missile Crisis placed President Kennedy and First Secretary Nikita Khrushchev in the unenviable position of making critical decisions on war and peace in the nuclear age with the fate of the world hanging in the balance. This is not hyperbole. President Kennedy believed the odds of nuclear war between the U.S. and U.S.S.R. were "between one-in three and even" and Khrushchev spoke of "the smell of burning in the air" (Allison, In *The Secret Cuban Missile Crisis Documents*, 1994). This 13-day nuclear crisis, the most dangerous period of the Cold War confrontation between the United States and the U.S.S.R. started on Tuesday, October 16, 1962 when President Kennedy was first informed of the secret Soviet military buildup on Cuba. This deployment consisted of the construction of missile sites for Soviet medium and intermediate range ballistic missiles capable of targeting the continental United States, Central America, and much of South America. The Soviets had deployed these missiles

as well as strategic bombers and improved surface-to-air missile systems to guard against a potential US attack on these strategic nuclear sites. The US Government learned of the Soviet deployment from imagery intelligence collected by the U-2 high-altitude reconnaissance program which provided clear, convincing evidence of the Soviet deployment of 48 Medium-range Ballistic Missiles (MRBMs) (range 1,100 nautical miles) and 24 Intermediate-range Ballistic Missiles (IRBMS) (range 2,200 nautical miles) at four deployment sites in Cuba. This deployment surprised the US Government. Up to that point, the Soviets had never stationed nuclear weapons outside the territory of the Soviet Union. However, America's senior leaders and the public realized the potential for such a deployment. The threat of a Soviet military buildup in Cuba was an issue in the 1962 mid-term congressional elections and Kennedy declared the installation of a significant offensive capability, including missile systems, would be "unacceptable" (Allision, In *The Secret Cuban Missile Crisis Documents*, 1994).

Having discovered the secret Soviet activities in Cuba, the central question for President Kennedy and his most trusted advisors on the EXCOMM revolved around defining the US strategy for eliminating the Soviet nuclear threat based in Cuba without precipitating general nuclear war with the Soviet Union. As the Soviets had yet to learn the US Government was aware of their secret operation, the president and his advisors had the benefit of one week to formulate and debate potential courses of action in secret before confronting the Soviets or making their activities in Cuba public. This time proved critical for making sound, informed decisions in an environment, while certainly stressful, which was not subject to

the distractions and potential complications resulting from public or media pressure or additional complicating measures the Soviet could have employed. Initially, the most popular course of action favored by the president and his advisors was to launch precision air strikes targeting the Soviet strategic weapons. In the end, the president decided to use a naval quarantine to block further arms shipments and to pressure the Soviets to peacefully withdraw their missiles and strategic bombers from Cuba. Based on a cost/benefit analysis of other options, President Kennedy and his advisors believed this option had the best chance of forcing the Soviet military withdrawal and reducing the likelihood of provoking war than other potential courses of action.

President Kennedy addressed the nation on the evening of Monday, October 22 to explain the current situation, the gravity of the threat to the United States and our Central/South American neighbors, and the naval quarantine strategy the U.S. would pursue to resolve the crisis. The president increased the alert posture of military forces and warned the Soviets that any attack originating from Cuba would result in a "full retaliatory response" from the United States and unveiled the threat of US nuclear retaliation should the Soviet use any of their new weapons in Cuba.

Over the next week several public and private exchanges took place between President Kennedy and First Secretary Khrushchev to resolve the crisis. The US naval quarantine went into effect on Wednesday, October 24 and many feared war would quickly break out should Soviet ships try to run the blockade. Soviet ships did approach the quarantine demarcation line but stopped dead in the

water which averted an immediate escalation of tensions. On Thursday, October 25, the US Government received a letter from the Soviets proposing a Soviet withdrawal of its strategic forces in return for a US pledge to not invade Cuba in the future. The U.S. received a second letter on Friday, October 26 which added an additional demand, for the U.S. to withdraw its Jupiter nuclear ballistic missiles from Turkey. President Kennedy decided to respond to the first Khrushchev letter while ignoring the second letter. The US Government was not willing to withdraw missiles from Turkey under the threat of Soviet blackmail. The crisis escalated on Saturday, October 27 when the Soviets fired a surface-to-air missile from Cuba which downed a US U-2 flying an aerial imagery intelligence collection mission. This event increased the pressure on President Kennedy within the EXCOMM to strike the extensive air defense system the Soviets had built on Cuba. The president decided to raise the stakes and demanded Khrushchev immediately announce the withdrawal of Soviet nuclear missiles from Cuba or the U.S. was prepared to take military action to eliminate them by force. Saturday, October 27 turned out to be the most frightening day of the crisis. The next meeting for the EXCOMM was scheduled for the morning of Sunday, October28. Most members of the EXCOMM expected Kennedy to authorize immediate air strikes against the Soviet air defense systems, nuclear capable missiles, and strategic bombers in Cuba. The anticipated Soviet response was an attack against the Jupiter missiles in Turkey, a Soviet move against the western allies in Berlin, or aggression against a US ally in some other part of the

world. Known as "Black Saturday" many of the EXCOMM officials doubted whether they and the rest of the world would survive the coming week.

As the crisis peaked, Khrushchev announced on Sunday, October 28 at 09:00 a.m., via message from Radio Moscow, that the Soviet missiles would be withdrawn from Cuba.

The U.S. had to act cautiously during the crisis. American intelligence was uncertain if the Soviets had delivered nuclear warheads to Cuba, a question not definitively answered until 1992 when Soviet sources confirmed nuclear warheads were in Cuba during the crises.[18]

The Context

To better understand this crisis, it is important to discuss the underlying context of the situation which allows greater insights into the motivation of the Soviets for placing missiles in Cuba and for the US response to this crisis. The overarching context, of course, was the Cold War, but more specifically both the U.S. and the Soviet Union sought to regain the initiative in the strategic completion for power which both sides believed they had lost. President Kennedy believed the U.S. had fallen behind the Soviets, especially in the late 1950s, based

[18] Soviet nuclear weapons were in Cuba for 59 days from October 4 – December 1, 1962. Eighty warheads were available for land-based cruises missiles, 12 for short-range FROG ballistic missiles, and 6 nuclear bombs for the IL-28 bombers. Additionally, 36 warheads for the (SS-4/R-12) missiles had arrived in Cuba on October 4 and were loaded for the return trip to the Soviet Union onto a Soviet ship (Aleksandrovsk) at Mariel between October 30-November 3 which departed Cuba on November 3, 1962. Twenty-four warheads from the SS-5/R-14) missiles arrived in Cuba on October 25 but were never unloaded from the Aleksandrovsk before the ship departed Cuba on November 3 for their return trip to the Soviet Union. (Last Nuclear Weapons Left Cuba in December 1962, 2013).

on Soviet triumphs in the space race. The Soviets had tested the world's first Intercontinental Ballistic Missiles (ICBM) in August 1957 and launched the world's first satellite into orbit in October 1957. Khrushchev repeatedly boasted his nation's factories "were turning out missiles like sausages" (Thielmann, 2011). President Kennedy ran his 1960 presidential campaign partially based on the fear of a Soviet "bomber gap" and a "missile gap", claiming erroneously the United States had fallen behind the Soviets in nuclear capability (Brugioni, 1991, pp. 9 and 54).[19] The Soviets were actively subverting governments in Southeast Asia and in the Caribbean. The new American president clearly signaled in his inaugural address that a new generation of Americans was prepared to take on the Soviet challenge in both the nuclear and unconventional warfare domains (Kennedy, 1961).

Khrushchev, for his part, was also working to gain strategic advantage over the United States. He expressed his support for "wars of national liberation" as a means of spreading communist ideology,[20] which Kennedy interpreted as a declaration of war in the third world.[21] Although Castro had come to power in January 1959, under President Eisenhower's watch, President Kennedy and his brother Robert saw the Cuban consolidation of power and its growing alliance

[19] Additional information on the alleged bomber gap can be found in Brugioni, 1991, pp. 24, 32, and 51.
[20] Khrushchev outlined his views on wars of national liberation in a speech on January 6, 1961. See "Analysis of the Khrushchev Speech of January 6, 1961," Hearing before the Subcommittee to Investigate the Administration of the Internal Security Act and Internal Security Law of the Committee on the Judiciary, United States Senate, 87th Congress, First Session, June 10, 1961 at https://www.cia.gov/library/readingroom/docs/1961-06-16.pdf, pp. 35, 38, 41, and 69.
[21] Kennedy addressed the Soviet threat in the Third World using soft power instruments of national power via initiatives such as the Peace Corps and his support for US military special operations forces.

with the Soviet Union as a direct threat to the U.S. which they could not tolerate. President Eisenhower had also shared this antipathy toward the new regime in Cuba and worked up a plan for Cuban exiles to invade the island to overthrow the new dictator, Fidel Castro. President Kennedy inherited this flawed plan, and early into his presidency, in April 1961, decided to execute it to rid the Caribbean of the Soviet sponsored communist government. After the failure of the Bay of Pigs Invasion, Kennedy continued his plan which focused on assassination plots against Fidel Castro and other acts of subversion against the communist government in Cuba (U.S. Department of State, The Bay of Pigs Invasion and its Aftermath, April 1961-October 1962).

Following Castro's consolidation of power after the revolution, he turned to the Soviet Union to form a relationship which included political and military support. President Eisenhower, and later President Kennedy, feared the Soviet Union might exploit Cuba's geographic position near the US mainland as a future military base. Seizing on the fall of Cuba to the communists and the perceived US scientific, technical, and strategic nuclear inferiority, the Kennedy campaign used these developments in the 1960 presidential campaign against republican nominee Richard Nixon. With President Kennedy's victory in the November 1960 election and his January 1961 inauguration, the myth of the missile and bomber gap Kennedy claimed in the presidential election was quickly busted. The U.S. had been systematically collecting intelligence using the U-2 from July 4, 1956 until May 1, 1960 and had launched the world's first space-based imagery reconnaissance satellite, Corona, in August 1960 (Clausen & Miller, 2012, p. 1).

These two programs provided the Eisenhower Administration and now the Kennedy Administration, accurate, comprehensive intelligence assessments of the Soviet nuclear arsenal facing the United States and our allies. In reality, the Soviets had only 44 operational intercontinental nuclear weapons poised to attack the United States during the Cuban Missile Crisis (Allison, In *The Secret Cuban Missile Crisis Documents*, 1994).[22] Kennedy learned Khrushchev had been routinely lying about Soviet nuclear capabilities as a means of masking their stark, relative weakness compared with US nuclear capabilities. Despite clear nuclear superiority, President Kennedy further expanded the US nuclear arsenal which Eisenhower had rapidly grown under his nuclear strategy of "Massive Retaliation". According to Graham Allison, by late 1961, prior to the October 1962 Cuban Missile Crisis, the U.S. was deliberately communicating the fact that the Soviets were the ones facing a missile gap with the United States (Allision, In *The Secret Cuban Missile Crisis Documents*, 1994). By late 1962, during the crisis, the U.S. possessed such overwhelming nuclear superiority, that it was capable of a "successful" nuclear first-strike against the Soviet Union while the Soviets were probably not capable of launching a counter-strike against the U.S. given their very limited nuclear capabilities.

A final component in detailing the strategic context of the Cuban Missile Crisis involves exploring Soviet intentions. The EXCOMM explored this issue at

[22] According to Graham Allision, at the time of the Cuban Missile Crisis, US intelligence estimated the Soviets possessed 75 operational ICBMs. Subsequent intelligence indicated the Soviets only had 44 operational ICBMs. More recent information suggests the Soviets were not confident in that small number of missiles (Allison, In *The Secret Cuban Missile Crisis Documents*,1994).

their first meeting and defined the following five hypotheses as an attempt to explain the Soviet offensive nuclear weapons deployment to Cuba:[23]

- Bargaining Barter – The Soviets intended to use the removal of missiles from Cuba as a bargaining chip to trade for US withdrawal of nuclear missiles from Turkey, concessions regarding the allied occupation of West Berlin, or some other important international issue.
- Diverting Trap – The Soviets were using the Cuban crisis as a diversion to draw US attention and divert US military power towards Cuba, which would then allow the Soviets to move against Berlin or some other area of concern. There was precedent for this type of diversion. While the U.S. and the West were focused in 1956 on the Suez Crisis, the Soviets and their Warsaw Pact allies invaded Hungary to put down the civil revolt against the communist government.
- Cuban Defense – Fearing a follow-on invasion from the U.S. against Cuba, the Soviet Union decided to take concrete action to defend the Castro regime from future US aggression and preserve this bastion of communism in the Western Hemisphere in violation of the Monroe Doctrine.
- Cold War Politics – The Soviets wanted to test the new US president's resolve/determination. If Kennedy failed the test to stand up to this Soviet challenge, they could exploit their success for propaganda purposes and

[23] As summarized by Allison in his introduction to the *Secret Cuban Missile Crisis Documents, p. viii*.

then go on to challenge U.S. and Western interests in other parts of the world to build upon their achievement in Cuba.

- Missile Power – The Soviets, realizing the Americans had called their bluff regarding the non-existent "missile gap", were placing nuclear weapons in Cuba to quickly and decisively correct the now clear nuclear imbalance between the Soviet Union and the U.S. Additionally, Soviet missiles in Cuba posed immediate nuclear missile warning challenges for the U.S., significantly reducing the warning time available for the US president and other national leaders in a nuclear launch against the U.S. from Cuba.

The EXCOMM analyzed each of these motivational hypotheses detailing the pros and cons of each approach based on the intelligence available at the time.

The EXCOMM rejected the Cuban Defense option because they believed the Soviet could have guaranteed Cuba's territorial integrity and political sovereignty at a much lower risk than through the introduction of strategic nuclear weapons so close to the United States. Conventional defense of the island by conventional means would have been possible at a much lower risk.

Khrushchev, in his memoirs, points to his belief the Americans were intent on making a second attempt to invade Cuba to topple Castro's government. According to Allison, Soviet information points to many possible explanations regarding their motivation. Soviet leaders who were close to Khrushchev believed his impulsive decision making style, which did not consider a full assessment of the risks associated with different courses of action, may have led

to his decision to deploy the missiles in Cuba. Another Soviet theory details Khrushchev's realization, during a trip to Crimea, that US nuclear missiles were stationed just across the Black Sea in Turkey, perilously close to Soviet territory. Khrushchev wanted to answer that provocation with a similar deployment to Cuba. A final potential explanation suggests Khrushchev was heavily influenced by senior leaders of the Soviet Strategic Rocket Forces to undertake the Cuban missile deployment to shift the strategic nuclear equation in the Soviet's favor.

President Kennedy and his EXCOMM advisors were not certain of Khrushchev's motivation but, after initial debate, were resolved to remove this new threat to US and hemispheric security either diplomatically or by military force. The president and the EXCOMM recognized the importance of current, tactical intelligence as they formulated policy and shaped the US reaction to the crisis. The following section details the sources of US strategic and tactical intelligence on the Soviet nuclear deployment in Cuba and assesses the quality of warning intelligence the US Intelligence Community provided the president and the EXCOMM.

Warning Intelligence Quality

Intelligence Sources

US intelligence on the Soviet offensive nuclear weapon deployment to Cuba was based on both human intelligence sources and technical collection systems. Intelligence for human sources was often discounted as unreliable while intelligence from imagery sensors was regarded as more accurate and definitive.

Specifically, US intelligence on Soviet activities in Cuba came from four key sources: shipping intelligence, refugees, agents within Cuba, and U-2 photo reconnaissance overflights (Allison and Zelikow, 1999, p. 219). Each of these sources will be explored in the following section.

Shipping Intelligence - The Office of Naval Intelligence (ONI) systematically collected and analyzed intelligence on Soviet and Soviet Bloc ships transiting from the U.S.S.R. to Cuba. The ONI catalogued the number of ships, their size, registry, and the fact that several large-hatch ships were being used to transport military equipment to Cuba. The Soviets used large-hatch ships in their timber industry and re-purposed them to ship large, MRBM and IRBM[24] missiles to Cuba. The nature of their cargo was closely tracked and included electronic, transport, and construction equipment; surface-to-air missiles; MiG fighter jets; patrol boats; and Soviet technicians. The US Navy routinely tracked and photographed these ships as part of the intelligence collection effort. Photo interpreters who analyzed this imagery developed a new analytic technique, dubbed "crateology", in which they could determine the type of equipment in each of the crates aboard a ship based on the crate's size and unique shape (Allison and Zelikow, 1999, p. 220).

Refugees - Refugees from Cuba were a second major source of intelligence. The flow of refugee reporting was so great the intelligence community established an inter-agency debriefing center in Opa Locka, Florida

[24] Medium-range Ballistic Missile (MRBM) and Intermediate-range Ballistic Missile (IRBM)

which collected and correlated refugee interrogation reporting. This reporting was used to build a target set for later imagery reconnaissance collection but the value of the refuge reporting itself was deemed of marginal value given the large number of distorted, inaccurate reports. Many of the reports included sightings of Soviet missiles but the US Intelligence Community assessed their validity as low (Allison and Zelikow, 1999, p. 220).

Agents - The third source of intelligence was a CIA network of agents who passed the US Government intelligence based on their access to sensitive information in the Cuban government. Cuban agents would obtain information, write up their reports using secret techniques to mask the information and their identities and then mail the reports to a third-country address outside Cuba and the United States. The CIA would pick up the reports and send them back to Langley for processing and analysis. Some of these reports proved valuable. One described a large area in western Cuba under heavy Soviet guard and identified a specific location where missile work was in progress. The date of information in the report was September 7, it was mailed on September 15, and CIA distributed it on September 18 (Allison and Zelikow, 1999, p. 220-221). Another agent report concerned a conversation with Fidel Castro's personal pilot. The pilot detailed coastal defenses, radars, surface-to-air missile systems, and ballistic missile launch equipment. This reporting was from an observation on September 9 and was distributed by CIA on September 20. This type of human intelligence reporting was valuable, and CIA used it to develop the imagery target list which

would ultimately lead to the discovery of missiles on the October 14 U-2 mission (Allison and Zelikow, 1999, p. 221).

Photo Reconnaissance - Airborne photo reconnaissance was the most prolific and most reliable source of intelligence. The development of the U-2 aircraft was a true triumph of science and technology and a testament to the leadership of President Eisenhower and many in his administration who had the insight to see the need for such an extraordinary capability. The U.S. began flying the U-2 in 1956, and at an altitude of 70,000 feet, the aircraft was safe from Soviet surface-to-air missile and jet fighter attack at that time. The aircraft contained multiple, conventional, wet-film, high resolution cameras which could distinguish objects just a few feet apart from an altitude of 14 miles. It could also image large swaths of territory using panoramic cameras up to 100 miles on each side of the aircraft to provide broad area coverage. Each mission produced thousands of feet of film which CIA and US Air Force intelligence professionals processed, exploited, and reported on after each mission. During the Cuban Missile Crisis, this work was largely done at the CIA's National Photographic Intelligence Center (NPIC), directed by Arthur Lundahl, using a team of imagery analysts from several US Intelligence Community agencies. The amount of film that required processing during peak periods of the crisis was staggering. For example, on October 18, six U-2 missions were flown against Cuba which produced 28,000 linear feet (5.3 miles) of film. NPIC analysts kept up with the flow and could interpret and report on that amount of data in about one day (Allison and Zelikow, 1999, p. 222). Unfortunately, no U-2 flights were

undertaken over the western part of Cuba between September 5 and October 4 and it took until October 14 for a U-2 to fly over that part of Cuba to discover Soviet offensive missiles.[25]

Strategic Intelligence and Warning

The September 1962 Special National Intelligence Estimate. The Special National Intelligence Estimate (SNIE),[26] *The Military Buildup in Cuba*, of September 19, 1962 was written to "assess the strategic and political significance of the recent military buildup in Cuba and of the possible future development of additional military capabilities there" (CIA, *Military Buildup in Cuba*, 1962, p. 1). US Intelligence Community analysts believed the main Soviet interest in Cuba was political and the primary motivation of the Soviet Union in providing military assistance to Cuba was to fortify the government against US attempts to change the communist regime by force. The Soviets were working to deter any repeat of prior US-sponsored military intervention to overthrow Castro. The US intelligence estimate cautions that any Soviet attempts to turn Cuba into an offensive military base of operations might provoke US military intervention and defeat their purpose of supporting Castro. This proved to be a grossly inaccurate assessment of Soviet intentions. The first Soviet nuclear missiles had reached Cuba on September 8, 11 days before this assessment was published on September 19. On a more accurate note, the National Intelligence Estimate (NIE)

[25] See McCone, February 27, 1963, Memorandum on U-2 Overflights of Cuba, 29 August through 14 October 1962 in The Secret Cuban Missile Crisis Documents, pp. 127-137 for additional information on the timing of U-2 overflights of Cuba.
[26] A National Intelligence Estimate is a strategic intelligence product coordinated across the US Intelligence Community and is a sophisticated, all-source, finished intelligence product the community produces for senior-level US Government decision makers.

did highlight as one of its five conclusions that Soviet use of Cuba for offensive strategic purposes was not out of the question. The report stated, "The U.S.S.R. could derive considerable military advantage from the establishment of Soviet medium and intermediate range ballistic missiles in Cuba, or from the establishment of a Soviet submarine base there" (CIA, *Military Buildup in Cuba*, 1962, p. 2). The report cites a submarine base as being the most likely option. That proved to be untrue. Although Khrushchev had a strong desire to build a Soviet nuclear submarine base in Cuba, he thought such a move, at such an early stage in the Soviet-Cuban relationship would be too difficult to conceal from American intelligence. A key failure in this National Intelligence Estimate is in its assessment of Soviet intent. The estimate states, "Either development (deployment of nuclear missiles or submarine base construction), however, would be incompatible with Soviet practice to date and with Soviet policy as we presently estimate it" (CIA, *Military Buildup in Cuba*, 1962, p. 2). While it was factually true the Soviets had never deployed nuclear missiles systems outside the Soviet Union prior to this crisis, this judgment represents a failure to creatively assess the various possible motivations the Soviet Union would have for making such a bold geopolitical move. The estimate went on to highlight the level of risk such a move would entail. "It would indicate a far great willingness to increase the level of risk in U.S.-Soviet relations than the U.S.S.R. has display thus far" (CIA, *Military Buildup in Cuba*, 1962, p. 2). This statement is certainly true and further demonstrates how US intelligence analysts discounted the possibility of a Soviet offensive nuclear deployment to Cuba. Ironically, that is exactly what was

happening at the time this assessment was being written, completely unbeknownst to the authors.

The President's Foreign Intelligence Advisory Board report. On February 4, 1963, three months after the crisis, the President's Foreign Intelligence Advisory Board (PFIAB) released a Top Secret assessment of intelligence regarding the Soviet military buildup in Cuba. The PFIAB's mission was to determine what lessons could be learned based on its assessment of how the various US foreign intelligence services performed prior to and during the crisis. The report is organized into main sections beginning with the post-October 14 phase (the date the U-2 first imaged the missile sites) and includes the period between missile discovery and the president's televised address to the nation on October 22. The much longer section of the report covered the pre-crisis phase prior to October 14. Additionally, the PFIAB report is organized around three critical components of the US intelligence cycle: intelligence collection, intelligence analysis, and production and dissemination of intelligence in support of policy formulation and operational requirements.

The PFIAB report is critical of US strategic intelligence warning efforts prior to the U-2 missile discovery on October 14, 1962. The report criticizes the US Intelligence Community for not being more effective in collecting adequate, timely intelligence regarding the "nature and scope" of Soviet military activities in Cuba over the many months of their buildup prior to the crisis. Additionally, the report cites the intelligence community's failure to exploit existing intelligence which had been collected and using that data to better estimate Soviet

and Cuban plans and intentions (Killian, *President's Foreign Intelligence Advisory Board* [PFIAB] *Report*, "Soviet Military Buildup in Cuba", 1963, p. 2).

Intelligence Collection. The PFIAB reported two major areas of intelligence collection in which the US could have performed better work to provide strategic intelligence warning: 1) clandestine agent coverage, also known as human intelligence, and 2) aerial photographic surveillance, known as imagery intelligence (Killian, *PFIAB Report*, 1963, p. 2). In contrast to the overall positive appraisal of the role imagery intelligence played providing tactical warning during the actual crisis, the PFIAB determined the US Intelligence Community failed to full capitalize on US imagery intelligence capabilities to provide strategic warning during the critical Soviet buildup period in September and early October 1962. The report conceded bad weather played a role in September in the cancellation of some U-2 missions but also cited a nine-day U-2 stand down from September 8-16 which adversely impacted the ability to monitor Soviet military developments. The stand down resulted from a decision to suspend the flights after a Taiwanese U-2 had gone down over mainland China on September 8. After the suspension was lifted, the CIA failed to intensify U-2 operations over Cuba in the face of mounting intelligence warning indicators pointing towards significantly increased Soviet military activity (Killian, *PFIAB Report*, 1963, p. 3). These CIA and other intelligence community members

believed a policy had been put into place which prohibited the U-2 from overflying areas covered by Soviet SA-2 missile systems.[27]

A further complicating factor with the U-2 coverage of Cuba concerned State Department uneasiness regarding preservation of US international legal rights and the need to fly future reconnaissance missions in international airspace. This came to light when on September 10, the CIA proposed to the Special Group a U-2 mission which would collect intelligence in international airspace and directly overfly Cuba. The Secretary of State objected to this proposal believing if the U-2 were lost over Cuban territory, it would jeopardize future US claims to conduct aerial reconnaissance in international airspace. The Secretary of State proposed a compromise to break this single mission into four separate missions (two in international airspace and two overlying Cuban territory). Further exacerbating the intelligence collection problem was a CIA weather constraint which allowed overflights only if the target area was less than 25 percent overcast. These two issues (the requirement to fly four separate missions and the poor weather) further limited U-2 coverage of Cuba in September (Killian, *PFIAB Report*, 1963, p. 4). The first successful mission was not flown until September 26 (Killian, *PFIAB Report*, 1963, p. 4). The PFIAB criticized the fact that the Special Group was not made aware of these difficulties which might have enabled it to modify their policies regarding U-2 flights during this heighten period requiring additional imagery collection.

[27] The SA-2 surface-to-air missile system was the same system the Soviets used to shot down the U-2 Francis Gary Powers was flying on May 1, 1960 over the Soviet Union.

The PFIAB report exonerated President Kennedy of any role in limiting the U-2 flights by stating, "The President granted authorization for all U-2 flights which were recommended to him by his policy advisers on the Special Group[28] having responsibility for such matters" (Killian, *PFIAB Report*, 1963, p. 3). Likewise, the Special Group was also exonerated and did not limit U-2 overflights; they approved every U-2 mission proposed (Killian, *PFIAB Report*, 1963, p. 3). Finally, the PFIAB could not find any evidence that a policy which prohibited U-2 flights over areas defended with SA-2s existed, despite beliefs within the US Intelligence Community to the contrary (Killian, *PFIAB Report*, 1963, p. 4).

It took until October 3 for the US Intelligence Community to start pressing the Special Group for more robust U-2 imagery intelligence collection efforts.[29] Although the threat was increasing during the period prior to October 3 and the community's ability to collect human intelligence (via returning travelers from Cuba, foreign diplomats, and refugees), and signals intelligence was inadequate, these factors were not enough to motivate US intelligence leaders to request

[28] The Special Group was originally formed in the Eisenhower Administration as a mechanism for coordinating covert operations. After the Bay of Pigs failure, this group evolved to include more senior-level national security officials with greater responsibility for planning and reviewing covert operations. President Kennedy's National Security Advisor, McGeorge Bundy chaired the meetings and the group included the Deputy Under Secretary of State, Deputy Secretary of Defense, the Director of Central Intelligence, and the Chairman of the Joint Chiefs of Staff. The DCI was responsible for submitting CIA covert action proposals to the group. President Kennedy also established Special Groups to coordinate activities related to overthrowing the Castro government (Operation Mongoose) and to prevent and combat subversive insurgencies against friendly governments (Foreign Relations of the United States, 1964-1968, Volume XII, Note on U.S. Covert Actions).

[29] DIA took the lead in pressing for the additional U-2 coverage (Killian, *PFIAB Report*, 1963, p. 3).

increased imagery intelligence collection via the U-2 program (Killian, *PFIAB Report*, 1963, pp. 3-4).

Regarding low-level tactical imagery collection, the Director of Central Intelligence, John McCone proposed low-level imagery reconnaissance in August and September. When the Special Group considered this proposal on September 14, the Secretary of Defense, probably concerned about the risk to US aircrew members and aircraft, indicated his desire to wait for the results of the U-2 missions before undertaking the more dangerous tactical reconnaissance flights. The PFIAB credited the defense secretary with using this wise logic but criticized the Special Group for not reexamining the situation in light of the limited U-2 coverage and not considering the low-level reconnaissance option to fill gaps in the limited U-2 collection. No low-level flights were made over Cuba until October 23 (Killian, *PFIAB Report*, 1963, p. 5).

Intelligence Analysis. The PFIAB cited the need for improved processes in producing National Intelligence Estimates and current intelligence analysis. The board was especially critical of the September 19, National Intelligence Estimate titled *The Military Buildup in Cuba*, and concluded "the President and policy-advisory officials were ill served by this assessment of Soviet intentions regarding Cuba." The key point of contention was the estimate's conclusion that "the establishment of Soviet medium and intermediate range ballistic missiles in Cuba would be inconsistent with Soviet practices to date and with Soviet policy as the community then assessed it" (Killian, *PFIAB Report,* 1963, p. 5). The ultimate irony lies in the fact that the intelligence community arrived at this

wildly inaccurate conclusion at the very time the Soviet were installing their nuclear missile systems in Cuba. The report cited three main reasons for this analytic judgment failure:

1) The lack of adequate intelligence coverage of Cuba
2) The rigor with which the view was held that the Soviet Union would not assume the risks entailed in establishing nuclear striking forces on Cuban soil
3) The absence of an imaginative appraisal of the intelligence indicators which, although limited in number, were contained in reports disseminated by our intelligence agencies (Killian, *PFIAB Report*, 1963, p. 5)

The board further criticized the intelligence community's analytic effort prior to the crisis. More specifically the board faulted the community in its analysis of intelligence indicators and production of current intelligence reports which failed to inform key US Government officials of the types of activities the Soviets were conducting on Cuba in the months prior to confirmation of missiles on October 15. The report highlights the gravity of strategic surprise, the avoidance of which is the key mission of intelligence agencies, which befell the US senior leadership at the onset of this crisis.

> We believe that the near-total intelligence surprise experienced by the United States with respect to the introduction and deployment of Soviet strategic missiles in Cuba resulted in a large part from a malfunction of the analytic process by which intelligence indicators are assessed and reported. This malfunction diminished the effectiveness of policy

advisers, national intelligence estimators, and civilian and military officers having command responsibilities. (Killian, *PFIAB Report*, 1963, p. 6)

The PFIAB study stated the way intelligence indicators were handled in the Cuba situation may have been the "most serious flaw in our intelligence system, and one which, if uncorrected, could lead to the gravest consequences" (Killian, *PFIAB Report*, 1963, p. 6). The failure of the US indications and warning system had three major consequences from a policy maker perspective:

1) The US Government was not provided the early warning of hostile intentions and capabilities which should have been derived from the indicators contained in the available intelligence.
2) The President and his senior advisors were not provided meaningful, cumulative assessments of the available intelligence indicators. If the intelligence community had systematically prepared and periodically presented compilations of accumulated indicators, policy makers could have considered appropriate courses of action in response to those developments. The board faulted the intelligence community for providing select raw intelligence reporting to White House staff members vice finished analysis. The significance of the increasingly alarming indicators was not communicated to the President.
3) The intelligence community, despite the mounting shift in indicators regarding the Soviet military buildup in Cuba, failed to revise the erroneous National Intelligence Estimate of September 19 (Killian, *PFIAB Report*, 1963, pp. 6-7).

Specifically, the board faulted US intelligence for failing to assess the nature of the Soviet military buildup in Cuba given the mounting intelligence which pointed to an increasingly threatening situation for the U.S. US indications and warning analysts had intelligence which pointed to various aspects of the build-up including:

- The presence in Cuba of high-ranking Soviet military officials who specialized in military construction, engineering, electronics, jet pilot training, surface-to-air missile defenses and Soviet long-range air and strategic strike forces
- Soviet specialists in rocketry and atomic arms
- Statements made by senior Castro regime officials about expectation of a nuclear delivery capability would be established in Cuba
- Sightings by ground observers of offensive missiles deployed under strict Soviet control and constructed with great secrecy
- The increasing scale of Soviet troops, arms, and military equipment and materiel in large volumes and maintained under strict secrecy
- A significant increase in the amount of Soviet-bloc ships entering Cuba (from 30 arrivals/month from January-July 1962 to 67 arrivals in September 1962) (Killian, *PFIAB Report*, 1963, pp. 7-8).

Despite this intelligence, US intelligence analysts failed to see how this information pointed to the induction of Soviet nuclear weapons systems in Cuba prior to obtaining definitive photographic evidence from the October 14, 1962 U-2 mission. The PFIAB recommended a "further and exhaustive examination" of

the complex task of assessing intelligence indicators, across the entire intelligence community (Killian, *PFIAB Report*, 1963, p. 7).

Intelligence Reporting. The President's Foreign Intelligence Advisory Board concluded restrictions placed on the publication and dissemination of reports were often "misinterpreted or misapplied" and this restricted the flow of important information (Killian, *PFIAB Report*, 1963, p. 8).

The following is an example of a restriction based within the intelligence community that was a critical error that contributed to the strategic surprise the U.S. faced on October 15. The CIA Director instructed his analysts, as of May 1962, to verify order of battle information derived from human intelligence reporting using imagery intelligence from the NPIC. The CIA Director did not have high confidence in the accuracy of reports from refugees and agents and sought to confirm the number and type of Soviet and Cuban military equipment using a more objective source, imagery intelligence. CIA analysis interpreted this directive to mean order of battle information could *not* be reported unless it was verified via imagery from NPIC. As increasing intelligence evidence mounted of the Soviet build-up in Cuba, CIA analysts did not publish that material, not even in the President's Daily Checklist, his daily current intelligence summary, in the lead up to the crisis (Killian, *PFIAB Report*, 1963, p. 8).

President Kennedy also contributed to this problem when he imposed his own restrictions on the publication of intelligence related to offensive weapons in Cuba on August 31. The PFIAB report goes on to emphasize, "On October 9 these instructions were reiterated by the President who emphasized the

importance of maintaining the tightest possible control of all information relating to offensive weapons" (Killian, *PFIAB Report*, 1963, p. 8). To further clarify the President's instructions, he did not seek to impose limitations on the collection and analysis of offensive weapons in Cuba and he emphasized all such intelligence should be collected, analyzed, and quickly reported to officials with a need-to-know. However, these instructions were interpreted to mean no intelligence assessment were allowed in print on this topic in any intelligence publication. Although the Director of Central Intelligence exempted the President's Intelligence Checklist from this prohibition, the source materials for this publication were subject to the restriction and thus the President's Daily Checklist authors were choked off from reporting on the Soviet military buildup on Cuba (Killian, *PFIAB Report*, 1963, pp. 8-9).

The PFIAB's conclusion on presidential involvement on restricting intelligence publication is generous to President Kennedy calling the decision "clearly wise, necessary and essential to the national interest" (Killian, *PFIAB Report*, 1963, p. 9). However, it did concede that the misinterpretations of restrictions did endanger the necessary information flow and suggested that future, more secure lines of communication should be established to provide decision makers with critical, sensitive intelligence material (Killian, *PFIAB Report*, 1963, p. 9).

Director of Central Intelligence, John McCone's response to the PFIAB findings. Based on what John Mc Cone perceived to be as excessive criticisms of the CIA, especially in the period prior to the discovery of the Soviet

missiles in Cuba, the Director of Central Intelligence (DCI) responded to the PFIAB's findings in a memo he sent the president on February 28, 1963. The DCI pointed out the reluctance of Special Group members to authorize overflight of Cuba after surface-to-air missiles were discovered. This caution was fueled by memories of the Francis Gary Powers U-2 shootdown over the Soviet Union on May 1, 1960, the recent loss of a Taiwanese U-2 over mainland China, and a U-2 incursion of Soviet airspace near Sakhalin Island in early September 1962 (J. McCone, Memorandum for the President, February 28, 1963, p. 1). McCone pushed back against those who in retrospect believed the US Intelligence Community failed to move with the proper sense of urgency in stepping up U-2 flights given the SA-2 threat on Cuba and the past incidents referenced above.

Regarding the quality of analysis, the US Government provided during the crises, McCone believed that intelligence and other analysts were "so convinced that the Soviets would not accept the inevitable confrontation resulting from placement of offensive missiles in Cuba, that they were inclined to dismiss such evidence as there was to the contrary." McCone stated the intelligence community had been inundated with many reports of missiles in Cuba over the previous two years, all of which proved to be incorrect until September 20, 1963. The large number of reports may have de-sensitized the intelligence community and deepened skepticism among analysts toward the potential Soviet missile deployment. Yet, McCone contended the US Intelligence Community performed well (J. McCone, Memorandum for the President, February 28, 1963, p. 2).

McCone performed his own after-action study, at President Kennedy's request, on the performance of the US Intelligence Community which he made available to the PFIAB. McCone stated he believed his study reflected "a more reasonable judgement of the performance of the intelligence community in the six months' period prior to the October crisis" (J. McCone, Memorandum for the President, February 28, 1963, p. 2). The following summarizes DCI McCone's 10 conclusions regarding intelligence quality, which he forwarded to President Kennedy as an attachment to his February 28, 1963 letter:

1. Despite some need for improvement in intelligence collection and processing, the US Intelligence Community operated "extensively and well" during the Cuba Crisis. "Every major weapon system introduced into Cuba by the Soviets was detected, identified, and reported (with respect to numbers, location and operational characteristics) before any one of these systems attained an operational capability."
2. There was a very narrow time gap between the introduction of strategic weapons in Cuba and the beginning of intelligence reporting on their presence. The intelligence cycle moved quickly in response to this development.
3. Existing US intelligence focus on Cuba contributed to the detection and analysis of Soviet activities on the island.
4. Intelligence information was disseminated and used by decision makers.
5. Airborne imagery collection was very effective and the best source for "establishing hard intelligence."

6. Although restrictions hampered acquiring airborne imagery, the delay was not critical because imagery obtained before October 17 was insufficient in prompting action from our Western Hemisphere NATO allies.
7. Human intelligence reporting was useful but did not provide significant information on offensive missiles until after mid-September. At that point it was used to target airborne imagery collection of missile sites.
8. Information dissemination restrictions were in place, but they did not necessarily affect analytic work or policymaker actions.
9. Concerning the September 19 National Intelligence Estimate which downplayed the potential for a Soviet missile deployment in Cuba, McCone admitted analysts placed great weight on their belief concerning the improbability of such a development based on their mistaken assessment of Soviet intentions and risk tolerance and despite the physical indicators pointing towards a missile deployment.
10. The October 19 estimate on probable Soviet reactions was correct. (J. McCone, Memorandum for the President, February 28, 1963, p. 3)

Tactical Intelligence and Warning

The President's Foreign Intelligence Advisory Board report. In contrast to the quality of strategic intelligence warning, the PFIAB report is much more laudatory towards the US Intelligence Community concerning tactical intelligence support to decision making during the period after the U-2 made the initial discovery of the missiles on October 14. The definitive proof the Soviet missiles in Cuba was obtained through aerial U-2 imagery and the PFIAB credited

these and other low-level photo reconnaissance flights with success. US imagery intelligence professionals promptly processed the conventional film and the resulting imagery interpretations were quickly submitted to the president "in time for decisive action before the Soviet MRBM and IRBM[30] systems became fully operational" (Killian, *PFIAB Report*, 1963, pp. 1-2). The report went on to state:

> Beginning with the President's initial receipt of this crucial intelligence, there was an effective performance on the part of the U.S. intelligence community in providing the President and his top policy advisers promptly with the coordinated intelligence necessary to enable our Government to respond effectively to the offensive missile threat in Cuba. (Killian, *PFIAB Report*, 1963, p. 2)

Imagery played a critical role in keeping the president informed of Soviet activities in Cuba, the PFIAB members cited "the skillful analysis of the data produced by photographic interpreters" (Killian, *PFIAB Report,* 1963, p. 2). They also highlighted "the use of intelligence previously obtained concerning strategic missile and air defense installations within the Soviet Union in determining the nature and extent of similar capabilities in Cuba" (Killian, *PFIAB Report,* 1963, p. 2). This probably refers to the scientific and technical intelligence Soviet Colonel Oleg Penkovsky provided the U.S. which aided in assessing Soviet missile capabilities.[31]

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[30] MRBM – Medium-range Ballistic Missile and IRBM – Intermediate-range Ballistic Missile

[31] The KGB arrested Penkovsky in Moscow on October 22, 1963 during the Cuban Missile Crisis. A Soviet court found him guilty of espionage and he was executed on May 16, 1963 in the Moscow KGB Lubyanka Prison (Central Intelligence Agency, "The Capture and Execution of Colonel Penkovsky, 1963", 2010).

Warning Intelligence Assessment

This section provides an evaluation of quality of the warning intelligence President Kennedy and the EXCOMM received during the Cuban missile crisis based on the eight factors defining intelligence excellence in JCS Joint Publication 2.0, *Joint Intelligence*. In many cases a distinction will be made between the strategic warning that was produced prior to the discovery of missiles in Cuba with the October 14 U-2 flight and tactical warning intelligence that was produced from October 14 until the end of the crisis on October 28. An overarching theme of the discussion below revolves around Soviet success in achieving strategic surprise against the U.S., the very goal strategic warning is designed to prevent. In contrast, US intelligence performed exceptionally well after the missiles were discovered on October 14 in providing tactical warning and supporting the president and the EXCOMM during the tensest days of the crisis. According to the US JCS definition, quality intelligence is: anticipatory, timely, accurate, usable, complete, relevent, objective, and available. This analysis will address each of these factors to assess the overall quality of intelligence President Kennedy received to help him formulate current situation assessments.

Anticipatory – From a strategic warning perspective, the US Intelligence Community made the mistaken judgment that the Soviets would not take the risk of placing strategic weapons in Cuba and this false assumption was reinforced by the fact that the Soviets had never taken such action in the past. US analysts were

aware of and reported on the Soviet military buildup on Cuba but characterized it as defensive in nature.

Timely – The US Intelligence Community did not provide the Kennedy administration timely strategic warning. The Soviet Union introduced offensive nuclear weapons systems in Cuba on September 8 and it took the community until October 15[32], 37 days, to detect those missiles. In contrast, after the U.S. discovered the missiles, the US Intelligence Community collected, processed, interpreted, and reported imagery derived intelligence "to the President in time for decisive action before the Soviet MRBM and IRBM systems became fully operational" (Killian, *PFIAB Report*, 1963, p. 1)

Accurate – The intelligence President Kennedy received concerning increased Soviet arms transfers and Soviet technical support to the Cuban armed forces was accurate. The intelligence community assessment was consistent with Soviet statements emphasizing the defensive nature of those weapons transfers. A critical pre-crisis inaccuracy, of course, was contained in the Special National Intelligence Estimate of September 19, 1962 in which the community downplayed the likelihood of the Soviets placing offensive nuclear weapons in Cuba, based on the lack of a historical precedent and the analytic assessment that the Soviets would not be so bold as to take that level of risk.

Usable – US intelligence analysts tailored reporting formats to President Kennedy's information processing style. In the lead up to the crisis, Kennedy's

[32] The U-2 mission was flown on October 14 and the imagery intelligence exploitation which discovered the missiles was conducted on October 15, 1962.

primary mechanism for receiving daily, current intelligence reporting was a written product, a digest of the most important issue, tailored specifically for him called the President's Intelligence Checklist (PICL). According to David Priess, who recently completed a book detailing the history and evolution of intelligence support to the office of the president from Kennedy to Obama, Kennedy made extensive use of this product containing short, crisp, hard-hitting articles and he read it daily to remain informed of current world events. The PICL did contain articles on Cuba prior to the crises but did not contain any warning of strategic offensive weapons in Cuba. During the crisis, the mode of providing intelligence to the president on Cuba shifted to daily briefings which CIA missile experts and imagery analysts from the National Photographic Intelligence Center. This more direct, interactive format allowed President Kennedy to talk with the analysts, question their sources, better understand knowledge gaps, and get immediate answers to technical capability questions. This adaptation clearly served the president and his advisor well and allowed for a faster-paced decision cycle than a written product could support. CIA still produced the PICL during the crisis, but its authors/editors made the deliberate choice to not include Cuba-crisis related material in the document since Kennedy was receiving robust intelligence support through the briefing process. The PICL did concentrate on keeping President Kennedy informed on other global issues outside Cuba.

Complete – Unfortunately, the intelligence picture reaching the president prior to the first photographic evidence of the missiles in Cuba which President Kennedy received on October 16, was not complete. The fact that his

understanding of what was really happening in Cuba in September and the first half of October was not complete is one of the major factors which led to the strategic surprise which shocked the administration when it learned of the Soviet missile deployment in Cuba. Although warning intelligence indicators were active, based on human intelligence reporting, which pointed to Soviet offensive activity in Cuba, the US Intelligence Community was unable to confirm that activity until the U-2 provided the photographic hard evidence. The U-2 operational stand down was a self-inflicted limitation which delayed the discovery of the Soviet weapons. The internal CIA clampdown on intelligence production specifically related to Soviet offensive arms in Cuba may have also prevented more frequent and extensive coverage of that critical topic in the PICL since content for the president's daily intelligence summary was derived from other CIA daily, current intelligence products subject to this gag order. During the crises, these two factors were no longer in play. U-2 flights had resumed and imagery collection from that platform as well as from low-level photo reconnaissance aircraft dramatically increased to provide a very robust flow of tactical warning intelligence. Additionally, the president had a much more complete picture of the ground truth in Cuba during the crisis. He had direct access in his intelligence briefings to senior, experienced intelligence analysts who prepared the briefing material. The gag order did not impede any intelligence flow to the president during the actual crises period.

Relevant – The intelligence the president received on Cuba prior to the missile discovery was relevant and emphasized the commonly held view that the

Soviets were supporting their new communist client state in the Western Hemisphere with weapons designed to prevent any further attempts to overthrow the regime through armed force.

Objective – Overall, it appears the US intelligence community produced objective intelligence for President Kennedy prior to and during the crisis. There is no evidence any of the intelligence was designed to push the president towards any specific policy direction or confine the president's policy options. However, the president's sensitivity to republican charges of allowing a Soviet communist base of operations to exist and grow 90 miles off the Florida coast, and Kennedy's public statements that the Soviets were *not* placing offensive weapons in Cuba led him to become highly sensitive concerning intelligence leaks about offensive weapons in Cuba. The resulting internal CIA policies designed to limit intelligence analytic production, may have led to some self-censorship which would have damaged the overall analytic effort.[33] One could argue the September 1962 SNIE assessment that the Russian were unlikely to deploy offensive systems in Cuba might have resulted from an unintentional "mirror imaging" analytic bias.

Available – In general terms, President Kennedy had access to intelligence on Cuba and the PICL was the main conduit between CIA and the president prior

[33] The February 1963 PFIAB study and DCI McCone's February 28, 1963 response to that study both downplayed any adverse impact on President Kennedy's intelligence dissemination restrictions. The PFIAB stated, "The President's directive restricting the publication of intelligence on offensive weapons was clearly wise, necessary, and essential to the national interest" (Killian, *PFIAB Report*, p. 9). DCI McCone stated, "there is no indication that these restrictions necessarily affected analytical work or actions by policy-makers." (J. McCone, Memorandum for the President, February 28, 1963, p. 4). However, the PFIAB noted, "the misinterpretations of this directive endangered the necessary flow of information…" (Killian, *PFIAB Report*, p. 9).

to the crisis. The president was interested and mentally engaged with his duty to stay abreast of fast-moving international events. He would actively question the assessments in the PICL, would make margin notes with questions which his staff would than refer to CIA's Office of Current Intelligence, and was known to surprise analysts in that office with his occasional direct phone calls to ask questions or seek clarification to an article he had read in the PICL (Priess, 2016, pp. 25-32). Additionally, the president had periodic meetings with his Director of Central Intelligence, John McCone, which provided opportunities for the president to gain insights on intelligence issues.

Despite the president's interest and a routinize mechanism for providing him intelligence, the PFIAB report was highly critical of the failure of the US Intelligence Community to provide the president "at appropriate intervals with meaningful, cumulative assessments of the available intelligence indicators" (Killian, *PFIAB Report*, 1963, pp. 6-7). The failure of the US Intelligence Community to provide comprehensive analytic assessments to the president based on the active warning indicators was one of the key strategic warning failures of this crisis.

Warning Receptivity

To gauge warning receptivity, two key questions come into play: 1) To what degree did senior leaders believe in the seriousness of the threat? and 2) To what extent did senior leaders trust the intelligence provided? These questions largely hinge on the level of professional trust the president and his senior policy

advisors had in the intelligence community in general and in the leadership, primarily the DCI, who directs the US Intelligence Community. In terms of his presidency, Kennedy's professional relationship with the US Intelligence Community began with a series of briefing he received from DCI Allen Dulles as a candidate in the summer of 1960. President Eisenhower wanted to extend access to US intelligence to both Kennedy and Nixon to continue the practice which President Truman offered him when he was running for president in 1952. After the election, DCI Dulles wanted to quickly establish that he and the US Intelligence Community were fully behind the new democratic president (A. Dulles, *My Answer on the Bay of Pigs*, unpublished draft, October 1965, as cited in Helgerson, 1996). Both DCI Dulles and Kennedy were interested in developing a positive, professional relationship.

The relationship between senior decision makers and the intelligence professionals who provide them the key international security information they need to make decisions is an important part in how receptive leaders are to intelligence. President Kennedy, by nature, was highly inquisitive, and especially after the Bay of Pigs failure, was determined to not be overly influenced by experts. He had a drive to obtain, digest, and analyze information from a wide variety of sources. McGeorge Bundy summarized Kennedy's receptivity and need for information in an oral history interview from March 1964:

> …the simplest and most basic rule about my part of his affairs was his eagerness to know anything that he might have to or might wish to act on. So that one was most sharply sensitive…to the need to make sure that he

> did hear either reports of events abroad, or differences of views developing within the government, or matters that would become public which are always important to any president….So, the first rule I would set is that you made sure that the President was informed. (M. Bundy Oral History Interview, JFK#1, 3/1964, p. 1)

The New President's Intelligence Immersion

Kennedy was no stranger to intelligence upon entering office as president. He had access to key intelligence assessments, including National Intelligence Estimates, and intelligence briefings on the Soviet strategic nuclear missile program while serving on the Senate Foreign Relations Committee. However, President Kennedy's access to additional intelligence and a more fuller understanding of the complete array of US intelligence capabilities began after his nomination as the Democratic candidate for president in the summer of 1960. President Eisenhower sent telegrams on July 18, 1960 to both Kennedy and his running mate Lyndon Johnson offering them CIA intelligence. Kennedy immediately accepted the offer and his first intelligence briefing was on Saturday, July 23 at the Kennedy vacation home in Hyannis Port, Massachusetts. DCI Allen Dulles conducted the presentation, which lasted over two hours. The CIA history of this first of several intelligence briefings to Kennedy recounts:

> In that first round of briefings, the DCI put heavy emphasis on Soviet issues, including Soviet progress in strategic delivery capabilities, missiles, and bombers, and discussed the nuclear testing issue. He also reviewed Soviet statements on Berlin and Sino-Soviet cooperation. Dulles

> went over the latest intelligence on the Taiwan Straits situation; Middle East politics, particularly events in Iran; France's anticolonial problems in Algeria and Belgium's in the Congo and Cuba. (Helgerson, 1996)

Dulles found Kennedy highly interested in the briefing topics and noted Kennedy wanted to learn more about potential foreign policy trouble spots which might emerge during the final phase of the presidential campaign. It is insightful to learn what candidate Kennedy thought was most important and his level of interest in using the CIA to inform his view of potential crises and foreign policy problems. At the end of his first intelligence briefing, Kennedy asked DCI Dulles to prepare information on the likelihood of a People's Republic of China (PRC) attack against the offshore islands in the Taiwan Straits and about the status of international diplomatic efforts aimed at limiting nuclear testing. More generally Kennedy requested information about all potential trouble spots. Scheduling difficulties precluded Kennedy from receiving his next intelligence briefing for almost two months (Helgerson, 1996). Kennedy also displayed an interest in learning more about the most advanced US intelligence collection capabilities. On September 25, 1960 Kennedy asked for information on intelligence capabilities to replace the suspended U-2 aerial reconnaissance program over the Soviet Union but DCI Dulles did not provide him with information about the new US "Corona" satellite imagery program which had its first successful launch in August and subsequently became fully operational in December 1960. Kennedy received two more intelligence briefings as a presidential candidate on September 19 and November 2 (Helgerson, 1996).

After winning the election on November 8, Kennedy quickly announced his first two presidential appointments, keeping, J. Edgar Hoover as Federal Bureau of Investigation (FBI) Director and Allen Dulles as Director of Central Intelligence. Dulles, having just served in the republican administration of President Eisenhower, moved quickly to establish the CIA as being fully supportive of the new president. “We made it clear to him that from this time on, any information he desired was at his immediate disposal and would be willingly given" (Helgerson, 1996). At the personal level, Allen Dulles was also working hard to solidify his personal standing with Kennedy. The new president-elect received a more in-depth, sensitive CIA intelligence briefing on November 18 which included information on CIA covert action programs. As part of the approximately two-and-a-half-hour session, Kennedy received a 30-45-minute briefing on the Bay of Pigs operation the Eisenhower Administration had been planning. Richard Bissell, the CIA Deputy Director for Plans (Operations), recalled Kennedy "was almost entirely a listener--although a very good listener. Kennedy had a number of questions that grew out of the briefing, but he had not prepared a list of questions ahead of time” (Helgerson, 1996). Both Dulles and Bissel believed the new president had a favorable attitude towards CIA covert operations directed against Cuba and the CIA leaders continued agency planning for a potential CIA-sponsored Cuban invasion (Helgerson, 1996).

Demonstrating his interest and desire to learn more about US intelligence, president-elect Kennedy decided to visit CIA Headquarters on December 16, during the transition. DCI Dulles planned a very ambitious agenda to impress and

further educate the incoming president on US intelligence. He directed Huntington Sheldon, the Director of Current Intelligence, to develop a briefing book for the DCI with material he and other senior CIA officials should use in their upcoming discussions with Kennedy. Presentation were scheduled to discuss the CIA mission, organization, budget, and legal authorities. Congressional relations, as well as the missions of the Watch Committee, the President's Board of Consultants, and other members of the US Intelligence Community were also on the extensive agenda. Unfortunately, Kennedy had to cancel this visit, but he was able to make it to CIA Headquarters for an abbreviated program after the inauguration on January 26, 1961. The 90-minute, re-scheduled event was even further shortened when the new president took interest in a history of US intelligence exhibit with materials on loan from the Houghton Library at his alma mater, Harvard University (Helgerson, 1996).

Bay of Pigs Effect on Intelligence Receptivity

The relationship between President Kennedy and the CIA evolved between the Bay of Pigs disaster in April 1961 and the Cuban Missile Crisis of October 1962. Kennedy inherited the Bay of Pigs Cuban invasion plan from the Eisenhower Administration. The new president went ahead with the plan based, in part, on the impressive reputation for covert action his inherited DCI Allen Dulles had earned during the Eisenhower Administration in Iran and Guatemala. Richard Bissel, the key CIA man in charge of this covert operation was also well respected as the father of the U-2 program who had studied economics with Kennedy's National Security Advisor McGeorge Bundy at Yale (May and

Zelikow, 1997, p. 25). Kennedy emphasized to both Dulles and Bissel that under no circumstances would he approve the use of US military forces during the Bay of Pigs invasion. When Castro's forces were on the verge of crushing the US-backed forces, Bissell pleaded with the president for US Navy and Air Force intervention, which Kennedy denied (May and Zelikow, 1997, p. 25). Kennedy's failure to use US military power in support of the Cuban exile invasion force led to anger and contempt from several senior military officers in the US Navy and Air Force as well as in the CIA's Clandestine Service (May and Zelikow, 1997, p. 26). In the aftermath of the failed invasion, which embarrassed the president early in his term, Kennedy declined to publicly criticize the CIA. Accepting full responsivity for the failure, Kennedy stated, "There's an old saying that victory has a hundred fathers and defeat is an orphan….I am the responsible officer of this government" (May and Zelikow, 1997, pp. 25-26). While Kennedy was publicly magnanimous, he later told both Dulles and Bissell they would have to leave his administration. The president told them, "In a parliamentary system I would resign….In our system the President can't and doesn't. So, you…must go" (May and Zelikow, 1997, p. 26). According to Schlesinger, he, the president, and Vice-President Johnson discussed some of the lessons learned after the Bay of Pigs:

> The President said that he could not understand how men like Dulles and Bissell, so intelligent and so experienced, could have been so wrong, but added that nothing could be done about CIA immediately. So long as he kept Dulles there, he said, the Republicans would be disinclined to attack

> the administration over the Cuban failure. The vice-president vigorously agreed. (Schlesinger, 1965, p. 290)

While Kennedy took full responsibility publicly, privately he "deeply resented what he perceived as CIA mismanagement, and the following year he replaced both Allen W. Dulles, the CIA near-legendary director, and Richard Bissell, the head of its Clandestine Service" (Roberts, 2014, p. 20). Kennedy lamented:

> I probably made a mistake in keeping Allen Dulles on. It's not that Dulles is not a man of great ability. He is. But I have never worked with him, and therefore I can't estimate his meaning when he tells me things…Dulles is a legendary figure, and it's hard to operate with legendary figures. (Schlesinger, 1965, p. 276)

The president, realizing he needed to make a leadership change stating, "We will have to do something (referring to CIA)….I must have someone there with whom I can be in complete and intimate contact-someone from whom I know I will be getting the exact pitch." Regretting he had not placed his brother, Robert Kennedy in the job of DCI, the president confided,

> I made a mistake in putting Bobby in the Justice Department. He is wasted there; Byron White could do that job perfectly well. Bobby should be in CIA…It is a hell of a way to learn things, but I have learned one thing from this business-that is, that we will have to deal with CIA.

> McNamara has dealt with Defense; Rusk has done a lot with State; but no one has dealt with CIA. (Schlesinger, 1965, p. 276)

Seeking a replacement for Allen Dulles as DCI, the president found John McCone, a republican close to President Eisenhower as head of the Atomic Energy Commission. President Kennedy, while in the US Senate, came to respect McCone for his leadership of the highly classified US nuclear weapons program and the candor in which he answered questions before Senate committees regarding sensitive nuclear test-ban issues (May and Zelikow, 1997, p. 27). Kennedy trusted McCone based on his experience while in the Senate. Additionally, McGeorge Bundy placed some veteran CIA officers on the White House staff and found other ways of working closely with the CIA. Sixteen months after the disastrous Bay of Pigs fiasco, President Kennedy, Bundy, and the president's most senior advisors "would have an understanding of intelligence not only far beyond what they had had in 1961 but well beyond that in most subsequent administrations" (May and Zelikow, 1997, p. 27). The Bay of Pigs affair had taught the president to listen to a wide variety of advisors.

The Kennedy-McCone Relationship

Following the Bay of Pigs disaster early in his presidency, Kennedy decided he needed to make a change in the senior leadership of the intelligence community. Kennedy sought out a conservative to give CIA some protection in Congress and found McCone, who he knew from his time in the Senate when McCone served as Director of the Atomic Energy Commission. According to

Arthur Schlesinger (1965), McCone "had the reputation of rigid cold-warrior who viewed the world in moralistic stereotypes" (p. 429).

President Kennedy made the formal announcement of McCone's appointment on September 27, 1961 at the Naval War College in Newport, Rhode Island. President Kennedy was effusive in his praise for John McCone:

> We are both extremely pleased and satisfied that Mr. John McCone who has served his country in important position of responsibility as Undersecretary of the Air Force in the administration of President Truman, as Chairman of the Atomic Energy Commission in the administration of President Eisenhower, has agreed to once more come and accept a position of high responsibility. He has had broad experience. Coming once again to Washington represents a real sacrifice for him. I know that all of us who are concerned with our present responsibilities are extremely happy to have his counsel, extremely happy to have him associated with us. (J. Kennedy, Remarks of the President Announcing the Appointment of John McCone as the Director of CIA, September 27, 1961, p. 1)

The president's remarks at the ceremony thanking DCI Dulles for his long period of dedicated service to the United States were equally gracious,

> I would like to say one word about my very strong feelings of appreciation and regard for the present Director of Central Intelligence Agency. He has a record almost unique—if not unique in the history of this country, he has

> served under eight Presidents of the United States, beginning with President Wilson in World War One—Presidents of different Parties, serving during different times with different problems. He has brought to their service on each occasion and in each administration a unique regard for the public interest. I know of no man who is a more courageous, selfless public servant than Mr. Allen Dulles, and I therefore, in expressing pleasure at having secured the services of McCone, want to express my profound regret that at the age of 68, after ten years in this responsibility, that Mr. Dulles should be retiring. He has agreed to continue to serve as a Consultant to me on Intelligence matters, and therefore his long experience will be available to the people of this country. (J. Kennedy, Remarks of the President Announcing the Appointment of John McCone as the Director of CIA, September 27, 1961, p. 1)

While these two statements may be regarded as normal, perfunctory statements made by presidents as they introduce new senior, cabinet-level officials, they also represent President Kennedy's effort to highlight the importance of intelligence and demonstrate his desire to maintain a positive, productive, receptive relationship with his new senior intelligence leader. These statements also sent a powerful message of support for the men and women, at the working level, who collected and analyzed intelligence in support of the president's foreign and defense policies. McCone, in response, signaled his dedication to the president, stating, "Mr. President, Admiral Allen: I appreciate

very much your expression of confidence. Mr. President, you mentioned sacrifice. I wish to assure you that in my mind, the opportunity to serve my country in this capacity is a very definite privilege" (J. Kennedy, Remarks of the President Announcing the Appointment of John McCone as the Director of CIA, September 27, 1961, p. 1).

President Kennedy sought to strengthen the role of the DCI in managing all agencies within the US Intelligence Community and empowered McCone to do just that by formally charging his new DCI with the following responsibilities in a memo dated January 16, 1962, charging Mr. McCone to:

- Serve as the Government's principal foreign intelligence officer – coordinate and provide effective guidance of the total US foreign intelligence effort
- Assure proper coordination, correlation, and evaluation of intelligence from all sources and its prompt dissemination to the President and other recipients as appropriate
- Work closely with heads of all departments and agencies with foreign intelligence responsibilities
- Serve as Chairman, US Intelligence Board (USIB) – McCone's deputy designated to represent CIA on this board
- Develop policies and procedures to assure adequate coordination of foreign intelligence activities, as directed by the President and NSC with the advice and assistance of the USIB

- Assure efficiency and effectiveness in coordination with the heads of the departments and agencies engaged in foreign intelligence activities while avoiding undesirable duplication of effort
- Exercise overall responsibility for CIA – primary responsibility is DCI with deputy director providing, to the extent necessary, direction to the CIA
- Keep the President informed on implementation of this directive (J. Kennedy, Memorandum to John McCone, January 16, 1962).[34]

Augmenting Kennedy's cabinet with a conservative republican made good political sense but McCone had virtually no intelligence experience, yet he quickly went to work and successfully repaired CIA's damaged moral in the wake of the Bay of Pigs. He launched a study group to identify and refine the director's key duties and to provide suggestions on agency reorganization. He significantly expanded scientific and technical research and improved managerial effectiveness by developing cost-analysis processes and creating a new comptroller position in the agency (Roberts, 2014, p. 120). He worked hard to keep himself out of the newspapers and improved relations with the State Department and Congress. Schlesinger characterized how McCone was able to win the confidence of his peers in the administration by, "Declining to allow his own views to prejudice the intelligence estimates, he showed a fair-mindedness which shamed some of us who had objected to his appointment" (Schlesinger, 1965, 429). McCone

[34] This outline of the DCI's responsibilities is in line with the responsibilities of this office as outlined in the National Security Act of 1947. President Kennedy probably sought to emphasize these points to better establish the primacy of the DCI within the US Intelligence Community.

appointed two key deputies, Richard Helms as the Deputy Director of Operations and Ray Cline as the Deputy Director of Intelligence. The new DCI endeavored to shift CIA emphasis more towards intelligence analysis while placing less emphasis on covert operations, the real forte of his predecessor Allen Dulles. These changes transformed the CIA into a more consistently technical service (Schlesinger, 1965, p. 429). Kennedy enhanced the authority of his new DCI by publicly announcing the new director would be responsible for developing policies and procedures across all levels of the US Intelligence Community. This public display of support was important at that time as the PFIAB with State Department backing, had recently recommended breaking the CIA up to separate its covert operations and analytic functions (Roberts, 2014, p. 120).

McCone's Relationship with Others

Some members of President Kennedy's cabinet initially had serious reservations regarding McCone's appointment as DCI. However, with time and McCone's demonstrated performance, he became more accepted as a trusted member of the Kennedy Administration. Roger Hilsman, Director of the State Department Bureau of Intelligence and Research during the Cuban Missile Crisis summed it up well in an oral history interview in 1970 responding to initial reactions to McCone's appointment:

> Well, you see, everybody thought McCone was going to be a bad guy. And basically, he turned out to be a pretty good guy; that is, he was on the wrong side of some issues, but he never…. You know, here is a guy who has successfully sunk the test ban treaty in the Eisenhower administration,

> who really, against his own President, Eisenhower, as AEC Commissioner, had coordinated with Scoop Jackson, a Democrat, and had sunk a number of things that Eisenhower wanted to do. A real alley fighter, you know. A very rich man, a very militant, anti-communist, Republican, you know….So, we thought, everybody thought on both Capitol Hill and in the administration, we were in for trouble. (R. Hilsman, Oral History Interview-JFK#1, August 14, 1970, p. 15).

McCone's ideas of asserting more control over other government agencies set the initial tone of the relationship. According to Hilsman, McCone apparently wrote a letter of instructions to himself at the beginning of his tenure that provided CIA extensive powers which other cabinet agencies thought consolidated too much authority at CIA, "Then this letter comes along, and it seemed to confirm our worst fears because there was language in that letter that was giving McCone authority over almost everything."[35] (R. Hilsman Oral History Interview-JFK#1, August 14, 1970, p 16).

As it turned out, these fears of Hilsman and others were overblown. Considering the contrast between how McCone and Dulles used intelligence, it became clear McCone used it to inform the policy process whereas Dulles used intelligence to make and implement foreign policy. This shift, driven by the leadership differences between Dulles and McCone, helped McCone relieve some

[35] This letter of instruction has never been published, at least not at time of this interview in 1970.

of the initial fear among his peers. Hilsman pointed out this change was based on lack of interest and competence on McCone's part, stating:

> I think the reason our fears didn't materialize on the substantive side--this is the National Intelligence Estimates and so on and so forth, which Dulles was into up to his ears, and Dulles was….you see, Dulles was using the NIE's as policy statements, then using his chiefs of mission to implement it, that is his contacts with foreign chiefs of state to implement it. And I think the reason McCone didn't use his position in that way was because he was neither interested nor very competent in the substance of foreign policy. So therefore, he didn't make the effort. He didn't have the knowledge and didn't make the effort. (R. Hilsman Oral History Interview-JFK#1, August 14, 1970, p 16)

In retrospect, Hilsman concluded:

> We worked out a very good relationship, McCone and I. And it turned out that he wasn't making the great bid for domination as we thought. He did a few things. The Cuban missile crisis he tried to manipulate to his advantage. (R. Hilsman Oral History Interview-JFK#1, August 14, 1970, p 16)

Intelligence Receptivity During the Cuban Missile Crisis

To analyze how the president viewed the threat of Soviet offensive nuclear weapons in Cuba, I have examined the interaction of President Kennedy with his Director of Central Intelligence, John A. McCone prior to and during the crisis

period. It is clear from reading the various now declassified memos DCI McCone wrote about his interactions with the president, that President Kennedy was very much aware and concerned about the seriousness of the Soviet strategic nuclear threat to the U.S. in the months leading up to the formal crisis period in October 1962. In McCone's August 23, 1962, Memorandum of Meeting with the President:

> The President requested a continuing analysis of the number and type of Soviet and Oriental personnel imported into Cuba; quantity and type of equipment and its probable use; all construction – particularly anxious to know whether construction involved SAM sites might differ from the ground sites.

In response, DCI McCone directed the Board of National Estimates to work continuously on this analysis. Mc Cone noted, President Kennedy "requested analysis of the danger to the United States and the effect on Latin America of missile installations." The DCI directed the Deputy DCI to arrange for the preparation of these estimates. (J. McCone, Memorandum of Meeting with the President, August 23, 1962, pp. 1-2). President Kennedy was even already thinking, as of at least August 23, of what the U.S. could do against Soviet missile sites in Cuba, should the U.S. discover such capabilities, questioning whether an air attack, a ground offensive, or a substantial guerilla effort would be necessary to negate the missiles.

From October 16, 1962 when President Kennedy was first informed of Soviet offensive missiles in Cuba to October 28, 1962 when Khrushchev agreed

the Soviets would withdrawal the missiles, the president was highly receptive to intelligence regarding the current situation in Cuba and potential Soviet reactions to the emerging US policy to rid Cuba of these weapons. During the crisis the president received daily briefings, mainly from Arthur Lundahl, Director of the CIA National Photographic Intelligence Center which was analyzing the aerial imagery from the U-2 and Sidney Graybeal, Chief of the CIA Missile and Space Division. These briefings were augmented with occasional presentations by DCI McCone and the CIA Deputy Director for Intelligence, Ray Cline. Reviewing the complete transcript of the Kennedy tape recordings of the various EXCOMM meetings and the written notes of sessions which were not taped,[36] reveals President Kennedy was fully attentive to the intelligence presented, was actively engaged with the intelligence analysts presenting the information, and asked numerous, relevant questions. His initial anger over being misled by the Soviets concerning their intentions on Cuba did not translate into any animosity towards the CIA, or loss of credibility or trust between Kennedy and the intelligence community. The interactions between the president and the intelligence analysts and senior leaders charged with ensuring he remained aware of the current situation were professional and focused on the immediate issues at hand. Given the gravity of the situation, the potential outbreak of nuclear war and the general threat to world peace, President Kennedy was highly focused and trusted the quality of intelligence he was provided. This is probably best demonstrated by the fact that Kennedy and others, after their initial encounter with the

[36] Consisting of 700 pages and found in May and Zelikow, *The Kennedy Tapes: Inside the White House During the Cuban Missile Crisis*, 1997, Harvard University Press, Cambridge, MA

photographic evidence from the U-2, later admitted they personally could not identify objects in the various images as Soviet missiles. At the onset of the crisis these senior national leaders had to completely trust the expertise of CIA's imagery analysts in assessing the presence of Soviet offensive missiles in Cuba. EXCOMM members asked questions to ensure there was no possibility of a misinterpretation of the imagery evidence concerning the type of missiles or their capability to deliver nuclear warheads. There were also key questions which arose on the actual presence of nuclear warheads on the island.[37] Throughout this tense period, President Kennedy was professional and remained receptive toward the intelligence provided. He used that intelligence to formulate his strategy in successfully handling the crisis and bringing it to a peaceful resolution on US terms.

Immediately following the crisis, President Kennedy took the initiative to recognize the many key players in the US Intelligence Community who contributed to the successful outcome. The president took the lead in seeking recognition for outstanding service during the Cuba missile crisis. He directed his military aid, Major General Clifton to send a letter to DCI McCone on December 3, 1962 asking him for advice on commendations/medals for CIA (C. Clifton, Memorandum to John McCone, December 3, 1962). McCone responded on December 14 with a letter to Kennedy recommending the CIA Agency Intelligence Medal of Merit for US Air Force Weather Reconnaissance Squadron,

[37] Intelligence analysts identified the construction of nuclear storage facilities during the crisis but could not confirm the presence of nuclear warheads for the MRBM or IRBM missiles in Cuba at that time. Later, in 1992, the US learned the Soviets had delivered nuclear weapons to Cuba which were present during the crisis (Coleman, 2007, pp. 11-12).

Provisional (4th) which flew CIA missions in August and September 1962, a citation for the National Photographic Interpretation Center, a citation for the CIA, and the Intelligence Star to each of the seven U-2 pilots who flew Cuba missions (J. McCone, Memorandum for the President, Recognition of CIA Units and Individuals, December 14, 1962). In a letter from the president to the DCI, in his capacity as Chairman of the US Intelligence Board,[38] President Kennedy was effusive in his praise stating:

> I wish to express…my deep and sincere appreciation for your outstanding service to our Nation—and the Free World—during the recent international crisis. In the course of the past few months, I have had occasion to again observe the extraordinary accomplishments of our intelligence community, and I have been singularly impressed with the overall professional excellence, selfless devotion to duty, resourcefulness and initiative manifested in the work of this group. The fact that we had timely and accurate information, skillfully analyzed and clearly presented, to guide us in our judgements during this crisis is, I believe, the greatest tribute to the effectiveness of these individuals and agencies. The magnitude of their contributions can be measured, in part, by the fact that the peace was sustained during a most critical time. It is, of course, a great source of strength to me to know that we have such dedicated and skillful men and women in the service of our Nation in these times of peril. Although I cannot personally commend each member of the intelligence

[38] The DCI was dual-hatted as the CIA Director and the Chairman of the US Intelligence Board.

> community for their individual efforts, I would like you to convey to them, through the members of the United States Intelligence Board, my personal word of commendation, my deep admiration for their achievements, and the appreciation of a grateful Nation. (J. Kennedy, Letter to John McCone, January 9, 1963)

The Kennedy-McCone Relationship after the Crisis

The relationship between Kennedy and McCone in the public sphere remained professional and positive in the immediate aftermath of the crisis. However, privately, especially as Congress became involved in investigating the crisis, private tension between McCone and the president increased. It does not appear that this low point in the personal relationship between the president and the DCI affected the president's receptivity towards intelligence in the aftermath of the crisis. Intelligence remained important in monitoring Soviet compliance with their agreement to withdrawal offensive weapons from Cuba and to ensure such weapons were not re-introduced into Cuban surreptitiously after the crisis.

The source of the conflict between Kennedy and McCone after the crisis stemmed from the fact that McCone was the only prominent Kennedy official who accurately predicted the Soviets were possibly introducing offensive nuclear weapons into Cuba before they were discovered with the U-2 flight of October 14. In the public debate following the crisis and in the congressional hearings which followed, McCone vigorously defended his position and the work of the CIA during the crisis. Kennedy believed the agency had done very well and was likewise highly supportive of the work the intelligence community had performed

in discovering the missiles and supporting his decision making through the EXCOMM. Kennedy however, resented what he considered McCone's public bragging about his prediction of Soviet missiles in Cuba. McCone's access to the president declined in the aftermath of the crisis based on the strained relationship (Roberts, 2014, p. 120).

President Kennedy, seeking to shape the story McCone would tell congressional committees investigating the crisis issued talking points to McCone to guide his testimony. U.S. Senator Kenneth Keating (R-N.Y.) had been especially critical of the president's handling of intelligence regarding the crisis claiming he knew of Soviet missiles in Cuba well before the administration. His information was presumably based on Cuban refugee accounts. President Kennedy challenged Keating to produce the evidence to help the US Intelligence Community to better track these systems, but Keating did not comply with that request. The president, seeking to prevent any potential political fallout from information which might subject him to harsh criticism in his handling of the intelligence aspects of the crisis, instructed McCone to highlight the following in his meetings with Congress:

- The President authorized every overflight requested
- The acting DCI accepted for CIA responsibility for arranging necessary overflights
- The intelligence community did not report any evidence of missiles to the President before the U-2 flight of October 14. What the intelligence community had was a handful of reports, which were subjected to

photographic verification. Hundreds of previous reports had been tested in the same way. The difference is that this time the test proved positive

- There was no report of concern because of weather delays to either the DCI or the White House
- The President had obtained full reports on this whole matter from both Mr. McCone and from the Intelligence Advisory Board
- Mr. McCone should be extremely careful in criticism of the Sec/State request for a rescheduling of September flights into four shorter ones. There was no reclama of this—and no report to anyone that it was leading to delay. (J. Kennedy, Facts for John McCone to Emphasize from President's Standpoint, March 4, 1963)

Following McCone's congressional testimony in early March 1963, it is clear both the president and his brother Robert Kennedy were highly concerned with how McCone and the CIA were handling the congressional oversight and public relations aspects of the crisis. Both the president and his brother were highly upset with press leaks out of the CIA, which sought to make the agency look good at the expense of the administration. In a March 4, 1963 phone conversation between the president and Robert Kennedy, the president called McCone "a real bastard…He's stupid himself. Everybody's saying he's a horse's ass" (in response to questions about the number of Cuban insurgents trained and active against Cuba) (J. Kennedy & R. Kennedy, Telephone Conversation Transcript, March 4, 1963, p. 13).

Seeking his brother's assistance in "counseling" McCone, the president stated:

> All the press are saying that they're pouring out a lot of stuff to try to make, you know, the CIA or McCone look good at the expense of the administration, that there's a lot of talk about it on the Hill and everything. I'd like to have John know about that. So maybe he'd then decide it wasn't so wise. (J. Kennedy & R. Kennedy, Telephone Conversation Transcript, March 4, 1963, p. 15)

Roger Hilsman, the Director of the State Department Bureau of Intelligence and Research during the crisis, recalled in a 1970 oral history interview the resentment many in the administration felt towards McCone based on his interaction with Congress following the crisis. According to Hilsman, "McCone is busy all over Capitol Hill saying, "Oh, I said that I didn't trust those communists. I said there were going to be missiles in Cuba" (R. Hilsman Oral History Interview-JFK#1, August 14, 1970, p 35). McGeorge Bundy, the president's National Security Advisor, also noted difficulties in working with McCone. In a phone conversation on March 4, 1963, Bundy and the president discussed their view on how McCone has become paranoid about people in Kennedy's circle who were out to get him. These rumors were spread by US senators. Bundy advised the president in the phone conversation to say something nice about McCone in an upcoming press conference, which Kennedy agreed to do (J. Kennedy & R. Kennedy, Telephone Conversation Transcript, March 4, 1963, pp. 3-5). The president did make a positive statement about McCone at his

March 6, 1963 press conference (J. Kennedy, Presidential Press Conference, March 6, 1963).

Despite this private criticism, President Kennedy stood by a fact-based, vice rumor driven approach toward verification of the Soviet withdrawal. Kennedy remained receptive to the intelligence he received and effectively used it in his public statements to reassure the American people and members of Congress of Soviet compliance with the agreements which resolved the crisis in October 1962. Reviewing the president's press statements through the end of March 1963 one concludes the president remained fully informed of the relevant intelligence in Cuba. Kennedy publicly stated his belief in US intelligence verification of Soviet withdrawal as being effective:

> We will continue to use our own method of verification, which we believe gives us assurance against a re-introduction of these weapons into Cuba, and I think that the methods we are using to determine the status of military activity in Cuba are very effective and are being used frequently. (J. Kennedy, Presidential Press Conference, December 12, 1962)

Despite the president's continue assurances, the press and several members of Congress remained skeptical and continued to assert the Soviet were maintaining offensive nuclear weapons, potentially hidden in tunnels, in Cuba. There was also an extensive debate about residual Soviet military troop strength in Cuba. President Kennedy consistently emphasized in his public statements that he was making his decisions based on hard intelligence on not on rumors from congressmen or refugee reports. His February 7, 1963 public statement is a good

example of his support for the use of intelligence reporting. Kennedy challenged anyone who possessed information on offensive weapons in Cuba to turn it over to General Carroll, the DIA Director. The president stated:

> Now, we get hundreds of reports every month, and we try to check them out. A good many of them are just rumors or reports, and even some of the members of Congress who have come forward either refuse to say where they heard the information or provide us with reports which do not have substance to them. (J. Kennedy, Presidential Press Conference, February 7, 1963)

Referring to the need for hard intelligence, Kennedy stated:

> But to take the United States to that path (towards another confrontation with the U.S.S.R.), to persuade our allies to come with us, to hazard our allies as well as the security of the free world, as well as the peace of the free world, we have to move with hard intelligence. We have to know what we are talking about. We cannot base the issue of war and peace on a rumor or report, which is not substantiated, or which some member of Congress refuses to tell us where he heard it. (J. Kennedy, Presidential Press Conference, February 7, 1963)

Continuing to make his point, Kennedy emphasized, "…we are taking the greatest pains to try to be accurate, but we have to deal with facts as we know them, and not merely rumors and speculation." (J. Kennedy, Presidential Press Conference, February 7, 1963).

In the final analysis, President Kennedy expressed his gratitude toward the US intelligence professionals. He rejected the politically based charges coming from Congress in the aftermath of the crisis and cited the outstanding work of the intelligence community, the Defense Department, and specifically the DCI, John McCone. Addressing charges of failure in US intelligence on March 6, 1963 at a press conference, Kennedy made a clear statement of support for the hard and successful work of the intelligence community during the crisis. Responding to press questions that his administration was deliberately withholding information on the crisis and that McCone knew of the presence of Soviet missiles in Cuba prior to October 14, 1962, Kennedy responded with high praise for the US Intelligence Community, stating:

> No, I have seen charges of all kinds, one day a distinguished Republican charges that it is all the CIA's fault, and the next day it is the Defense Department's fault, and the next day the CIA is being made a scapegoat by another distinguished leader. So that we could not possibly answer these charges, which come so fast and so furiously. I think in hindsight, I suppose we could have always perhaps picked up these missile bases a few days earlier, but not very many days earlier, because the missiles didn't come in, at least in hindsight it now appears, until sometime around the middle of September. The installation began at a later date. They were very fast, and I think the photography on the same areas, if we had known that missiles were going in, 10 days before might not have picked up anything. The week before might have picked up something. In the

> pictures taken October 14th were only obvious to the most sophisticated expert. It was not until the pictures taken really the 16th and 17th that you have pictures that would be generally acceptable. So, this was a very clandestine and fast operation. So, I feel the intelligence services did a very good job. When you think that the job was done, the missiles were discovered, the missiles were removed, the bombers were discovered, the bombers were removed, I don't think that anybody should feel anything but a good job was done. But I think we can always improve, and particularly with the advantage of hindsight. I am satisfied with Mr. McCone, the intelligence community, the Defense Department and the job they did in those days particularly taken in totality. (J. Kennedy, Presidential Press Conference, March 6, 1963)

After the crisis concluded, DCI McCone wrote a memo on October 31 which detailed the timing of his various warnings about Soviet offensive missiles in Cuba. He recalled he had briefing Secretary of State Dean Rusk on August 21, in Rusk's office, about definite information on surface-to-air missiles and speculated again on the probability of medium range ballistic missiles in Cuba (J. McCone, Memorandum for Record, Soviet MRBMs in Cuba, October 31, 1962, p. 1). McCone also recalled on the evening of August 22, that he provided the same information to President Kennedy, adding certain details about the number of Soviet and Chinese personnel entering Cuba (J. McCone, Memorandum for Record, Soviet MRBMs in Cuba, October 31, 1962, p.1). McCone noted President Kennedy "was quite familiar with the situation" and that "The President

expressed concern" (J. McCone, Memorandum of the Meeting with the President at 6:00 p.m., August 22, 1962, p.2). The president requested this policy matter to be addressed at the Principals meeting at the White House on August 23.

Summarizing the relationship between President Kennedy and the DCI, John McCone, McGeorge Bundy described the president's treatment of the leaders and advisors in his administration was based of strict professionalism. According to Bundy, in an oral history interview in 1965 on Kennedy's relationships with and among members of his administration:

> We didn't talk much about whether he was or wasn't happy with any one of his Cabinet officers, or indeed with anybody on his staff because he didn't do business that way. He never encouraged people to complain about anyone else, and his clear intent was to manage his own administration his own way, and to have everybody stay on board and be, at least publicly, in the in-government sense-at least in the conduct of normal business-comfortable with one another and not waring publicly. His determination on that point was so self-evident that the question never came up. The two officers that he and I at least, fussed about (in the sense of how to organize and manage his relationship to them) were John McCone and Adlai Stevenson, and to a lesser degree Chet Bowles….The President was always on edge about Mc Cone. (M. Bundy, Oral History Interview, JFK#1, March 1964, p. 18)

The following excerpt from the Bundy oral history interview highlights why Kennedy appointed McCone and a few of the misgivings the president developed regarding his DCI:

> He wanted very much to have a man who was strong on the Hill, strong with conservative opinion, who wouldn't expose him to any risk of criticism from that flank. He could take the heat from liberals who didn't like McCone, and he got a little of it privately before he went ahead with it. The President never much enjoyed being told not to do something he decided to do, so he didn't waste much time on it, but I remember the phones jangling….The reason he became wary about John McCone was simply that John McCone showed himself in two or three sensitive cases more concerned about McCone than he was about Kennedy. The President valued people who would take heat on his behalf, and not people who were insulating themselves from the general fire. (M. Bundy Oral History Interview, JFK#1, March 1964, p. 18)

Bundy also alluded to his own feelings about McCone, independent of the president's view. In answering the question why Kennedy ever appointed McCone, Bundy stated, "You'd better ask the Attorney General-I think that's his crime. Allen Dulles was involved in it too" (M. Bundy Oral History Interview, JFK#1, March 1964, p. 18). Apparently, McCone was very sensitive and seemingly jealous of other administration leaders' access and influence over the president. Bundy recalled in 1965, McCone seemed to have felt slighted if the

president had conversations with the secretary of defense or secretary of state or both and he wasn't invited. According to Bundy:

> I have spent a great many phone calls in the last three years explaining to John McCone that it really isn't a personal affront to the Central Intelligence Agency, if the President had a talk with the Secretary of State or the Secretary of Defense, or, still more offensive, both, and doesn't even once include the Director of Central Intelligence. And surprisingly, people keep pressing you as to the requirement that their agency or they themselves be there in order to maintain the morale of their agencies. (M. Bundy Oral History Interview, JFK#1, March 1964, p. 176)

Bundy, as National Security Advisor, spent a great deal of effort managing McCone's relationship with the president.

Leadership Interpretation of Warning

President Kennedy interpreted Cuban Missile Crisis related intelligence based on his worldview and assumptions about the motivations of Soviet behavior. At the tactical intelligence level, the information Kennedy received during the crisis period allowed him to make decisions regarding diplomatic and military policies which through the naval quarantine brought the crisis to a peaceful end on US terms. The president interpreted this tactical intelligence objectively. Concerning the more strategic issue of what motivated the Soviet Union to deploy and offensive nuclear capability to Cuba, both the US Intelligence Community and President Kennedy may have made cognitive and

motivational errors which influenced their assessment of Soviet motivations. This is an important point as it fundamentally influenced how Kennedy assessed the current situation based on the initial intelligence warning he received on October 16, 1962. This situation assessment ultimately influenced Kennedy's chosen course of action to implement a naval quarantine. Had the president assessed the situation differently, he may have decided to choose a different policy, including one of living with the Soviet missiles in Cuba. The remainder of this section will concentrate on assessing how President Kennedy interpreted the warning intelligence he received to determine if certain biases may have influenced his interpretation of intelligence warning.

President Kennedy's interpretation of intelligence is based on psychological factors discussed below. To better understand, how the president, interpreted intelligence, it is reasonable to look closely at how he assessed the Soviet motivation for their deployment of offensive strategic nuclear weapons in Cuba. Fundamentally, did the president interpret the intelligence to mean the Soviets were deploying these systems for offensive or defensive purposes? His view towards this key question would influence his assessment of the current situation and ultimately his chosen course of action to resolve the crisis. Would the president take decisive action to eliminate the missiles threat, force the Soviets to withdrawal the missiles, or would he simply make an accommodation and learn to live with this new development? These key assessment and policy questions turned, in part, on Kennedy's interpretation of the intelligence he received during the crisis.

Soviet motivation for their Cuban offensive buildup was discussed in the first EXCOMM meeting (Allison, In *Secret Cuban Missile Crisis Documents*, p. iv). The offensive arguments suggested the Soviet action was designed to test American credibility and fortitude (Fischer, Beth, 1998, p. 160). Kennedy was highly concerned about the future status of Berlin as Khrushchev had threatened additional action, foreshadowing a crisis, following the upcoming mid-term elections in November 1962. Kennedy believed Soviet actions in Cuba were designed to distract the Americans from the Berlin problem, that the Soviet missiles could be used as leverage to militarily threaten the U.S. and force the Western allies out of Berlin. Soviet missiles in Cuba could thus serve as a bargaining chip to force the allies out of Berlin in exchange for Soviet withdrawal of offensive weapons from Cuba. An additional potential Soviet offensive motivation included the fear the Soviets could use the Cuba crisis as a diversion to launch an aggressive military campaign elsewhere to challenge the West.

Several potential arguments can be made suggesting Soviet motivations were defensive in nature. The Soviet deployment may have been designed to deter the U.S. from a future military attack against Cuba to depose the communist regime or the Soviets sought to quickly rectify their then completely apparent strategic nuclear inferiority with the United States. Initial CIA intelligence assessments in the earliest days of the crisis on October 16 and 17 discussed the possibility of Soviet defensive motivations and discussed the deployment in terms of deterring a future US military attack against Cuba. The Special National Intelligence Estimate the CIA produced at the beginning of the crisis on October

19 did not discuss deterrent motivations but did highlight the Soviet nuclear deployment may have been designed to seek parity after the missile gap myth was exposed (Fischer, Beth, 1998, p. 159). Subsequent CIA assessments and intelligence briefings to the president stressed Soviet offensive motivations for their deployment, including Khrushchev's assumed desire to enhance nuclear strike capabilities against the U.S. Formal intelligence assessments the CIA provided to the EXCOMM did *not* include analysis concerning Soviet motivation to protect Cuba from attack against the U.S. or discuss the symbolic significance Cuba had to Soviet leaders as the first bastion of communism in the Western Hemisphere (Fischer, Beth, 1998, p. 160).

Cognitive Factors

Kennedy's experience with Soviet leaders, his views concerning the nature and level of the Soviet threat, and the motivations which guided their foreign and military policy potentially affected his interpretation of the intelligence provided during the crisis. This is certainly not meant as a criticism but rather an acknowledgement that all humans interpret information through a lens which influences their interpretation of information, which naturally also includes intelligence information. Beth Fischer has researched both cognitive and motivational factors which may have adversely impacted intelligence produced during the Cuban Missile Crisis. She identified several potential cognitive and motivational errors based on either interpreting Soviet actions in an offensive or defensive context. The same problems may have also affected President Kennedy as he interpreted the information the US Intelligence Community provided during

the crisis. The following is a systematic discussion of key assumptions and the potentially negative cognitive effects these interpretations may have had on President Kennedy, many of his advisors, and many Americans. These biases may have influenced the president's interpretation of intelligence.

Assumption 1 – The Soviet Union was an aggressive world power seeking to expand its influence on a global scale.

Potential negative cognitive effect: US senior officials, including President Kennedy, were more attentive to information confirming that assumption and less sensitive to information which challenged it. This led him to favor intelligence which confirmed his view that the Soviets had an offensive motivation for deploying missiles to Cuba vice a defensive motive.

Assumption 2 – The Soviet Union was an **opportunistic** aggressor.

Potential negative cognitive effect: This line of thinking may have blinded the president to the Soviet's need to redress the strategic nuclear imbalance. Like assumption 1 above, this assumption would also have biased Kennedy's interpretation of intelligence to support the view that the Soviets wanted to rectify the strategic nuclear balance (offensive motivation) and were not simply trying to use nuclear weapons in Cuba to deter a future US attack.

Assumption 3 – Because the United States maintained a self-image as "freedom-loving defenders of democracy" the United States was not and could not be, a 'threat' to the Soviet Union, because US motivations were defensive and benign (Fischer, Beth, 1998, p. 160).

Potential negative cognitive effect: The Soviets had no need to take such a highly provocative action as to station nuclear missiles in Cuba, just 90 miles from the U.S. – the U.S. had no intent of using nuclear weapons against the U.S.S.R. and thus was not a serious threat to the Soviet Union. This is a fundamental attribution error in which one believes the negative actions of others is based on defects in their opponent's personalities or disposition, instead of viewing them as consequences of situational factors their opponents face.

Assumption 4 – Although the U.S.S.R. was an opportunistic expansionist aggressor it was risk-averse – the CIA made that conclusion in their September 19, 1962 NIE (Fischer, Beth, 1998, pp.160-161).

Potential negative cognitive effect: the U.S. failed to analyze Khrushchev's past propensity towards risk, (exposing Stalin crimes, instigating Berlin crises, incidents of nuclear saber rattling). The U.S. failed to integrate past Khrushchev behavior into analytic judgements (Fischer, Beth, 1998, p. 161).

Assumption 5 – The CIA assessed a Soviet offensive nuclear deployment would not occur in Cuba.

Potential negative cognitive effect: The CIA was insensitive to vast amounts of human intelligence (refugee reporting) coming out of Cuba suggesting a possible deployment. Confirmation bias may have been at play as the CIA dismissed numerous refugee reports of missiles to conform with their assessment that a Soviet nuclear deployment outside the U.S.S.R. had never been undertaken

and the Soviets would not take such a bold risk by deploying nuclear missiles so close to the United States.[39]

Motivational Factors

Motivational errors may have also contributed to problems in the president's interpretation of intelligence. Following the Bay of Pigs failure, President Kennedy placed a portion of the blame for that debacle on the CIA.[40] Based on motivational theory, both the CIA and the president may have required a higher "burden of proof" based on that negative experience to convince the president of a Soviet effort to place missiles in Cuba. Fischer believes this is probably less of a factor than the cognitive issues detailed above. Her logic for this conclusion revolves around the assumption that if the CIA believed they needed to pass a higher bar to convince the president that Soviet offensive weapons were in Cuba, they would have been more vigorous in their effort to collect intelligence to confirm that hypothesis, which they were not.

Beth Fischer contends that theory-driven thinking may have contributed to the failure of the U.S. to detect Soviet missiles in Cuba earlier than it did. If President Kennedy and the US Intelligence Community thought the deployment of such systems was more likely, the administration would have been more attentive to that possibility and ordered a more intensive intelligence collection and analytic effort against this intelligence problem. The prevailing US view,

[39] The CIA could not definitively determine if the missiles the refugees were reporting were offensive nuclear missiles or defensive, conventional surface-to-air missiles.
[40] The President reserved much of his disdain for the Joint Staff with a consequent loss of trust in the advice of that institution.

which President Kennedy shared, that the Soviets were expansionist aggressors, blinded them to Moscow's feeling of increasing strategic nuclear vulnerability. The US failure to understand or appreciate this Soviet vulnerability led the president and his senior advisors to underestimate the probability that Khrushchev would take the bold risk of deploying nuclear weapons to Cuba. Based on Fischer's explanation of the biases that a theory-driven approach to intelligence interpretation yielded in the Cuban missile crisis, a more data-driven, bottom-up, inductive approach may have provided earlier strategic warning of the Soviet offensive military buildup in Cuba.

In summary, based on my review of the record, I have yet to find evidence of overt bias, fear, or any other factors that caused President Kennedy to misinterpret the intelligence the US Intelligence Community provided him. Certainly he, like all human beings, were subject to the hidden, psychological biases as detailed above. These biases, if they were a factor at all, would more likely have affected the intelligence as it was being produced by the US Intelligence Community, which is an important factor. The tone and substance of CIA finished intelligence products certainly did fit with President Kennedy's existing view of the Soviets and therefore reinforced (potentially biased) that view. However, the impact that had on strategic warning was probably minimal. Other factors, such as weather and the desire to avoid a repeat of the Gary Powers U-2 shootdown incident over the Soviet Union were the main factors that precluded more aggressive photo reconnaissance efforts needed to confirm the presence of Soviet offensive weapons in Cuba. Any biases which would have

affected President Kennedy's interpretation of intelligence would not have had a significant impact on the timeline regarding initial discovery of missiles in Cuba. Concerning tactical intelligence, the president used his daily intelligence updates during the crisis to formulate and tweak the US Government's strategy to respond to the crisis and no evidence I have discovered suggests the president deliberately or accidentally misunderstood, misapplied, or politicized the intelligence provided.

Conclusion – Current Situation Assessment

Harkening back to the theory presented in chapter 1, accurate situation assessment is a function of quality intelligence, leadership receptivity, and objective interpretation of intelligence. Overall President Kennedy and his advisors were highly successful in building and maintaining a relatively accurate assessment of the current situation during the Cuban Missile Crisis.

Intelligence Quality – The US Intelligence Community provided the administration with high quality intelligence which supported the EXCOMM's key decision making functions. This was especially true in terms of accurately depicting Soviet military capabilities on the ground in Cuba. The intelligence community provided President Kennedy with a very accurate picture of actual Soviet military capabilities and assessments regarding the Soviet deployment timeline which allowed Kennedy time to deliberate and select the best policy option moving forward. A key question which was not answered at the time concerned the presence of Soviet nuclear warheads in Cuba. The US Intelligence

Community was unable to answer that question, but Kennedy assumed the worst, that the Soviets had a nuclear capability. Thirty years later, he was proven correct.

Receptivity – Kennedy was receptive of intelligence. He was a voracious consumer of information in general and was highly engaged with the intelligence professionals who provided him Cuba-related intelligence both prior to the Crisis via his daily President's Intelligence Checklist and during the crisis taking detailed current intelligence briefings from expert analysts from the National Photographic Interpretation Center and CIA's Missile and Space Division. The president was also highly reliant on intelligence and counsel from senior intelligence leaders, primarily the DCI John McCone during the crisis. Despite the potential problems in receptivity based on lack of trust generated by the Bay of Pigs disaster just 16 months earlier, Kennedy's replacement of the CIA's key leadership and McCone's efforts to reform his agency and earn the trust of the president and his colleagues prior to the crisis paid dividends in terms of the president's receptivity towards intelligence. The level of professionalism, responsiveness to the president's intelligence needs, and attention to detail exhibited in the intelligence briefings also helped build trust and thus improved receptivity towards the intelligence the US Intelligence Community presented to the president and the EXCOMM.

Interpretation – Kennedy accurately interpreted the intelligence on Soviet military capabilities in Cuba. He took briefings from intelligence analysts at the beginning of each EXCOMM meeting and used that information in the policy

debates that ensued. Key questions during the crisis period involved when would Soviet MRBM/IRBM missiles become operational and did the Soviets possess nuclear warheads in Cuba? The US Intelligence Community answered the first question and had to assume the worst based on lack of information on the second question. In theory, questions regarding Soviet military capabilities in Cuba might be subject to less interpretation errors/bias given the more concrete nature of analyzing order of battle intelligence and the intuitive, convincing nature of imagery intelligence which served as the primary confirmation source for capability-based intelligence assessments. The president correctly interpreted the fact that the Soviets were placing nuclear weapons in Cuba.

More complex, less clear, and certainly subject to more potential bias, was his interpretation of Soviet motivations for the deployment, their intent. Kennedy's pre-existing views of the Soviet Union may have skewed his interpretation of intelligence regarding Soviet motivations for the deployment. Kennedy, along with many other EXCOMM members and other Americans viewed the Soviets as an aggressive, expansionist power. This led him to believe the Soviets were placing missiles in Cuba to gain an offensive advantage over the U.S. (to leverage the allies out of Berlin or gain the international political initiative over the U.S.). This interpretation is fundamentally different from one which assessed the Soviet motivation was for defensive purposes (defending Cuba from a future US attack or rectifying the strategic nuclear imbalance). This drove Kennedy to conclude that Soviet missiles must be eliminated from Cuba either through a quarantine or through military action. Anything less would signal a

weakening of American prestige, loss of trust with our allies, and emboldening the Soviet Union to take advantage of the situation in Berlin, Laos, the Taiwan Straits, or other trouble spots. According to Raymond Garthoff, one of the foremost scholars on the Cuban Missile Crisis, material from Soviet archival and memoir sources now shed some light on the facts regarding Soviet motivation for the deployment, yet questions remain. We now know that Khrushchev had three primary motivations:

1) "a need to shore up the strategic balance with the United States,

2) a perceived need to deter an attack by the United States on Cuba and

3) a belief that a successful missile deployment in Cuba analogous to US deployments around the Soviet Union would give the United States a dose of its own medicine and would have a powerful positive impact on world politic as reinforcing Soviet attempts to gain political parity with the United States." (Garthoff, 1998, p. 24)

Kennedy, DCI McCone, and the National Intelligence Estimates placed their greatest emphasis on the Soviet's desire to enhance their strategic nuclear position vis-a-vis the United States and strengthen their international political standing. Kennedy's prior views regarding Soviet motivations may have biased his interpretation of intelligence and led him to discount the possibility the Soviets also had defensive motivations, which indeed they did (Garthoff, 1998, p. 24). Had Kennedy placed greater weight on Khrushchev's defensive motivation it could have led the president to the same conclusion held by Secretary of Defense

McNamara, that the Soviet deployment did not radically shift the strategic nuclear balance. That conclusion could have led Kennedy to an accommodation with the Soviet which may have left the offensive nuclear weapons in place in Cuba.

In summary, strategic warning was less than ideal in the Cuban Missile Crisis case; a series of factors came together which precluded more advanced intelligence warning to the president of Soviet offensive nuclear weapons in Cuba. However, tactical intelligence provided during the crisis enabled President Kennedy to develop alternate potential courses of action and helped him decide the appropriate US response. Kennedy was highly receptive towards the intelligence he received based on the overall professional relationship with the intelligence community and its leadership and the gravity of the situation at hand. Kennedy's potential biases may have influenced his interpretation of intelligence, but his interpretation of Soviet motivations was partially correct and was not flawed to the extent that it prevented him from adopting an effective policy to counter the Soviet missile deployment and bring the crisis to a peaceful end on terms favorable to the United States.

CHAPTER 4 – THE SOVIET WAR SCARE OF 1983

The 1983 Soviet War Scare refers to a series of events which culminated during North Atlantic Treaty Organization (NATO) Exercise Able Archer 83 between November 7-11, 1983. This exercise and a series of events leading up to this training event caused the Soviet Union to become very concerned the United States and its NATO allies were preparing to launch a preemptive nuclear war against the U.S.S.R. and its Warsaw Pact allies. This is the backdrop for the second case study.

This case examines what is perhaps the closest the Soviets came to launching a nuclear attack against the West based on their intelligence assessment of Western capabilities and intentions. Additionally, new information has recently been revealed in the now declassified 1990 President's Foreign Intelligence Advisory Board (PFIAB) study which sheds more light on NATO Exercise Able Archer 83, a central event in understanding the Soviet War Scare of 1983. Nate Jones from the National Security Archive was instrumental in working to declassify this key document through the Freedom of Information Act (FOIA) process and the subsequent national press coverage renewed interest in this interesting period of Cold War nuclear history. The National Security Archive and the Wilson Center have taken the lead in providing researchers and the public numerous primary source documents on this crisis. These documents tell the story of how Soviet fear of an imminent US/NATO nuclear attack continued to build in the early 1980s. Fueled by a combination of factors including: a renewed US commitment to defeat Soviet Communism, the

deployment of new nuclear weapons in Europe, the Soviet's realization that the "correlation of forces" was turning against them, and their historic fear of western domination, Soviet senior leaders, notably General Secretary Yuri Andropov, the former Soviet Committee for State Security (KGB) Chairman, became increasingly frightened of the US/NATO threat.[41] Many senior Soviet leaders truly believed the U.S. and NATO were capable and looking for opportunities to conduct a debilitating nuclear first-strike against the Soviet Union. Based on this profound and growing fear, the Soviet Union launched a special high-priority, resources-intensive, indications and warning intelligence program called Operation RYAN.[42] The mission of this special program was to gain a better understanding of the threat through systematic monitoring of US/NATO political and military activities to avoid potentially catastrophic surprise (Hoffman, 2009, p. 36). Perhaps most troubling in reviewing this case was the lack of US understanding of the depth and seriousness of Soviet fear. US leaders at the time had absolutely no intention of launching a bolt-out-of-the-blue surprise nuclear attack and the very thought seemed so farfetched that they never contemplated the Soviets would fear an unprovoked, surprise US nuclear attack. This situation made it easy for US leaders to quickly dismiss reports of Soviet concerns as mere propaganda. Only later, through information provided by Soviet KGB defector

[41] Please see the section titled "Sources of Soviet Anxiety" later in this chapter for a detailed discussion of both the long-term, strategic as well as the short-term, situational factors which contributed to Soviet fear of a pending US/NATO nuclear attack against the Soviet Union.
[42] Operation RYAN was a special, high-priority Soviet/Warsaw Pact intelligence collection and analysis program to provide senior Soviet military and political leaders warning of a pending US/NATO nuclear missile attack against the Soviet Union. The Russian-language acronym RYAN or VYRAN are short for the Russian words vnezapnoe raketno yadernoye napadeniye – translated as sudden or surprise nuclear missile attack.

Oleg Gordievsky, did President Reagan learn of the deep fear the Soviet leadership was experiencing. To his credit, President Reagan modified his rhetoric and policies to better account for the genuine fear the Soviets were experiencing and moved the world away from the dangerous precipice of nuclear confrontation in the early 1980s.

This chapter argues General Secretary Andropov and his senior advisors failed to make accurate situation assessments during the November 1983 NATO Able Archer Exercise. The KGB, the GRU,[43] and the intelligence services of their Warsaw Pact allies did not provide quality intelligence to Soviet leaders due to an overly politicized system which demanded intelligence that conformed with senior political and military leader's threat perceptions. The Soviet leadership was highly receptive toward intelligence. The senior Soviet leader, Yuri Andropov, was a career KGB officer and rose to lead that organization before assuming the role of General Secretary of the Communist Party of the Soviet Union. He was in a very unique position of having great insight into the strengths and weaknesses of that organization and was very familiar with its sources and methods for collecting and analyzing intelligence on Western nuclear capabilities and intentions. This familiarity led Andropov to trust in his intelligence services and in the intelligence products they provided the senior Soviet leadership. The Soviets also failed to objectively evaluate their intelligence. Their historical, deep-seated fear of the West; combined with US/NATO deployments of advanced nuclear weapons, capable of decapitating the Soviet leadership in 10-12 minutes;

[43] The GRU (Glavnoye razvedyvatel'noye upravleniye) is the acronym for Soviet military intelligence (subordinate to the Soviet General Staff).

President Reagan's strident anti-Soviet rhetoric; and a series of destabilizing events in 1983 led the Soviets to the point where fear, as opposed to rational analysis, drove their threat assessment of the U.S. and NATO. This final factor contributed to other failures which resulted in the Soviet misperception of NATO intentions. This situation led the world perilously close to nuclear conflict in 1983. Catastrophe was averted through the enlightened leadership of President Reagan, Margaret Thatcher, and others who finally realized just how dangerous the situation had become.

This chapter is organized as follows: first, I provide an overview of the 1983 NATO Able Archer exercise, the high point in a series of events in 1983 on the road to potential nuclear conflict. While far less has been written about this series of events than the Cuban Missile Crisis, there is a growing body of literature, especially since the 2015 declassification of the 1990 President's Foreign Intelligence Advisory Board (PFIAB) study, on this crisis.[44] An emerging body of literature is growing as scholars study the decisions and actions of both the US and Soviet governments during this period and the implications for nuclear crisis management in the future. Following a brief introduction to this crisis, I will provide some additional context which will help the reader better understand the climate of fear the Soviet leadership was operating under when they received warning intelligence and made situation assessments based on that intelligence. The next section characterizes the quality of the warning intelligence

[44] The PFIAB study is considered the definitive study of the Soviet War Scare based on hundreds of all-source intelligence documents and over 75 interviews with US and British officials. It is the only study written by authors with access to all US intelligence and the Soviet response to Able Archer 83 (Jones, 2016, p. 44).

used to inform decisions in reaction to US and NATO activities. I then discuss how Soviet leaders interpreted the intelligence they received to determine if they used the information in an objective way to make situation assessment or if other factors biased their judgement of the intelligence. Finally, the chapter concludes with an overall analysis concerning whether the Soviets made an accurate current situation assessment regarding the events surrounding NATO Exercise Able Archer 83.

Key Events

The events of 1983 brought the United States and the Soviet Union closer to nuclear confrontation than at any other time except the 1962 Cuban Missile Crisis. Fall 1983 was a period of increased tension as demonstrated through inflamed rhetoric and specific, provocative incidents. NATO Exercise Able Archer 83 was a high point of the crisis in which the Soviets believed NATO was preparing to launch a nuclear first strike against the Soviet Union. The five-day exercise ran from November 7-11, 1983 and was part of a series of NATO military exercises known as Autumn Forge. The goal of Exercise Able Archer was to practice command and control procedures required to release nuclear weapons in a wartime environment. The exercise scenario followed the usual escalatory formulation in which Soviet/Warsaw Pact forces had invaded a NATO ally (Norway in this scenario) followed by wide-scale air and naval attacks against NATO bases in Europe. The simulated conflict quickly escalated into a theater-level war across the European continent. NATO forces initially resisted Soviet aggression which led the Soviets to escalate the conflict using chemical

weapons. NATO forces quickly responded in kind to this new phase of the conflict by using chemical weapons in retaliation (Jones, 2016, p. 2). As the simulated conflict continued, NATO forces were no longer able to maintain the defense and NATO's senior military commander requested permission for initial, limited use of nuclear weapons against pre-selected fixed targets. NATO's political leaders granted the Supreme Allied Commander, Europe (SACEUR) permission to destroy Eastern European cities with NATO nuclear weapons to halt the Soviet invasion of Western Europe. Although the scenario was fictitious and designed as a backdrop to test and train tactical nuclear weapon release procedures, the Soviets believed the exercise was merely cover for NATO preparations for an actual nuclear attack on the Soviet Union and/or their Warsaw Pact allies. The Soviet reactions to this exercise included increased intelligence activity to monitor the exercise from an indications and warning perspective as well as increased force readiness levels at select military bases (President's Foreign Intelligence Advisory Board Report [PFIAB Report], *The Soviet War Scare*, 1990, p. 70). The Soviet concern with this exercise was also fueled by variations from previous years' exercise patterns. In 1983, NATO tested new procedures and moved simulated fielded nuclear forces from the Normal Alert stage up to General Alert, whereas in the past the exercise started in the General Alert phase (PFIAB Report, *The Soviet War Scare*, 1990, p. 70). The combination of the scripted command post exercise plus actual physical activity related to NATO nuclear weapons (nuclear weapons handling and field deployment of nuclear-equipped military units) further heighted Soviet fear that

the US/NATO were indeed preparing an actual attack. The Soviets also knew launching such an attack under the guise of a routine military exercise was a real possibility as it was a component of their own military doctrine.

The Context

The Soviet War Scare was in many ways the culmination of deteriorating relations between the United States and the Soviet Union resulting from the end of détente. President Carter, had taken many steps in response to the December 1979 Soviet invasion of Afghanistan to increase pressure on the Soviet Union including, imposing a grain embargo, increasing US defense spending, boycotting the 1980 Moscow Olympics, and withdrawing the SALT II Treaty from Senate ratification (Jones, 2016, p. 4). President Reagan ran his 1980 campaign against Carter premised on the notion the United States had fallen behind the Soviet Union militarily and the Soviets were using every opportunity to take advantage of the United States (Jones, 2016, p. 6). President Reagan entered office in January 1981 publicly decrying both the Soviet military threat and the moral bankruptcy of the Soviet Communist movement while at the same time privately corresponding with Soviet leaders about his desire for peace, highlighting both nations' responsibilities for global stability. The contradictory public and private statements from the President baffled Soviet leaders who called for summit meetings which President Reagan initially rejected. Another seeming paradox quickly emerged in Reagan's private calls for nuclear arms reductions and disarmament in his private letters to Soviet leaders while at the same time embarking on one of the largest US military buildups in history (Jones, 2016, p.

7-9).[45] These contradictions confounded Soviet thinking about the new President but Reagan was pursuing a new strategy, one aimed at not just accommodating the Soviet Union as had been the norm under détente, but in actively developing and executing a plan to reduce the danger of nuclear war and eventually to defeat the Soviet Union.

A great deal of what we know today about the Soviet War Scare of 1983 comes from the recently declassified President's Foreign Intelligence Advisory Board study of 1990. Nate Jones at the National Security Archive aggressively pursued the declassification process to provide scholars access to this key document summarizing this dangerous Cold War period. This PFIAB study reveals that while the Reagan administration was publicly warning about growing Soviet strategic nuclear superiority and taking concrete measures to rapidly enhance US military strength, including nuclear capabilities, the Soviets believed their nuclear defenses where inferior and deeply feared a US surprise attack.

Vulnerability of Soviet Nuclear Forces to a US/NATO Nuclear Surprise Attack

Soviet leaders in the early 1980s, despite their rhetoric which highlighted the superiority of Soviet Communism, fully realized the strategic nuclear balance was not favorable for the Soviet Union. Three major factors contributed to this Soviet problem: 1) deficiencies in their early warning network, 2) highly centralized command and control, and 3) strategic nuclear forces that were never a full readiness levels (PFIAB Report, *The Soviet War Scare*, 1990, p. 38). The

[45] President Reagan proposed a $2.7 trillion defense budget for 1982-1989, including a 18.1% increase in the 1983 defense budget.

Soviet had grown used to these shortfalls and seemed to tolerate them based on their belief, up to the late 1970s, in the unlikelihood of a US surprise attack (PFIAB Report, *The Soviet War Scare*, 1990, p. 38). Additionally, Soviet doctrine, like US doctrine, held that a nuclear conflict probably would not result from a bolt-out-of-the-blue type scenario, but would follow a somewhat predictable chain of events. Both sides believed a nuclear war would occur based on a degeneration of the political/military situation which progressed over time resulting in multiple stages of escalation. The conflict would start with a major political crisis, leading to a conventional military conflict, then to theater-level nuclear war,[46] and finally to a full-exchange of intercontinental, strategic nuclear weapons. Soviet belief in the quality and capabilities of their intelligence system and the generally open nature of Western democracies may have also contributed to their prior tolerance of strategic nuclear vulnerability (PFIAB Report, *The Soviet War Scare*, 1990, p. 38). This is not to say the Soviets were complacent. They built, deployed, and maintained silo-based strategic nuclear weapons systems[47] and ensured Soviet nuclear forces maintained high readiness levels to deter a US nuclear strike.

Recognizing serious problems with their early warning network in the late 1970s, the Soviets engaged in an ambitious program to close that critical vulnerability. Prior to the early 1980s, Soviet leaders could only expect approximately 13 minutes of warning time of a US intercontinental ballistic

[46] Which would probably also involve the initial use of chemical weapons by the Soviets and possibly by the US in retaliation.
[47] In addition to their manned-bomber and submarine-launched ballistic missile forces.

missile (ICBM) attack and between 5-15 minutes of warning for a submarine-launched ballistic missile (SLBM) attack (PFIAB Report, *The Soviet War Scare*, 1990, p. 39). In response to this unacceptable situation, the Soviets built and fielded new ballistic missile early warning radars and two new over-the-horizon radars (which were completed in 1981) to enhance their ground-based early warning coverage (PFIAB Report, *The Soviet War Scare*, 1990, p. 39). Additionally, by 1983 the Soviets further enhanced their warning capabilities by launching a series of space-based, infrared, launch detection satellites which covered ICBM launch sites in the continental United States. These improvements increased warning times from 13 to 30 minutes for US ICBMs and from 5-15 minutes to a little more than 15 minutes against US SLBMs (PFIAB Report, *The Soviet War Scare*, 1990, p. 39). These gains in warning time and subsequent decision making time were quickly reversed with the deployment of US Pershing II missiles systems in late 1983. This reduced first-strike warning time against the Soviet leadership in Moscow to approximately 8-10 minutes (PFIAB Report, *The Soviet War Scare*, 1990, p. 39).

In the early 1980s, the Soviets also became extremely concerned about their ability to effectively command and control their nuclear forces given the extremely tight decision making timelines that would be at play and the extreme duress their leaders would face resulting from compressed decision timelines. Deterrence in peacetime and operational warfighting in conflict depends on having a credible, reliable means for launching nuclear weapons should the need arise. Given the centralization of nuclear release authority in both the United

States and the Soviet Union, leadership survivability and decision making performance are two key aspects of effective command and control. During this period of increasing Soviet vulnerability, both elements came into question. The United States assessed nuclear release authority during the Soviet War Scare period probably rested in the hands of the General Secretary of the Communist Party and the Minister of Defense. In scenarios with extremely limited decision making time, the General Secretary was the sole nuclear release authority (PFIAB Report, *The Soviet War Scare*, 1990, p. 40). Recognizing the importance of leadership survival, the Soviets undertook a decades-long program to build a wide array of hardened and deeply buried command and control facilities in the Soviet Union, many near Moscow, to protect the senior leadership during a nuclear crisis/attack. In a real-life scenario, after the US Pershing II deployment to Germany in late 1983, Soviet leaders would have only had 8 minutes to move to an underground command post near Moscow (PFIAB Report, *The Soviet War Scare*, 1990, p. 39).[48] During this period, the senior Soviet leadership would need to consult with advisors, including military officials, agree on the appropriate response, and communicate nuclear attack orders to the General Staff. Effectively executing such a series of movements and decisions would certainly have been challenging. Failure would mean the Soviet nuclear arsenal would remain idle, vulnerable to attack. On the positive side, from a Soviet perspective, their nuclear

[48] The US Army Pershing II missile had an 1800 km range and would not have reached Moscow from its deployment sites in West Germany. However, Soviet intelligence believed this system had a range of 2500 km, an accuracy of 30 meters, and an earth-penetrating warhead. With these capabilities the Soviets believed it was designed to strike command and control targets in the Moscow area with little to no warning (PFIAB Report, *The Soviet War Scare*, 1990, p. 39).

weapons were secured using encrypted codes and they had made improvements to communications systems to ensure launch orders would move quickly and reliably to fielded forces once the Soviet nuclear command authority made the nuclear launch decision.

The PFIAB concluded that a critical weakness in the Soviet nuclear command and control system resulted from the relatively rapid succession of aged Soviet leaders between 1980-1984 (PFIAB Report, *The Soviet War Scare*, 1990, p. 41). Three aged, ailing, Soviet General Secretaries died over a three-year period.[49] Several senior Soviet military officers doubted whether the political leadership could make such momentous decisions due to their advanced age and ill health. The PFIAB study cites three public occasions in which Marshal Ogarkov, Chief of the General Staff, raised such concerns during the terms of General Secretaries Brezhnev, Andropov, and Chernenko (PFIAB Report, *The Soviet War Scare*, 1990, pp. 41-42).

Soviet leaders during this period realized many components of their nuclear arsenal were highly vulnerable to a debilitating first-strike. The one element of the Soviet nuclear arsenal which provided a credible deterrent was their silo-based ICBM force operated by the Strategic Rocket Forces (SRF). This force had demonstrated their capability to launch nuclear missiles under exercise conditions prior to simulated US nuclear weapon impacting their silos, however

[49] General Secretary Leonid Brezhnev, 75, died on November 10, 1982, Yuri Andropov served from November 10, 1982 to February 9, 1984 and died at age 69, and finally Konstantin Chernenko served from February 9, 1984 to March 10, 1985 and died at 73. All three leaders died in office.

their performance would probably not be as impressive under more challenging wartime conditions.

The Soviets used their SRF forces to compensate for significant vulnerabilies in other areas of their strategic nuclear triad and tactical nuclear systems. Surprisingly, Soviet strategic bombers, maintained and operated by Soviet Air Force Long Range Aviation units were kept at low states of readiness. Unlike their B-52 counterparts in the United States, Soviet Tu-95 BEAR bombers were not kept on strip alert. US intelligence estimated it would take from hours to days to ready this part of the Soviet nuclear force for combat. The Soviets must have believed their entire manned bomber force would have been wiped out in a US surprise nuclear strike (PFIAB Report, *The Soviet War Scare*, 1990, p. 42).

Soviet submarine-launched ballistic missile forces were also highly vulnerable. The Soviets deployed only about 1 in 6 of these boats at any given time and kept the vast bulk of their remaining SLBM force in port, vulnerable to US surprise attack. Even the submarines that were on patrol, while in a much better defensive position than their counterparts in port, where susceptible to US attack given the high level of effort and expertise the US Navy developed to hunt and attack Soviet nuclear submarines. The Soviets were well aware of the effectiveness of that effort based on the Jonathan Walker and Jerry Whitworth espionage efforts the Soviets had orchestrated (PFIAB Report, *The Soviet War Scare*, 1990, pp. 42-43).

Soviet theater nuclear forces directed against NATO units in Europe were also dangerously susceptible to US first-strike attack which would have

neutralized their capability prior to employment. Field deploying Soviet short- and intermediate-range nuclear missile units and artillery units supplied with nuclear weapons would have required significant logistic and security support. The time-consuming process of readying these systems for operational use was much longer than the time period for US forces to engage these units while they were still in garrison, thus leaving them highly vulnerable targets for a US first-strike.

US and NATO actions, in response to the Soviet SS-20 nuclear missile deployment in the late 1970s, further exacerbated Soviet nuclear vulnerability fears. An early part of Reagan's plan to more aggressively confront the Soviets included the "zero option", an effort to seek negotiations with the Soviet regarding eliminating their SS-20 intermediate range nuclear missiles which threatened US allies and troops in Europe in exchange for cancelling pending deployment of US Pershing II and Gryphon Ground-Launched Cruise Missiles (GLCMs). The Soviets refused that offer and President Reagan, despite a significant popular opposition in Europe, responded by continuing the planned deployment of these two nuclear systems to US bases in Germany (Pershing II and GLCM) as well as to bases in Italy, the UK, Belgium, and the Netherlands (GLCM). The Soviet KGB and East German intelligence tracked the deployment and closely monitored the operational status of these missiles as a top collection and analysis priority.

While macro-level forces were at work such as the end of détente, President Reagan's increasingly firm anti-Soviet rhetoric and massive defensive

buildup, and increasing Soviet realization of their strategic nuclear vulnerability, specific events also contributed to Soviet fears of an imminent US nuclear attack leading up to the 1983 NATO Exercise Able Archer. Specifically, the Soviet shootdown of South Korean Airlines KAL 007 on September 1, 1983, a major incident involving erroneous US nuclear launch warnings on September 26, and Andropov's rapidly deteriorating health situation in October 1983 contributed to Soviet fear of an imminent US/NATO nuclear attack.

The Soviet Shootdown of KAL 007

The fall of 1983 was one of the tensest periods in US-Soviet relations. On September 1, 1983, the Soviet Air Force shot down South Korean Airlines flight KAL 007 over Sakhalin Island[50] killing all passengers and crewmembers on board. Although it quickly became clear to the U.S. that the Soviets had misidentified the civilian Boeing 747 airliner[51] for a U.S. Air Force RC-135 which was flying an intelligence collection mission in international airspace near the Kamchatka Peninsula, the Reagan Administration seized upon this Soviet error to further depict the Soviet Union as an evil, despotic regime. The Reagan Administration publicly portrayed this as just the latest incident in a long

[50] KAL 007 ultimately crashed into the Pacific Ocean 9-11 nautical miles from the Sakhalin Island coast, according to KGB Deputy Chairman Kryuchkov (Kryuchkov & Mielke, September 19, 1983, p. 1-19).

[51] KGB Deputy Chairman Kryuchkov in a personal meeting with East German Minister for State Security Mielke on September 19, 1983 discussed how the Soviets did not know the aircraft was a civilian airliner and thought it was a military reconnaissance aircraft. Kryuchkov explained, "We did not know that the downed plane was a civilian airliner. Our pilots were not aware of that. We were convinced that it was a military aircraft. When the regional ground command issued its orders, it did not know it was a civilian airliner. We are not going to make this public, but this was just how it was. We were convinced that this was a special aircraft on a specific reconnaissance mission" (Kryuchkov & Mielke, September 19, 1983, p. 1-19).

campaign which revealed the Soviets' wanton disregard for human life. The Soviets compounded the seriousness of the situation by their reaction in which they accused the United States of using the civilian airliner as cover to collect intelligence and deliberately overflying Soviet territory. In the days following the incident, US Government officials sought to capitalize on the tragedy, whipping up anti-Soviet feeling. The US Government was working to embarrass Soviet officials and challenge their lies regarding the specific events connected with this unfortunate disaster. Soviet leaders saw the incident as a direct provocation (Hoffman, 2009, p. 86). On September 27, Deputy DCI Robert Gates provided Secretary of State Schultz with an intelligence assessment that stated US-Soviet relations were as "pervasively bleak" as at any time since Stalin's death in 1953. Gates recognized the Soviets feared the Reagan Administration more than any other presidential administration in history (Hoffman, 2009, p. 86).

On September 28, 1983, General Secretary Andropov issued what David Hoffman, author of *The Dead Hand*, characterizes as one of the "harshest condemnations ever of the United States" (Hoffman, 2009, pp. 86-87). Andropov's statement was published in Pravda and Izvestia and read on the evening television news broadcast. Andropov characterized the Reagan Administration as on "a militarist course that represents a serious threat to peace (Hoffman, 2009, pp. 86-87). "If anyone had any illusion about the possibility of an evolution to the better in the policy of the present American administration, these illusions are completely dispelled now" (Dobrynin, 1995, p. 540). Soviet Ambassador to the United States Anatoly Dobrynin said, "The Soviet leadership

had collectively arrived at the conclusion that any agreement with Reagan was impossible" (Hoffman, 2009, p. 87 as cited in Gates, 1996, p. 290).

The Serpukhaov-15 Early Warning Launch Incident

September 26, 1983 would prove to be an eventful and dangerous day in the long history of the Cold War and a contributor to the crisis situation which was developing in the months leading up to the NATO Exercise Able Archer 83. The world came much closer to nuclear war that day based on an erroneous launch indication. David Hoffman lays out the details of this fascinating incident in his book, *The Dead Hand*. The key figure in this amazing story is 44-year old Lieutenant Colonel Stanislav Petrov, the senior watch officer on duty at the top-secret Serpukhov-15 missile attack early warning center south of Moscow. Lt Col Petrov was not a line watch officer, but a systems engineer, whose day-to-day job was to monitor and improve the computer systems which processed sensor data from a series of Soviet infrared (IR) "Oko" satellites which monitored US ICBM fields. On this night, he would serve as the senior watch officer responsible for providing Soviet leaders the warning time they needed to formulate a response to a nuclear missile attack from the U.S. The center relied on data from seven orbiting satellites and contained the most advanced supercomputer in the Soviet Union which processed the IR satellite sensor data on-site (Hoffman, 2009, p. 7). The M-10 supercomputer processed the constantly streaming, incoming data using signature analysis to detect potential missile launches. The system was also designed with a backup optical camera which allowed ground-based operators at the warning site to visually verify US missile launch activity (Hoffman, 2009, p.

8). Lt Col Petrov was a veteran officer having worked at the center for 11 years, however, the satellite system was new, had been hastily rushed into service in late 1982, and the men working the system were told to work out any potential problems as they became more familiar with the system (Hoffman, 2009, p. 8). The ballistic missile early warning system, which had been in development since the early 1970s, was plagued with problems. Only 7 of the first 13 satellites launched from 1972-1979 worked for more than 100 days (Podvig, 2002, p. 31 as cited in Hoffman, 2009, p. 10). The Soviets were in a race to increase their early warning time over the 7-10 minutes their existing ground-based early warning radars could provide. The US already had a space-based IR warning constellation in orbit and the Soviets had rushed to build an equivalent system.

Lt Col Petrov was highly attuned to the political atmosphere in which he operated. He was aware of the increasing fear which had griped the Soviet political and military leadership. He knew the importance of his mission, to provide Soviet leaders the warning time they needed to assess the current situation, make decisions, and launch a nuclear counter-attack against the US should he provide a valid missile warning. He also believed the likelihood of a nuclear confrontation between the two superpowers was remote, given the enormous destruction that would result (Hoffman, 2009, p. 9).

The most significant event in Lt Col Petrov's military career occurred at 0015, in the middle of the night, when suddenly the bright red letters "LAUNCH" appeared flashing on the panel across the top of the room on the watch floor. According to Hoffman's account, a siren wailed, a light indicating the US launch

base lit up, and other electronic panels indicated a missile launch and a validity assessment: “high reliability”. This series of events had never happened before, and the warning team was stunned. Petrov immediately exercised command and ordered his technicians and operators to quickly start checking the system for anomalies to determine if this was merely a bug in the computer system or a real US ICBM launch. Petrov personally worked hard to quickly review the incoming streams of data to assess the launch validity. The system operators monitoring the optical camera on the satellite could not confirm a valid launch. Petrov believed it was highly unlikely the Americans would start World War III with the launch of a single ICBM and continued to work diligently to figure out what was happening. Under time pressure, Petrov called his supervisors and reported a “false alarm” although at that point he was not sure that was true. In the middle of that phone call, the panel lit up again with a second missile launch, then a third, a fourth, and a fifth launch. The flashing alert had changed from “LAUNCH” to “MISSILE ATTACK” which triggered an automated message to senior Soviet military officers. Without any additional information, Lt Col Petrov again told the duty officer at his higher headquarters this was all a false alarm. That “false alarm” message from one sensible, Soviet military officer saved the US from a retaliatory nuclear strike (Hoffman, 2009, p. 11). After initial praise from Soviet authorities for his calm leadership, he was criticized for failing to record key event details in his logbook. The Soviet investigation into the incident faulted Lt Col Petrov and he received a reprimand.[52] Sunlight, reflecting from the top of

[52] Lt Col Petrov died in May 2017.

clouds, caused the false alarm. The Soviets re-wrote the computer software to account for this natural phenomenon to prevent a recurrence of this type of false alarm (Chan, 2017).

The dangerous strategic political and military situation in the fall of 1983 and Soviet assessments of trends in the correlation of forces moving into the mid-1980s and beyond, characterized by the increasing vulnerability of Soviet nuclear forces, incidents such as the Soviet shootdown of KAL 007, the Serpukhaov-15 early warning incident, and rapid turnover in the Soviet's senior-most political leadership, provide the context for analyzing this case study. These negative trends and provocative incidents provide a backdrop to better understand how the KGB/GRU formulated intelligence warning, how receptive Soviet leaders were to intelligence, and how they interpreted intelligence to formulate situation assessments. The remainder of this chapter evaluates each of these elements to determine the accuracy of Soviet situational assessments prior to and during NATO Exercise Able Archer.

Warning Intelligence Quality

Intelligence Sources

The Soviet Union developed a strategic indications and warning system which focused on a US/NATO nuclear first strike against the Soviet Union as a primary intelligence warning problem. They called this system RYAN. The history of this intelligence warning system is fascinating. Nate Jones, from the National Security Archive, has written the definitive book on NATO Exercise

Able Archer 83 and RYAN[53] is a prominent feature in his analysis. Additionally, the 1990 PFIAB study and David Hoffman's book, *Dead Hand,* describe how this system was designed to provide senior Soviet leaders strategic warning of a US surprise nuclear attack. Operation RYAN began when the KGB's First Chief Directorate[54] and the Institute for Intelligence started working in 1979 on developing new concepts to provide the Soviet Union warning of nuclear attack (Jones, 2016, pp. 12-13).

The result of this initial conceptual work was rolled out at a major KGB conference in Moscow in May 1981 in which General Secretary Brezhnev and KGB Chairman Yuri Andropov warned the conference attendees that the US was "actively preparing for nuclear war" (Jones, 2016, p. 13). The KGB began in earnest in 1981 and 1982 to collect and analyze intelligence in the context of this new strategic warning framework (Jones, 2016, p. 13). The Soviets tasked their Warsaw Pact allies to also collect and forward intelligence reporting based on Operation RYAN indicators to KGB headquarters in Moscow (Wolf, 1997, p. 246). The KGB valued the Czechoslovak intelligence service and cited it as the second-best effort (behind the KGB, of course) in fulfilling RYAN's intelligence requirements (PFIAB Report, *The Soviet War Scare*, 1990, pp. 82-83). The East German intelligence service, the Ministry for State Security's foreign intelligence directorate (MfS-HVA)[55] was also a key player in this effort. This directorate, led

[53] Different documents refer to this special intelligence warning effort as either RYAN or VYRAN which is an acronym for the Russian words vnezapnoe raketno yadernoye napadeniye – meaning sudden or surprise nuclear missile attack.
[54] The KGB First Chief Directorate was tasked with collecting and analyzing foreign intelligence including against the "main enemy", the United States.
[55] This was the Hauptverwaltung Aufklärung (HVA) in the East German Ministry for State Security.

by Markus Wolf, was well-positioned to collect and analyze information on US deployment of Pershing II and GLCM missiles in West Germany based on its extensive human intelligence network, and active, effective signal intelligence collection efforts against those intelligence targets in West Germany.[56] Wolf took on the KGB-directed task and established a special staff and a situation center to coordinate this collection and analysis effort (Wolf, 1997, p. 264). Wolf discussed the East German contribution to the KGB-led operation in his 1997 memoir, *Man Without a Face,* and voiced his skepticism of Operation RYAN, which he makes clear, was ordered from above by his KGB masters and not open for debate. Wolf's doubt stemmed from his skepticism about the probability of nuclear war in Europe, but he did recognize the increasing intensity in the global competition between the US and the Soviet Union (Wolf, 1997, p. 247).

One of the more intriguing aspects of this operation was the Soviet attempt to build and operate a complex computer system designed to evaluate the "correlation of forces" based on collected RYAN data which the KGB used to objectively calculate the relative standing of the Soviet Union to the United States and warn their senior leaders of trends which the computer calculated could lead to a US nuclear first-strike against their country. The KGB operated under the assumption that "if the U.S. obtained decisive, overall superiority, it might be included to launch a surprise attack on the Soviet Union" (PFIAB Report, *The Soviet War Scare,* 1990, p. 44). The system was designed to "warn when Soviet

[56] The author reviewed many signal intelligence and finished intelligence reports on the US Pershing II and GLCM deployment and operational status in the MfS archive in Berlin in November 2017.

relative strength had declined to the point that a preemptive Soviet attack might be justified" (PFIAB Report, *The Soviet War Scare*, 1990, p. vi). The Soviet programmed the computer to quantitatively determine the relative level of US superiority and Soviet intelligence analysts believed the quantitative nature of the system would provide accurate strategic warning (PFIAB Report, *The Soviet War Scare*, 1990, p. 44).

The 1990 PFIAB report on the Soviet war scare details how this computer system functioned. Soviet military and economic specialists built the computer model consisting of 40,000 weighted elements. Software continuously processed and evaluated economic, political, and military data elements the Soviets assessed were important based on their experience in World War II (PFIAB Report, *The Soviet War Scare*, 1990, p. 44). The Soviets inserted data, not just foreign intelligence information, but also data about the Soviet Union, to allow the computer to make relative evaluations between the U.S. and the U.S.S.R. It is clear this was a high priority effort that extended beyond just the KGB into other areas of the Soviet government. A special organization in the KGB, consisting of approximately 200 employees, was responsible for data input and given the poor state of Soviet computing technology, one can assume the cost of building and operating such a computer system must have been quite high (PFIAB Report, *The Soviet War Scare*, 1990, p. 44).

The way the computer model calculated the relative strength of the Soviet Union versus the United States is intriguing. The U.S. was given a fixed score of 100 and the computer would then use economic, political, and military data inputs

to calculate the relative strength of the Soviet Union. At any value of 60 or above, Soviet leaders deemed the situation as safe, but they desired to maintain a level of at least 70 to provide a more comfortable margin. Data was continuously fed into the computer and thus a relative assessment could be made at any time. The Soviet Politburo received reports from the RYAN computer monthly (PFIAB Report, *The Soviet War Scare*, 1990, pp. 44-45). By 1984, after the Able Archer exercise, the RYAN computer assessed relative Soviet power with a score of 45, which was nearing the predetermined threshold of 40 which the KGB viewed as critical. A score under 40 would prompt the KGB and the Soviet military leadership to inform their political leadership that the nation's security was in jeopardy at which point the Soviets would begin preparations for a preemptive attack against the United States and/or NATO within a few weeks (PFIAB Report, *The Soviet War Scare*, 1990, p. 45).

Much of what we now know about Operation RYAN comes from former KGB Colonel Oleg Gordievsky, based on extensive debriefings after his defection to the West in July 1985. Soviet double agent Gordievsky passed along information about this computer system to his British case officers. He also detailed how Soviet leaders had come to believe the US was achieving a strategic advantage over the Soviet Union and how they believed US leaders were more willing to use nuclear weapons much earlier in a crisis than previously thought (PFIAB Report, *The Soviet War Scare*, 1990, p. 22).

The impetus for developing the RYAN computer model was the KGB's increasing concern that, given the ever-more complex nature of the Western

scientific and technological advances and the US-Soviet relationship, future assessment of the strategic balance was becoming extremely difficult. The KGB raised these concerns to the Soviet Politburo in the late 1970s, and the Politburo approved of the RYAN operational concept as a means for addressing this intelligence problem.

The East German Intelligence Service Role in Operation RYAN

Operation RYAN, the Soviet/Warsaw Pact effort to detect a surprise nuclear attack, was the top intelligence priority for the Soviet KGB in the early 1980s. The Soviets also tasked their Eastern European allies with collecting and forwarding intelligence in support of this massive collection initiative. The East German and Czechoslovakian intelligence services were the most highly valued contributors to the overall Soviet effort. Although RYAN had become operational in May 1981, the East German program was still in its infancy during the Able Archer exercise in November 1983. East German participation in the RYAN effort did not begin until January 1983. Senior KGB intelligence leaders, such as Chairman Chebrikov, met with East German Minister for State Security Erik Mielke to share conceptual thinking and operational details of the program. The KGB had provided the East German Ministry for State Security (MfS) with their indicators list, which Mielke called the "catalog with the surprise criteria."[57]

On February 9, 1983, Mielke indicated to his KGB counterpart, Chairman Viktor Chebrikov, that the MfS had read the document and was looking forward

[57] Mielke thanked KGB Chairman Chebrikov for providing the indicators list during a meeting in Moscow on February 9, 1983 (Chebrikov & Mielke, February 9, 1983, p. 1-3).

to further work with Soviet intelligence specialists to refine the indicators. Chebrikov acknowledged in the meeting the indicators list was not finalized, it was a work in progress (Chebrikov & Mielke, February 9,1983). Later in 1983, the KGB passed along their thanks to their East German counterparts for their intelligence work on Operation RYAN in a meeting between Minister Mielke and KGB Deputy Chairman Kryuchkov on September 19, 1983 and stated General Secretary Andropov was reading the material the KGB and MfS provided (Kryuchkov & Mielke, September 19, 1983, pp. 1-19).

Initially, the East German intelligence service had questions for the KGB regarding intelligence indicator lists, the organizational structure necessary to effectively operate, which organization within their respective intelligence services would be primarily responsible for RYAN operations, and how this intelligence would be shared across the Warsaw Pact, among other questions (Ministry for State Security, *Issues to Discuss with the Leadership of the KGB of the USSR*, January 14,1983, pp. 33-34). As of early October 1983, Kryuchkov didn't have answers to those questions. He believed the First Chief Directorate had an important role to play but stated, "Foreign intelligence cannot shoulder this responsibility. The problem is way too broad and serious" (Kryuchkov & Wolf, November 7, 1983, pp. 1-7). He also recognized the complexity of the problem, "Chekist foreign intelligence has to deal with the studying of war preparations, this is to determine characteristics, phenomena, and indicators, analyze them, and assess whether a war can start in half a year or in a year. For this there exists thousands of characteristics" (Kryuchkov & Wolf, November 7, 1983, pp. 1-7).

Kryuchkov acknowledged the First Main Directorate and the KGB Institute for Research of Operative Problems had made significant progress in conceptualizing indicators but stated it had not been decided yet organizationally where the intelligence assessment center should be located. The prevailing thought in the KGB was the new watch center should be directly subordinated to the KGB Chairman. Admitting the limited scope of the field effort he stated, "So far, foreign intelligence has submitted a few assignments to some KGB Resident agents abroad who have to report on them every two weeks (Bonn is among them)" (Kryuchkov & Wolf, November 7, 1983, pp. 3-4).[58] The amount of MfS documentation prior to Exercise Able Archer 83 is very limited. However, later documentation reveals, Operation RYAN continued well past the darkest days of the US-Soviet relationship in 1983. The MfS issued Order Number 1/85 on February 15, 1985 with a much more comprehensive set of indicators compared with the 1983 version Gordievsky outlined.[59] Despite the change in Soviet leadership and steps President Reagan, Prime Minister Thatcher, and General Secretary Gorbachev took to reduce tensions, Operation RYAN continued, probably based on bureaucratic inertia, nearly until the end of the Cold War. Based on reports exchanged between the KGB and the MfS, Operation RYAN continued until at least April 1989.[60]

[58] Kryuchkov's assessment of the status of intelligence collection may not have considered the level of collection the GRU was engaged in up to that time.
[59] See the Gordievsky indicator list below
[60] Based on MfS Operation Ryan reporting found at the Wilson Center Digital Archive at: http://digitalarchive.wilsoncenter.org/collection/224/project-ryan

Dr. Bernd Schaefer, who, along with Nate Jones and Ben Fischer, have published articles for the Wilson Center based on their study of the MfS's role in Operation RYAN, assesses the MfS was a very willing and productive partner although he detects a tone of skepticism in the documentation:

> Many Stasi[61] documents on RYAN read like overbearing bureaucratic exercises, aimed at comprehensiveness and perfection on paper, but unattainable in practice. Phrasing in some of the MfS materials implies that there probably was some skepticism in higher MfS echelons about the program's effectiveness and the Soviet approach (though it did not deter the MfS from contributing more substantive efforts than any other fraternal socialist intelligence service towards identifying indicators). (Schaefer, 2014, Forecasting Nuclear War)

Dr. Schaefer's assessment is confirmed in Marcus Wolf's view of Operation RYAN:

> With the U.S. rearmament program and the advent of the aggressive Reagan administration, our Soviet partners had become obsessed with the danger of a nuclear missile attack, which they referred to by an acronym, RYAN….The HVA[62] was ordered to uncover any Western plans for such a surprise attack, and we formed a special staff and situation center, as well as emergency command centers to do this. The personnel had to undergo military training and participate in alarm drills. Like most

[61] Stasi is the colloquial name for the East German Ministry for State Security (MfS), the Ministerium für Staatssicherheit der DDR

[62] Hauptverwaltung Aufklärung – East German foreign intelligence service in the Ministry for State Security

> intelligence people, I found these war games a burdensome waste of time, but these orders were no more open to discussion than other orders from above. I no longer believed in the possibility of nuclear war in Europe…. (Wolf, 1997, pp. 246-247)

Strategic Intelligence Warning

The quality of strategic warning intelligence can be assessed, in part on the quality of the indicators in the Operation RYAN warning system. Fortunately for this analysis, this secret indicator list is available. KGB defector Oleg Gordievsky who along with Christopher Andrew published the indicator list in their 1991 book, *Comrade Kryuchkov's Instructions: Top Secret Files on KGB Foreign Operations, 1975-1985*. The KGB headquarters in Moscow sent a Top Secret telegram to their Residencies in Europe tasking them with a "Permanent Operational Assignment" to collect warning intelligence related to US/NATO preparations for a surprise nuclear attack against the Soviet Union. The February 17, 1983 memo to the KGB Residency in London, from which Gordievsky was operating, sheds light on the specific intelligence collection requirements the Soviets were interested in to provide strategic warning to the Soviet senior leadership of a potential nuclear attack. The directive lists seven immediate tasks and 13 potential areas for collecting intelligence to support Operation RYAN. It also requests field agents to make suggestions on how to accomplish the primary collection tasks to cover the stated indicators. The immediate tasks included:

- Location of Government Officials - Collecting information about evacuation facilities for government officials and their families, including routes and evacuation methods.
- Nuclear Fallout Shelters - Identifying civil defense shelter locations and the state of preparedness to accommodate the general population. Immediate reporting to KGB HQ is required if shelters are being readied for use.
- Blood Banks – Identifying increased blood purchases from donor and the prices paid for blood donations.[63] Determining how blood donor reception centers operate.
- Civil Defense – Proposing plans for monitoring individual civil defense installations.
- Leisure Areas – Identifying locations frequently visited by officials during non-working hours by individuals responsible for making and implementing nuclear attack decisions.
- Key installations – Monitoring the most important government institutions, headquarters, and other installations involved in preparations for s surprise nuclear attack.[64]

[63] This indicator is based on the Soviet assessment that burns are the most widespread injury in a nuclear explosion and medical treatment would require widespread blood transfusions.
[64] Interestingly, the KGB provided very specific instructions on how this collection task should be accomplished. The KGB directed a normal, activity baseline should be established by counting the number of cars at facilities during the daytime and nighttime, the number of lighted windows during the daytime and nighttime, and activity levels on non-working days. Comparing increased numbers of cars, occupied offices, and general activity levels between the baseline and heightened levels would be an indicator of potential attack. This would allow analysts to detect increased activity.

- Host Nation Activity Against Soviet Citizens and Institutions – Reporting changes in police or intelligence activity relative to Soviet citizens and institutions[65] which may be associated with a surprise nuclear attack (Andrew & Gordievsky, 1993, pp. 71-72).

According to the PFIAB report, the following items constituted the top intelligence collection requirements to support Operation RYAN throughout the early 1980s. These were the most urgent collection requirements for the KGB, GRU, and the intelligence services of their Warsaw Pact allies:

- Plans and measures of the United States, other NATO countries, Japan, and China directed at the preparation for and unleashing of war against the "socialist" countries, as well as the preparation for and unleashing of armed conflicts in various other regions of the world.
- Plans for hostile operational deployments and mobilizations.
- Plans for hostile operations in the initial stage of war; primarily operations to deliver nuclear strikes and for assessments of aftereffects.
- Plans indicating the preparation for and adoption and implement of decision by the NATO political and military leadership dealing with the unleashing of a nuclear war and other armed conflicts (PFIAB Report, *The Soviet War Scare*, 1990, p. 58).

Specific tasking directed against the United States:

[65] This probably includes additional surveillance, questioning, or detention of Soviet citizens in the host country.

- Any information on President Reagan's "flying headquarters"[66] including individual airfields and logistic data.
- Succession and matters of state leadership, to include attention to the Federal Emergency Management Agency
- Information from the level of Deputy Assistant Secretary on up at the Department of State
- Monitoring of activities of the National Security Council and the Vice President's crisis staff
- Monitoring of the flow of money and gold on Wall Street as well as the movement of high-grade jewelry, collections of rare paintings, and similar items (PFIAB Report, *The Soviet War Scare*, 1990, p. 58). (This was regarded as useful geostrategic information)

Soviet intelligence personnel were also ordered to monitor US military and civilian installations for indications of military mobilization or other actions which could indicate a potential hostile move against the Soviet Union (PFIAB Report, *The Soviet War Scare*, 1990, p. 59).

It is important to note that Soviet intelligence leaders stationed in the field, who had a working knowledge of the political, cultural, economic, and military environment were extremely skeptical that NATO would launch a first strike attack. Oleg Gordievsky, a senior KGB officer in the London embassy; Oleg Kalugin, a career KGB officer now living in the United States; and Marcus Wolf,

[66] Referring to the National Emergency Airborne Command Post, a Boeing E-4 which would serve as an airborne command post for the US National Command Authority during a nuclear contingency.

head of foreign intelligence in the East German intelligence service, all believed NATO did not intend to launch a pre-emptive nuclear strike against the Soviet Union. According to Gordievsky, the more isolated Soviet leaders, in Moscow, including General Secretary Andropov, Defense Minister Ustinov, and Chief of the KGB foreign intelligence directorate, Vladimir Kryuchkov were the main drivers of the RYAN warning effort (Jones, 2016, p. 22). However, the skepticism of those operating abroad did not preclude them from following their orders (Andrew & Gordievsky, 1993, p. 69).

The field operatives continued to send raw intelligence reports on US/NATO activities back to KGB headquarters. Their RYAN indications and warning system orders called for them to only report their raw observations, without context or assessment to give meaning to what they had observed. This missed opportunity to obtain insights from field agents resulted in a critical flaw in the Soviet's strategic intelligence warning system. According to Nate Jones, who has extensively researched the Soviet War Scare of 1983, this flaw "played a key role in exacerbating the Soviet leadership's fear of a U.S. nuclear strike" (Jones, 2016, p. 22).

Following Exercise Able Archer 83, Soviet and East German intelligence leaders were aware of the flaws in their RYAN indications and warning system. The East German MfS remained skeptical of the effectiveness of RYAN. On August 24, 1984, Lev Shapkin,[67] deputy KGB Chief for Foreign Intelligence met

[67] Lev Shapkin previously headed the KGB Institute for the Research of Operative Problems, which studied and led the development of warning concepts and indicators (Kryuchkov & Wolf, November 7, 1983).

Marcus Wolf, Chief of the MfS Foreign Intelligence Directorate. The two discussed necessary changes to the Operation RYAN indications and warning system. Both were concerned that faulty reporting concerning preparation for a NATO nuclear first strike could lead to Soviet miscalculation. Shapkin told Wolf that RYAN indicators were part of a creative process that must be made more comprehensive, changeable, and more precise (Wolf, August 29,1984, p. 3) and cautioned against being misled by a relatively large number of enemy measures and indicators (Wolf, August 29,1984, p. 4).

Wolf also stressed the requirement to always know the "current situation", implying a need to understand the current situation in the larger context, outside the confines of the RYAN indications and warning system. Wolf noted, "Continuing assessments must be made to determine if certain developments suggest a crisis or not. Conditions must be constantly analyzed to determine if a conflict is emerging or is already apparent" (Wolf, August 29,1984, p. 13).

Tactical Intelligence Warning

Soviet intelligence services were well aware of the Able Archer 83 exercise and their human intelligence collection network "underwent a major mobilization to collect against it" (PFIAB Report, *The Soviet War Scare*, 1990, p. 70). The KGB and GRU alerted its staff in residencies in NATO countries to report on the increased alert levels at US military bases across Europe (PFIAB Report, *The Soviet War Scare*, 1990, p. 70). This tasking order instructed Soviet intelligence personnel to collect and report back any information related to an impending nuclear attack against the Soviet Union (PFIAB Report, *The Soviet*

War Scare, 1990, p. 70). Moscow's Warsaw Pact allies were also tasked with this urgent intelligence collection requirement during the exercise. The collection effort was not limited to human intelligence. Following an all-source intelligence collection strategy, the Soviets augmented their human intelligence (HUMINT) capabilities with increased technical collection. They conducted over 36 intelligence collection flights, "significantly more than previous Able Archers" (PFIAB Report, *The Soviet War Scare*, 1990, p. 70). To determine if the US Navy was moving closer to the Soviet Union as part of the exercise or as a prelude to a nuclear attack, the Soviets flew strategic and naval aviation reconnaissance missions in the Norwegian, North, Baltic, and Barents Seas (PFIAB Report, *The Soviet War Scare*, 1990, p. 70).

Soviet intelligence closely monitored NATO Exercise Able Archer 83 and tasked their KGB residences on November 5 with collecting intelligence on the exercises which started on November 7. KGB Headquarters in Moscow sent a message alerting its London Resident of possible NATO nuclear attack preparations in conjunction with the exercise. Presumably, this message also went to other KGB residences in other NATO member states. The message reminded the KGB field agents:

> Surprise is the key element in the main adversary's plans and preparations for war in today's conditions. As a result, it can be assumed that the period of time from the moment when the preliminary decision for RYaN is taken, up to the order to deliver the strike will be of very short duration, possibly 7-10 days. (Jones, 2016, p. 31)

The KGB tasked the Residencies with collecting intelligence to support several indicators including: leadership contacts between the US-UK governments, increased alert status at military bases in the UK, and use of new communication channels (Jones, 2016, p. 31-32). NATO did in fact conduct these activities as part of Exercise Able Archer and the Soviets had intelligence indicators and collection capabilities to monitor these activities. More specifically, Soviet human and technical collection assets were in position to collect information which would have activated indicators of pending nuclear attack based on the exercise scenario. Oleg Gordievsky recalled on November 8 or 9, the KGB and GRU residencies in Western Europe received a flash message reporting "an alert on U.S. bases." He believed the telegrams "clearly implied that one of several possible explanations for the (non-existent alert was that the countdown to a nuclear first strike had actual begun" (Jones, 2016, p. 32). Demonstrating Soviet intelligence penetration of NATO, this intelligence directly corresponded with the exercise events, as the NATO Supreme Allied Commander Europe (SACEUR) had requested authority for "initial limited use of nuclear weapons against pre-selected fixed targets." Exercise simulation cells in the U.S. and U.K. approved the requested nuclear use and the weapons were used in the exercise scenario on November 9 (Jones, 2016, p. 32). Other indicators of pending attack which raised Soviet fears included simulated:

- Flying 170 aircraft in a strategic airlift of 19,000 US reinforcement troops from the continental U.S. to Europe

- Transferring NATO's war headquarters from its primary to its alternate location
- Using new nuclear weapons release procedures
- Moving through all US Defense Conditions (DEFCONs) to general alert
- Uploading simulated nuclear weapons on fighter aircraft
- Transmitting radio message referring to B-52 nuclear strike missions (real-world, not simulated) (7th Air Force after action report and PFAIB study as cited in Jones, 2016, p. 32)

The exercise was not confined to simply command post simulations. Real, observable, fielded US and NATO forces also participated in the exercise. US Pershing II missile units were field deployed (without nuclear warheads) to dispersal sites in Ulm, Schwäbisch Gmünd, and Heilbronn. Given the extremely high priority for collection of this type of activity, the Soviet and East German intelligence services probably monitored this deployment via their Military Liaison Mission (human intelligence collection) and through signal intelligence collection of the US units' command and control radio channels.[68] Intelligence reporting of this activity could have further led the Soviets to believe the deployment, which corresponded with their indicators for pending nuclear attack, was in preparation for a nuclear attack (PFIAB Report, *The Soviet War Scare* as cited in Jones, 2016, p. 33).

[68] The author reviewed extensive documentation at the MfS archive in Berlin of East German signal intelligence reporting of Pershing II unit activities based on radio intercepts of US nuclear command, control, communication networks.

Warning Intelligence Assessment

This section provided an evaluation of the quality of the warning intelligence Yuri Andropov and other senior Soviet leaders presumably received during the Able Archer Exercise based on the same eight factors defining intelligence excellence used to evaluated intelligence quality for the previous Cuban Missile Crisis case. Unlike the Cuban Missile Crisis case, this assessment is not based on direct evaluation of Soviet intelligence products since those products are not available from the KGB archive. However, it is based on primary source evidence from Oleg Gordievsky, a senior KGB agent (Deputy Resident) at the London Residency during the Able Archer 83 exercise who is probably the West's most authoritative Soviet source of information on the day-to-day workings of Operation RYAN. Additionally, the 1990 PFIAB report on the 1983 Soviet War Scare and the Able Archer 83 exercise provide a declassified view of Soviet intelligence activities based on highly classified, all-source US intelligence. The following provides a systematic evaluation of the quality of Soviet Warning intelligence using the characteristics of quality intelligence as articulated in JCS Publication 2-0, Joint Intelligence.

Anticipatory – From a strategic intelligence warning perspective, Soviet intelligence anticipated the increased US/NATO nuclear threat and developed an indications and warning system designed, in theory, to provide Soviet leaders strategic and tactical warning of pending nuclear attack. The Soviet leadership recognized US/NATO capability to do harm and planned and implemented an intelligence warning system (albeit flawed in an operational sense) in direct response to this threat. At the tactical level, the Soviets knew about the Able

Archer exercise and provided raw warning intelligence reporting from their KGB Residencies to KGB Center. KGB Center used that intelligence in their assessments for senior Soviet political/military leaders. Soviet intelligence anticipated threats and was active to provide intelligence warning.

Timely – Based on Soviet military reactions to the NATO exercise, it appears as if Soviet leaders were receiving intelligence concerning Able Archer in a timely manner and acting upon that intelligence. The Soviet military took immediate measures to collect additional intelligence, ensure force readiness, and improve survivability in response to Soviet intelligence reporting on the NATO exercise.[69] Additionally, the Soviets had established reliable, encrypted, communication networks to receive timely field reporting from KGB and GRU intelligence units monitoring US/NATO political figures and military forces prior to the NATO exercise.

Accurate – Much of the intelligence derived from Operation RYAN was inaccurate. Soviet intelligence agents in the field, operating out of embassies in Western countries, were well placed to gain perspectives and insights on US/NATO military capabilities and intent. However, their reporting which revolved around raw intelligence, driven by indicators sent down from KGB Headquarters, did not include nuanced assessments or much assessment at all which would have helped Soviet leaders in Moscow develop a clear, more

[69] The PFIAB report highlighted the unusual Soviet military reaction to NATO Exercise Able Archer. "Although past Able Archer exercises were monitored by Soviet intelligence, the reaction by Warsaw Pact military forces and intelligence services to the 1983 exercise was unprecedented." Air armies in East Germany and Poland were placed on alert. The Soviets also significantly increased the number of reconnaissance flights over previous years (PFIAB Report, *The Soviet War Scare*, 1990, p. 7).

comprehensive picture of the current situation. Anatoly Dobrynin, the Soviet Ambassador to Moscow, referring to RYAN intelligence reporting in the following quote to the KGB Resident in Washington, stated "We both remained skeptical, but he forwarded what he could get (mostly rumors and guesses) to Moscow" (Dobrynin, 1995, p. 523).[70]

Usable – It seems as if some of the intelligence must have proven usable in that it did prompt the Soviets to take defensive measures. Additionally, the reporting formats the KGB and GRU used were likely well established and well known to the senior leaders receiving the information.

Complete – Significant intelligence gaps existed in covering the US/NATO nuclear attack intelligence problem. Most importantly, the Soviets did not have well placed, high-level human intelligence agents who would have been able to provide information on the intentions of senior US/NATO political leaders. This type of intelligence is sometimes also available via communications intelligence. It is conceivable the cryptographic materials Soviet agent John Walker and other agents may have allowed Soviet intelligence to gain access to sensitive US/NATO military communications. Based on Soviet criticism in their KGB 1984 Work Plan, it seems apparent the KGB was not satisfied with their level of knowledge of US/NATO intent based on HUMINT reporting (Andrew & Gordievsky, 1993, p. 14-22).

Relevant – Based on an assessment of the known indicators, some of the intelligence provided was relevant and some of it was highly irrelevant.

[70] See the "Objective" section below for further details regarding why much of the Operation RYAN intelligence was inaccurate and misleading.

Intelligence on the location of senior Western political leaders; civil defense activities, including the status of nuclear fallout shelters; and activity at key military installations would have been relevant indicators. Increased activity at blood banks, the price paid for blood at donation centers, the location of off-duty locations frequently visited by senior leaders, and the activities of bankers and church religious leaders were examples of poor indicators of nuclear attack (Andrew & Gordievsky, 1990, p. 589). The indicator list the KGB sent to London in February 1983 demonstrated a gap in knowledge regarding the preparations the U.S. or the British would take before launching nuclear attack. The Soviets built their initial indicator lists based on their own concept of nuclear war, what they would do to prepare an offensive nuclear attack. In August 1983, the KGB further exasperated this problem by including additional indicators based on their own war plan which included: increase in disinformation campaigns; infiltration of sabotage teams armed with nuclear, biological, and chemical weapons; increase in "repressive measures by the punitive authorities"; and expanding the network of subversion-training schools (Andrew & Gordievsky, 1990, p. 593). KGB assumptions that the British would implement such measures were absurd. This was clearly a bad case of mirror-imaging. In January 1984, the KGB Center further refined the indicator list. KGB field operatives were to also monitor banks, post offices, and slaughterhouses for increased or unusual activity. This strange set of requirements was also probably the result of mirror imaging (Andrew & Gordievsky, 1993, p. 88 and Andrew & Gordievsky, 1990, pp. 601-602).

Objective – One of the most high-impact problems which plagued Operation RYAN intelligence was its lack of objectivity. Oleg Gordievsky recounted, "Residencies were, in effect, required to report alarming information even if they themselves were skeptical of it. The Center was duly alarmed by what they reported and demanded more" (Andrew & Gordievsky, 1990, p. 585). The PFIAB report also included references to erroneous field reporting. Some KGB field agents felt their reporting was partly to blame for the increase anxiety Moscow felt regarding nuclear war with the United States. According to the PFIAB report "it (the Residencies) had, willy-nilly, submitted alarmist reports on the West's military preparations, intensified ideological struggle, and similar themes to try to satiate Moscow's demands for VRYAN[71] reporting." (PFIAB Report, *The Soviet War Scare*, 1990, p. 64). Christopher Andrew, a well-respect intelligence historian, also included this information in his book with KGB archivist Vasili Mitrokhin, "The alarmist RYAN reports obediently provided by KGB residencies were merely an extreme example of Line PR's[72] habitual tendency to tell Moscow what it wanted to hear." One political intelligence officer later admitted: "In order to please our superiors, we sent in falsified and biased information, acting on the principle: Blame everything on the Americans and everything will be OK. That's not intelligence, it's self-deception!" (Andrew & Mitrokhin, 1999, p. 214).

[71] VRYAN is a variation of the RYAN acronym
[72] Line PR is the political, economic, and military, strategic intelligence and active measures section in a KGB Residency (Andrew & Gordievsky, 1993, p. xvii).

Available – Given the high-level political and military positions of the senior Soviet leadership, they would have had priority access to any existing, relevant intelligence. Additionally, all the players would have had the security clearances to access the necessary intelligence information. Raw intelligence produced via technical collection such as Soviet satellite reconnaissance and ground-based signals intelligence would have been available to KGB and GRU analysts. However, one of the major flaws in the Soviet Operation RYAN intelligence system was their provision of raw, unevaluated, non-contextualized intelligence reporting to their senior leaders, vice finished, all-source warning intelligence products.

Warning Receptivity

To effectively make accurate current situation assessments senior leaders must be receptive to intelligence. Leaders must remain critical thinkers but their ability to incorporate key facts into their thinking is based, in part, on the level of receptivity to the information intelligence professionals work hard to provide. This section analyzes the level of intelligence receptivity of Yuri Andropov and key senior Soviet leaders prior to and during the War Scare of 1983 which culminated during the November 1983 NATO Able Archer exercise. It will examine key factors which influenced receptivity including: Andropov's prior intelligence experience, the effect of catastrophic failure on receptivity, the Andropov-Chebrikov relationship, and intelligence during and after the Able Archer exercise.

Andropov's Intelligence Background

Yuri Andropov, upon his ascent as General Secretary[73] following Brezhnev's death on November 10, 1982, was unique in that he was the first and only KGB Chairman to serve as General Secretary. Prior to his long, 15-year tenure as KGB Chairman (1967-1982), Andropov served in various Communist Party and government positions. Notably, he was the Soviet Ambassador to Hungary in 1956 and witnessed first-hand the Hungarian Revolution against the communist system which Soviet/Warsaw Pact troops brutally suppressed. His experience in Hungary had a lasting impact and he became a hardline supporter of the Brezhnev Doctrine. Such hardline, uncompromising attitudes would characterize Andropov's beliefs and approach to the West in which he became increasingly paranoid about the US and NATO threat.

Later, Yuri Andropov served as KGB Chairman from May 1967 to May 1982. As the longest serving Chairman, Andropov was a key player in many of the most important events of the Cold War, including the 1968 Soviet/Warsaw Pact invasion of Czechoslovakia, the 1979 Soviet invasion of Afghanistan, and the 1981 Polish Crisis. He also presided over an internal security apparatus responsible for mass domestic political repression. Entering the most senior leadership post in the Soviet Union as General Secretary, Andropov was an expert on Soviet intelligence, aware of its capabilities and limitations, and fully convinced of the critical need to use intelligence to protect the Soviet Union from US and NATO subversion or outright military attack.

[73] The formal title is: General Secretary of the Central Committee of the Communist Party of the Soviet Union.

Andropov, based on his long experience as KGB Chairman and the father of Operation RYAN, was highly receptive to intelligence in general and more specifically to the intelligence RYAN produced. In fact, one could probably not find someone more receptive of Operation RYAN intelligence than Yuri Andropov. According to Raymond Garthoff, in his book *Soviet Leaders and Intelligence*, KGB Chairman Andropov and Defense Minister Ustinov presented the Soviet Politburo a plan sometime between March-May 1981 to initiate Operation RYAN (Garthoff, 2015, pp. 61-62). With Politburo approval, Andropov proudly announced the unprecedented intelligence collection and analysis effort in May 1981 at a secret conference of senior KGB officers. The presence of General Secretary Brezhnev at this meeting certainly lent a sense of importance and urgency to Andropov's message:

> The most dramatic speech however, was given by Yuri Andropov, the Chairman of the KGB, who was to succeed Brezhnev as General Secretary eighteen months later. The new American administration, he declared, was actively preparing for nuclear war. To the astonishment of most of his audience, Andropov then announced that, by a decision of the Politburo, the KGB and GRU (Soviet military intelligence) were for the first time to cooperate in a worldwide intelligence operation codenamed RYAN. (Andrew & Gordievsky, 1990, p. 583)

Ben Fischer, a former CIA officer, intelligence historian, and a leading scholar on Operation RYAN, describes Andropov as the leading proponent of RYAN. "He inaugurated the alert in 1981 as Chairman of the KGB and presided

over its expansion after succeeding Leonid Brezhnev as General Secretary the next year" (Fischer, 2014). The KGB formed a new watch center to process RYAN reporting in their headquarters. The new division was a high priority and was almost certainly initiated by Andropov. The formation of a special RYAN commission chaired by KGB chairman Viktor Chebrikov underscored the alert's top-level political backing and its bureaucratic clout (Fischer, 2014). As General Secretary, Andropov continued Operation RYAN, the program he had started, to ensure the Soviet's would not be caught by a surprise nuclear attack from the United States.

Another element which increased the appeal and probably positively affected Soviet receptivity towards warning intelligence was the highly scientific, analytic methodology the RYAN computer system employed. US intelligence and defense officials knew of the Soviet computer system at the time and praised its capabilities claiming the results were "highly objective, empirically provable and readily adaptable to modern data processing" (Jones, 2016, p. 14). Soviet leaders were "highly dependent" on this computer model during the 1983 war scare period (PFIAB Report, *The Soviet War Scare,* 1990, p. 43). The PFIAB concluded that although it may seem very unusual, potentially absurd, from an American perspective to put so much trust in a computer to calculate the strategic balance of forces between the U.S. and the Soviet Union, "this approach may have been especially appealing to Soviet leaders at the time" (PFIAB Report, *The Soviet War Scare,* 1990, p. 46). Nearly all senior Soviet leaders during this period were formally trained as engineers. To them a seemingly objective, scientifically

based computer model handling a complex problem like the strategic balance would have had broad appeal and would have been considered a highly credible source of intelligence (PFIAB Report, *The Soviet War Scare*, 1990, p. 46).

Intelligence Failures - Impact on Receptivity

During Yuri Andropov's short tenure as General Secretary between Nov 1982 – February 1984, there was not a significant, punctuating intelligence failure on par with President Kennedy's Bay of Pigs fiasco which had the potential to damage intelligence receptivity. The long, grinding war in Afghanistan occurred during this time, but the initial decision to intervene in that country was either not well informed by intelligence or the Soviet leadership dismissed those assessments. The Soviet Chief of Foreign Intelligence, Vladimir Kryuchkov, opposed the intervention as did KGB officers involved in Afghan affairs (Garthoff, Détente and Confrontation, pp. 991-1046 and 1014-1017 as cited in Garthoff, 2015, p. 59). The GRU was not aware of the pending political decision to invade nor asked for an assessment (Garthoff, 2015, p. 60). Andropov's role in the Afghanistan decision is disputed. Some sources state he opposed the invasion based on the negative impact it would have on relations with the West, while Garthoff contends Andropov joined Brezhnev, Ustinov, and Gromyko in the December 12, 1979 invasion decision (Garthoff, 2015, p. 60). In any case, since Andropov was KGB Chairman at the time of the invasion decision, he would probably not have blamed intelligence for the increasingly difficult Soviet situation in Afghanistan (since their assessments were accurate despite not receiving a full hearing by the Soviet leadership).

The KAL 007 shootdown incident could be considered relevant due to its temporal proximity to the November 1983 Able Archer exercise and because it was a massive, publicly embarrassing Soviet failure which had the potential to damage relationships between the Soviet senior political leadership and elements within the Soviet defense establishment. The Soviet Air Force was primarily responsible for the shootdown of the civilian jetliner. Andropov, recalling Soviet Ambassador to the U.S. Anatoly Dobrynin from his vacation in Crimea, put the full blame on the Soviet military. He told Dobrynin, "Our military made a gross blunder by shooting down the airliner and it probably will take us a long time to get out of this mess" (Dobrynin, 1995, p. 537). During the conversation with Dobrynin, Andropov cursed "those blockheads of generals who care not a bit for grand questions of politics" (Dobrynin, 1995, p. 537). Andropov believed this flight was an American provocation designed to test the air defense capabilities in the Soviet Far East but that was no excuse for the Soviet Air Force to shoot the plane down instead of forcing it to land. The Defense Minister, Ustinov, summoned the top generals from the Soviet Far East for a severe verbal reprimand over the poor state of radar coverage in that area (Dobrynin, 1995, pp. 537-538). Given the lack of direct KGB or GRU involvement in this incident and Andropov's channeling of his anger towards the Soviet military, it is unlikely KAL 007 had adverse impact on the relationship between the Soviet leadership and its intelligence organizations or on the credibility of their subsequent intelligence reporting.

The Andropov-Chebrikov Relationship

Upon taking power as the General Secretary, Andropov moved to consolidate power and form his own team of advisors. He moved within a few months to appoint several known, trusted individuals from his time in the KGB. Key among these appointments, was his new KGB Chairman, Viktor Chebrikov. General Secretary Andropov had a long, 14-year relationship with his newly appointed KGB Chairman, who had served as Andropov's deputy from 1968-1982. When Andropov moved out of his KGB leadership job in May 1982 to take a position in the Central Committee Secretariat to be groomed as the next General Secretary, the KGB Chairman position was filled by Vitaly Fedorchuk, but only for seven months. After Brezhnev's death in November 1982, Andropov moved Fedorchuk to be the Minister of the Interior and moved Viktor Chebrikov into the KGB Chairman position (Ebon, 1983, p. 84). Although Andropov's choice of Chebrikov may have seemed a natural selection based on his long-standing relationship, Chebrikov was identified as a protégé of Brezhnev, having, like Brezhnev, begun his party career in the Dnepropetrovsk region and attended the same college as Brezhnev. According to Andropov biographer Zhores Medvedev, "Chebrikov was a trusted adherent of Brezhnev" (Medvedev, 1983, p. 121). Despite his former association with Brezhnev, Andropov concluded Chebrikov was "an able man whom he knew well and could count upon for full co-operation" (Medvedev, 1983, pp. 121-122). Of course, Andropov's relationship with his country's intelligence service extended beyond just one man. In fact, to rapidly consolidate his power and surround himself with trusted confidants, Andropov brought along many of his entourage from the KGB to fill key party

and government posts, "Geidar Aliyev became a Politburo member and first deputy premier, Vitaly Fedorchuk was named Minister of Internal Affairs, and Victor Chebrikov became KGB Chairman" (Solovyov and Klepikova, 1983, p. 275). Chebrikov remained the KGB Chairman through Andropov's short tenure as General Secretary, and through Chernenko's even shorter period as General Secretary (February 1984-March 1985) before Gorbachev replaced him with Vladimir Kryuchkov who had served as the head of the KGB First Chief Directorate under Andropov. Kryuchkov's career ended abruptly in 1991 as he was one of the key leaders in the failed August coup against Gorbachev.

Intelligence Receptivity During the Soviet War Scare of 1983

Based on the Soviet military reaction to the events of Able Archer, it seems clear the Soviet senior political and military leadership were very much aware and in tune with the intelligence data they were receiving from the field. Evidence from the 1990 PFIAB report and the May 18, 1984 Special National Intelligence Estimate indicates Soviet leaders took defensive precautions in reaction to NATO events as they unfolded during Exercise Able Archer. Soviet Air units in Germany and Poland assumed a high alert status by readying nuclear strike forces during the exercise, and increasing the number of fighter-interceptors on strip alert (Central Intelligence Agency, *Implications of Recent Soviet Military-Political Activities*, 1984, p. 1 and p. 4).[74] What may be less clear is the level of

[74] Note: This Special National Intelligence Estimate (SNIE) downplays the significance of Soviet military reactions to Able Archer and concludes the War Scare in terms of Soviet propaganda efforts "Soviet talk of nuclear war has been deliberately manipulated to rationalize military efforts with domestic audiences and to influence Western electorates and political elites" (Central Intelligence Agency, Implications of Recent Soviet-Military-Political Activities, 1984, p. 5). The 1990 PFIAB report was critical of this interpretation.

General Secretary Andropov's role during the 1983 War Scare and the level of his involvement with Soviet intelligence agencies during the period between early November and the conclusion of the Able Archer exercise on November 11. We do know that Andropov was extremely ill during this period. He suffered from chronic hypertension and diabetes which was complicated by kidney disease (PFIAB Report, *The Soviet War Scare*, 1990, p. 66). The day after the KAL 007 incident Andropov took part in his final Politburo meeting in Moscow before leaving for vacation in Crimea. In mid-October 1983, Andropov possibly had to have one kidney removed. His failing health forced cancellation of a state visit to Bulgaria (although the official reasons given was due to the intense international situation). Andropov also failed to appear in the annual Kremlin celebration of the 1917 Bolshevik Revolution (PFIAB Report, *The Soviet War Scare*, 1990, p. 69). He was not seen in public since at least before the KAL 007 incident on September 1 and would not be seen in public again until his death in February 1984.

Operation RYAN After the Crisis

In 1984, following the Exercise Able Archer crisis, bureaucratic momentum kept RYAN alive and it is clear the enthusiasm emanated from the KGB Center although not from the Residencies. KGB Headquarters continued to issue refined operational instructions to its field officers who were skeptical and increasingly apprehensive of the effectiveness of this operation. The KGB operation in London was scolded for not turning in one of their bi-weekly reports into headquarters during the summer of 1984 (Andrew & Gordievsky, 1993, p.

89). Andrew & Gordievsky make the argument that interest in Operation RYAN continued to decline for several reasons. First was the change in senior leadership in Moscow. The most ardent supporters of RYAN, those with the greatest nuclear war paranoia, were replaced by a new group of leaders less nervous about nefarious Western motives. General Secretary Andropov died on February 9, 1984. His successor, Konstantin Chernenko, was less suspicious of Western intentions than Andropov.[75] Chief of the General Staff, Ogarkov, a prominent public hawk, was fired and reassigned.[76] Defense Minister Ustinov became seriously ill with pneumonia shortly after Ogarkov was fired and died on December 20, 1984 (Andrew & Gordievsky, 1990, p. 604). A second key reason for the decline of Operation RYAN was the expected imminent nuclear attack from the United States/NATO did not occur. Soviet leaders had been aggressively warning their KGB Residencies, and whipping up public anxiety of nuclear war for the past two years, an event that fortunately did not happen. Logically, this certainly did not mean it would not or could not occur in the future. However, the heightened level of vigilance the Center demanded, in reality, was difficult to credibly sustain given the lack of indications of a pending US attack. Third, Operation RYAN intelligence failed to secure the war plans Soviet official so desperately sought. Soviet intelligence failed to find evidence the U.S. or NATO was preparing an imminent nuclear attack. Gordievsky and

[75] Chernenko differed from Andropov in that he believed the United States might "return to a realistic evaluation of the correlation of forces and resume negotiation and détente with the Soviet Union" (Garthoff, 2015, p. 71).

[76] Ogarkov may have been moved from the Politburo to signal a willingness to improve relations with the United States. This move, placing Akhromeyev as Chief of the General Staff may have been driven by younger Politburo members Gorbachev, Romanov, and Aliev.

other Residents "were encouraged to note the emergence in Moscow of a less paranoid interpretation of American and NATO policy" (Andrew & Gordievsky, 1993, p. 89). Documentary evidence from the MfS archive indicates the East German effort to support Operation RYAN really ramped up in 1984 and 1985 and the East Germans continued RYAN reporting until April 1989.[77] The KGB did not shut Operation RYAN fully down until November 27, 1991, one month before the end of the Soviet Union (Garthoff, 2015, p. 63).

Leadership Interpretation of Warning

Soviet leaders suffered from both motivational and cognitive distortions in interpreting intelligence to formulate current situation assessments. Soviet leaders made assumptions concerning the motivation for US/NATO activities which biased their interpretation of events. Additionally, based on overwhelming evidence, the fear they perceived created deep motivational distortions in their interpretation of intelligence.

Based on their reaction to the Able Archer exercise, Soviet leaders must have assessed the situation and the danger of nuclear conflict as real. The PFIAB cited the Warsaw Pact military reaction to the exercise as "unprecedented" in scale. Based on Soviet/Warsaw Pact military preparations for this exercise and the scale of their reaction, "Soviet military leaders may have been seriously concerned that the U.S. would use Able Archer 83 as a cover for launching a real attack" (PFIAB Report, *The Soviet War Scare*, 1990, p. 70). A heavily redacted

[77] Based on MfS Operation Ryan reporting found at the Wilson Center Digital Archive at: http://digitalarchive.wilsoncenter.org/collection/224/project-ryan

section of the PFIAB study details the numerous military actions the Soviets undertook in anticipation of and during the exercise. Many indicators of Soviet military activity had been seen only during crisis periods in the past and included transporting Soviet nuclear weapons from storage sites to operational units by helicopter, a suspension of all flight activity except intelligence collection flights from November 4-10, (to perform maintenance and ensure maximum combat readiness), and improving the readiness posture for selecting priority NATO targets (PFIAB Report, *The Soviet War Scare*, 1990, p. 72). The Soviets placed their nuclear forces on alert in response to Able Archer, a step they had never taken in the past in response to NATO exercises (Jones, 2016, p. 34). On November 11 the heighten state of alert was lowered and Marshal Ustinov made a speech in Moscow that the PFIAB authors believe sheds light on possible reasons for the unusual Soviet response to the Able Archer exercise. Marshal Ustinov called US actions ""reckless", "adventurous", and accused the U.S. of moving the world towards "nuclear catastrophe" (PFIAB Report, *The Soviet War Scare*, 1990, p. 74). Ustinov went further to state, "no enemy intriguers will catch us unawares" referring to Soviet fears the U.S. and NATO would use the cover of an exercise to launch a surprise nuclear attack (PFIAB Report, *The Soviet War Scare*, 1990, p. 74). Marshall Ustinov seemed genuinely concerned, warning the officers listening to the speech that the international situation had deteriorated and "the increased danger of an outbreak of a new world war" necessitated extraordinary measures (PFIAB Report, *The Soviet War Scare*, 1990, p. 74).

The PFIAB assessed the Soviet interpretation of their intelligence on Able Archer as generating legitimate concern. The evidence the PFIAB cites for this assessment is as follows (PFIAB Report, *The Soviet War Scare*, 1990, p. 75-76):

- US-Soviet relations were at their lowest point in 20 years and the threat of an imminent US attack was a constant theme in Soviet media.[78]
- The Soviets were possibly very concerned about the integrity of nuclear command and control as the only person authorized to release nuclear weapons, General Secretary Andropov, was seriously ill with kidney failure.
- Soviet doctrine envisioned a NATO surprise attack coming under the guise of a NATO exercise which would have ensured such forces were mobilized, equipped, and brought to full combat readiness prior to transitioning from exercise to full combat mode.

This indicates the Soviet leadership trusted the services providing the warning intelligence. US intelligence noted some Soviet forces were readied to preempt or counterattack NATO action launched under the cover of the Able Archer exercise.

The Joint Intelligence Committee (JIC) in the U.K. also noted the unprecedented Soviet reaction to Able Archer in a memo from the Ministry of Defence to Prime Minister Thatcher advocating for a system of notifications for

[78] Imminent war was a constant media theme in the Soviet press at that time. This led many in the US Intelligence Community to falsely dismiss the Soviet war scare as merely Soviet propaganda. US intelligence failed to see the true danger present at the time that an accident or miscalculation from NATO could have triggered a catastrophic Soviet response (Central Intelligence Agency, *Implications of Recent Soviet Military-Political Activities*, 1984, pp. iii-iv).

future nuclear command post exercises. Although the JIC could not make a firm conclusion, it stated "…we cannot discount the possibility that at least some of the Soviet officials/officers may have misinterpreted Able Archer 83 and possibly other nuclear CPXs[79] as posing a real threat" (Ministry of Defence, United Kingdom, Soviet Union Concern About a Surprise Nuclear Attack, 1984, cited in Jones, 2016, pp. 251-257).

Sources of Soviet Anxiety

Soviet leaders, especially during the period of this study, harbored a deep, genuine fear of the United States. In a broad, strategic context, senior Soviet leaders realized by 1983 that détente had broken down. President Reagan's strong, anti-Soviet rhetoric and psychological operations campaign[80] reinforced Soviet leader's existing fear and distrust of the U.S. and its NATO allies. The Soviets were also well aware that their nuclear forces were increasing vulnerable to a disarming US first strike. This sense of vulnerability was heightened by the pending deployment of Pershing II and Gryphon missile systems to Western Europe in late 1983 when the Soviets realized their propaganda and active measure campaign in Western Europe had failed to derail the nuclear deployments. Additionally, Soviet concerns about President Reagan's Strategic Defense Initiative program, led Soviet leaders to conclude the U.S. was opening a new chapter in the nuclear arms race between the two superpowers to outcompete

[79] CPX – Command Post Exercise

[80] The US psychological operations campaign included increased US naval and air activity near the Soviet Union designed to test Soviet military readiness by gauging their responsiveness to US military operations near the Soviet Union. It was also designed as a show of force to demonstrate US military capabilities and willingness to operate at extended ranges from US/allied territory.

the Soviet Union technologically. Finally, the Soviets also realized their 1979 invasion of Afghanistan was increasingly a drain on resources and on the morale of the Soviet military. Beyond this strategic backdrop, specific incidents, which immediately proceeded Exercise Able Archer, also contributed to the punctuated sense of fear Soviet leaders felt in November 1983, including the following events:

- 1 Sep 1983 – Soviet shootdown of KAL 007
- 26 Sep – Soviet early warning scare
- 5 Oct – Lech Walesa awarded Nobel Peace Prize
- 23 Oct – Beirut U.S. Marine Corps barracks bombing – resulted in an increased alert posture at US bases which Soviet intelligence misinterpreted as an indicator of potential nuclear conflict
- 26 Oct – US invasion of Grenada – The Soviet KGB and other leaders thought their Central American ally in Nicaragua, the Sandinistas, were next on this list for a US invasion (Andrew & Gordievsky, 1990, p. 599)

The overarching theme in the literature on the Soviet War Scare of 1983 deals with the incredible level of fear Andropov and other senior Soviet leaders (Ustinov, Ogarkov, and others) felt based on the factors listed above. Most trace the beginning of this acute sense of fear to President Reagan's strong anti-Soviet rhetoric used in the 1980 presidential campaign against President Carter which became increasingly relevant after the new president took office and signaled it was not just rhetoric, but a new, more aggressive phase in the post-détente era had dawned. It is clear Andropov became fearful to the point of paranoia based on his

statements while serving as head of the KGB and later as General Secretary. In May 1981, General Secretary Brezhnev made an unprecedented appearance at KGB senior leadership conference to denounce Reagan's aggressive policies. KGB Chairman Andropov asserted:

> The new US administration was actively preparing for nuclear war and announced that the Politburo had decided that the KGB and the GRU would cooperate in a worldwide operation to monitor any indication of US and NATO measures for the initiation of a nuclear attack, in particular a surprise missile strike. (Garthoff, 2015, p. 62)

On June 16, 1983, Andropov told the Central Committee "there had been and 'unprecedented sharpening of the struggle' between East and West. 'The threat of nuclear war overhanging mankind causes one to reappraise the principal goals of the activities of the entire Communist movement'" (Andrew & Gordievsky, 1993, p. 81).

On September 28, 1983, following the Soviet shootdown of KAL 007 on September 1, 1983:

> The terminally ill Soviet leader, Yuri Andropov, issued from his sickbed a denunciation of American policy couched in apocalyptic language unprecedented since the depths of the Cold War. The United States, he said, was 'a country where outrageous military psychosis is being imposed. (Andrew & Gordievsky, 1993, p. 85)

Andropov suggested a major international crisis might be approaching, "The Reagan administration in its imperial ambitions, goes so far that one begins

to doubt whether Washington has any brakes at all preventing it from crossing the mark before which any sober-minded person must stop" (Hersh, 1986, p. 176 as cited in Andrew & Gordievsky, 1990, p. 598). On November 2, 1983, Andropov was quoted from a recent speech and included in the KGB First Chief Directorate Work Plan for 1984, "Its essential aim is to attempt to secure a dominant position in the world for the United States, regardless of the interests of other states and nations." The report stated, "The threat of an outbreak of nuclear war is reaching an extremely dangerous point" (Andrew & Gordievsky, 1993, p. 17). The report went on to warn:

> …the task of not overlooking immediate preparations by the adversary for launching a surprise nuclear missile attack on the U.S.S.R. or local wars and armed conflicts threatening the security of the Soviet Union and countries friendly to it, has acquired even greater urgency and immediacy. (Andrew & Gordievsky, 1993, p. 17)

Nearing the Able Archer Exercise, in late 1983, Andropov highlighted the dangers of war in a statement to the Politburo "the danger of war was then greater than at any other time since the Cuban Missile Crisis" (Garthoff, 2015, p. 68). The KGB leadership continuously echoed these assessments in their speeches, cables, and operational directives to KGB Residencies abroad.

Cognitive Factors

Beth Fisher's work can also be used to assess cognitive factors and how they influenced the Soviet leadership's interpretation of intelligence during the War Scare of 1983. Fisher contrasts theory-driven with data-driven approaches to

how leaders assess situations and make decisions. Theory driven approaches start with assumptions. Humans tend to interpret new information through the prism of those assumptions which can and often do lead to information interpretation biases. In contrast, Fisher argues, data-driven approaches, where data is collected and analyzed to draw conclusions based on raw information, is more likely to reach sound, unbiased conclusions. She contends humans are more prone to use theory-driven thinking more often than data driven thinking. This section analyzes how Soviet assumptions may have contributed to intelligence interpretation problems leading up to and during the Able Archer 83 exercise. These assumptions regarding US motivations and Soviet strategic vulnerabilities which the KGB and senior Soviet leaders faced are based on secret intelligence found in the declassified 1990 PFIAB study. The following is a description and an analysis of each of these assumptions using what we now know (the historical record) and information processing errors Beth Fisher outlines which can lead to interpretation errors.

Assumption 1 –The new US administration was actively preparing for a nuclear war and a US nuclear first strike on the Soviet Union was possible (PFIAB Report, *The Soviet War Scare*, 1990, p. 53). Soviet perceptions of US intent are understandable from a Soviet perspective given the sources of anxiety detailed above. The Soviets viewed US rhetoric and actions with an offensive lens. Using that perspective, the Soviet interpreted open source and secret intelligence as reaffirming their view of the US/NATO as hostile, offensive aggressors. For example, the Soviets were deeply fearful of the pending (late

1983) deployment of new, destabilizing (in their view) Pershing II and Gryphon missiles in Western Europe. Had the Soviet viewed the US/NATO deployment simply as a defensive response to their earlier deployment of SS-20 missiles which threatened every Western European capital with similarly quick nuclear destruction, they may have interpreted intelligence on the Pershing IIs and Gryphons as a defensive response to their earlier deployment.

Assumption 1A - The U.S. might initiate a nuclear war if it achieved a level of overall strength significantly greater than the Soviet Union (PFIAB Report, *The Soviet War Scare*, 1990, p. 54). As a corollary to the first assumption, this line of thinking may have been heavily influenced by the Soviet experience with the German invasion of the Soviet Union in 1941 (Operation BARBAROSSA). The Soviet failure in 1941 to properly interpret indications and warning intelligence led to the worst military disaster in Soviet history. According to Ben Fischer, who wrote about the enduring trauma of the German surprise attack on Soviet perceptions and defense strategy:

> The connection between ignored warnings and surprise attack has never been forgotten in Moscow. For decades after the war, Soviet leaders seemed obsessed with the lessons of 1941, which were as much visceral as intellectual in Soviet thinking about war and peace. (Fischer, 2007)

Fischer believes the propensity for the Soviet leadership to remain ever vigilant and assume the worst[81] may be related to the fact that the generation of

[81] Anatoly Dobrynin, the long-time Soviet Ambassador to the U.S. disputes the notion that Soviet senior leaders (Khrushchev, Brezhnev, and Cherenkov) believed an attack could take place at any moment, with the probable exception of Yuri Andropov.

Soviet leaders in senior positions during the War Scare of 1983 experienced the horror of World War II first-hand while KGB field operatives experienced it through history books. The Soviet interpretation of intelligence prior to and during the war scare may have also been influenced by confirmation bias. Leaders received intelligence which was largely unevaluated field reporting with little contextual analysis. This alarming intelligence confirmed what they already believed; the U.S. was planning an imminent nuclear attack against the Soviet Union. On that assumption, Soviet fear is certainly understandable based on their historical experience. However, the Soviets seriously misjudged Western intent. The U.S. and its NATO allies did not have any plans or intent to launch a pre-emptive nuclear war against the Soviet Union.

Assumption 2 – The Soviet Union would continue to fall behind the U.S. in economic power and scientific expertise (PFIAB Report, *The Soviet War Scare*, 1990, p. 54). One of the more impressive accomplishments of Soviet intelligence during this period was their ability to collect scientific and technical intelligence against the West. Soviet leaders were aware of the growing technological gap between the Soviet Union/Warsaw Pact and the US/NATO. This fear became even more acute in early 1983 when President Reagan unveiled his concept for the Strategic Defense Initiative. An important element in the Soviet's calculation and perception of the "correlation of forces", the increasingly apparent inability of Soviet military design bureaus to qualitatively match US and Western weapons systems and the overarching fear that the Soviet strategic nuclear arsenal would not be able to compensate for this problem, if the U.S. were successful in

developing and deploying an effective ballistic missile defense system, further contributed to their fear. On this assumption the Soviet assessments were correct and Soviet leaders objectively interpreted the intelligence on this subject. They were technologically outclassed and Soviet leaders knew it.

Assumption 3 – The Soviet domestic situation and hold on Eastern Europe was deteriorating – weakening Soviet capacity to compete strategically with the United States (PFIAB Report, *The Soviet War Scare*, 1990, p. 54). The domestic situation was indeed deteriorating in the Soviet Union and within their Eastern European satellite states. The KGB ran an extensive domestic intelligence apparatus and were very much aware of the levels of domestic political dissent and economic dissatisfaction in the country. Soviet leaders were struggling with the challenge of satisfying consumer demand for basic necessities. In Eastern Europe, the 1980/1981 Solidarity trade union crisis in Poland was a further reminder of the potential for civil unrest in Eastern Europe or the Soviet Union. Soviet officials were concerned with their ability to control internal dissent, despite an omnipresent and brutal internal security apparatus which could be challenged in the future. The Soviets correctly interpreted intelligence on this issue. The domestic situation was indeed deteriorating in the Soviet Union and across their Warsaw Pact sphere of influence.

Motivational Factors

Based on the motivational model of decision making, Andropov and his hardline colleagues sought mechanisms to minimize and alleviate their fear and anxiety. They may have done this through initiation of Operation RYAN. Their

need to maintain their emotional well-being may have interfered with their ability to accurately process information. The Soviet leaders, like most wise decision makers, sought to minimize their level of uncertainty in assessing the current situation and this provided a strong motivation for launching and devoting significant financial and intellectual resources to this intelligence operation. Beth Fisher, in discussing this model in her book chapter, *Perception, Intelligence Errors, and the Cuban Missile Crisis*, outlines five coping mechanisms that can also be applied to the Soviet War Scare of 1983. Humans engage in this type of thinking to maintain peace of mind and reduce anxiety. This is done subconsciously. These motivational factors can lead to misinterpretation of information. These motivational factors will be assessed in terms of Soviet senior-leader motivations for launching and operating Operation RYAN.

Defensive Avoidance – occurs when one seeks to avoid anxiety-arousing warnings concerning future negative consequences of preferred actions. In the Soviet case, Soviet leaders may have chosen to pursue an aggressive intelligence collection and analysis program believing it was a suitable, realistic alternative to addressing their anxieties (listed above) head on. The Soviets knew they were not in an economic position to continue competing with the U.S. in terms of qualitative factors in the nuclear arms race and the Strategic Defense Initiative (SDI). Seeking intelligence on US nuclear war plans and current nuclear attack posture was designed to ensure the Soviets would not be caught by surprise and could retaliate with their full nuclear force, if necessary.

Selective Attention – occurs when one prefers to pay more attention to information that suggests certainty. The Soviets were certainly guilty of this bias. KGB field operatives provided raw information which Soviet leaders used to suggest certainty in terms of their view that the U.S. and NATO were on an aggressive, one-way path towards nuclear conflict in the immediate future. Andropov and his circle in the Politburo sought certainty by launching and maintaining Operation RYAN. Their interpretation of the data, which reinforced their pre-existing world view, improved their sense of certainty (however distorted and wrong those assessments were) regarding their assessment of the US/NATO.

Bolstering – occurs when one seeks to downplay the trade-offs associated with a specific decision. This is difficult to assess in the Soviet case as data on alternatives to Operation RYAN is limited. Certainly, the Soviets had many choices concerning how to use the significant amount of resources which were poured into this program. It is unknown if such a rational debate about alternative uses of these resources ever occurred. Soviet leaders may have simply believed this intelligence operation was the most logical way to alleviate their fears and did not engage in any motivationally based reasoning to justify the program relative to other options.

Exaggerate the positive/minimize the negative – occurs when one exaggerates positive consequences, minimizes negative consequences, and seeks out information which discredits disturbing info. Soviet leaders were motivated to ensure Soviet nuclear forces would not be rendered ineffective and incapable of

retaliation in a US surprise nuclear attack. The central focus of RYAN was to provide intelligence to preclude that scenario. I have found no evidence to suggest, and it is doubtful Soviet leaders casually or systematically considered, any possible negative consequences (although many later emerged) prior to deciding on this course of action.

Wishful thinking – occurs when one is convinced the chosen course of action will succeed despite information to the contrary. This was probably not a factor because it is unlikely Andropov, the father of the RYAN program, and later the most powerful leader in the Soviet system as General Secretary would have been directly challenged with dissenting views on the utility of the program. Key leaders were convinced of the need for this intelligence program and were confident it would succeed. I have found no evidence there were any dissenting views concerning the initiation or continuation of this program.

The Soviet leadership's fear of imminent nuclear attack likely biased their interpretation of the intelligence the KGB and GRU provided. General Secretary Andropov, Defense Minister Ustinov,[82] and KGB Chairman Kryuchkov were part of the remaining Stalinist hardliners, who had a much more limited working knowledge of the United States and NATO. While their field operatives with such knowledge were genuinely skeptical that the US/NATO would ever launch a nuclear strike, the more isolated Soviet leadership was much more pessimistic regarding US intent. While Soviet intelligence services were reporting the

[82] Ustinov had a more realistic view toward the dangers of nuclear war than senior members of the Soviet uniformed military and was much more pessimistic toward any notion of a "winnable" nuclear confrontation with the United States.

activation of indicators which led the senior Soviet leadership to believe the alliance was preparing a nuclear strike, Soviet leaders failed to objectively assess NATO's political/military intent. Given that threat assessments are comprised of both enemy military capability and intent, the Soviets mistakenly assessed Able Archer as a preparation for a real-world attack. They may have let their deeply ingrained fear interfere with the ability to objectively evaluate the available intelligence. NATO had no intention of launching a preemptive nuclear strike against the Soviet Union. US President Reagan and other US leaders believed the idea of such an attack was so farfetched that they initially completely dismissed such an assertion as incredible. They believed, until Oleg Gordievsky presented contrary information via the British, that Soviet stated fears of the U.S. and NATO were part of a well-organized Soviet propaganda effort designed to weaken US and European resolve regarding Pershing II and Ground-launched Cruise Missile deployments to Europe.

Soviet Reaction based on their Intelligence Interpretation

One of the most compelling arguments concerning the seriousness with which the Soviets interpreted their intelligence warning was the fact that they placed their forces on a heightened state of alert, which they had never done during previous exercises (Jones, 2016, p. 34). Jones points out what we don't know is exactly which Soviet forces went on alert and how close they were to launching a preemptive nuclear attack against the US/NATO. KGB defector Gordievsky blames Operation RYAN for increasing the danger of accidental nuclear war.

In the tense atmosphere generated by the crises and rhetoric of the past few months, the KGB concluded American forces had been placed on alert-and might even have begun the countdown to war. According to Andrew and Gordievsky (1990):

> The world did not quite reach the edge of the nuclear abyss during Operations RYaN. But during Able Archer 83 it had, without realizing it, come frighteningly close-certainly closer than at any time since the Cuban missile crisis of 1962. (p. 605)

While there is little doubt Soviet leaders assessed the danger as real, there are still lingering questions concerning the degree of uncertainly the Soviet political and military leaders had concerning US intent. US intelligence did not detect a large-scale Warsaw Pact mobilization to counter the perceived NATO threat. The PFIAB authors credits the Soviet with historically making correct situation assessment regarding earlier US alerts. However, the board goes on to assess the Soviets probably did not understand the true intent of this NATO exercise and they worked to combat that uncertainty by ordering increased intelligence collection flights and requesting additional human intelligence collection via their KGB Residencies in Western European capitals. Soviet military moves, conducted in secrecy, leads one to believe the Soviets were also carefully preparing to launch a surprise preemptive attack in such a way as to not trip US intelligence indicators warning of such a possibility or lead to a self-fulfilling prophecy by provoking a NATO attack. "This situation could have been extremely dangerous if during the exercise – perhaps through a series of ill-timed

coincidences or because of faulty intelligence – the Soviet had misperceived US actions as preparations for a real attack" (PFIAB Report, *The Soviet War Scare*, 1990, p. 76).

Conclusion – Current Situation Assessment

Making a final evaluation regarding the accuracy of the Soviet's Current Situation assessment before and during the war scare is difficult.

Intelligence Quality – The overall quality of intelligence the KGB provided their senior political/military leaders was poor and misleading. The indicators they used prior to this crisis were crude, dangerously ambiguous, and not well tailored to detect nuclear attack preparations. The Soviets admitted they failed to penetrate western military organizations which would have allowed them direct human intelligence access to the information they needed to gauge the intent of those charged with nuclear attack decisions and implementation of those decisions. Another catastrophic problem: Intelligence was biased from the source. Field operatives had bureaucratic incentives to feed KGB Center raw, unevaluated, alarmist reporting which conformed to the tone of the guidance they received from their paranoid KGB and national-level leadership. KGB Residencies routinely filed biased reports, lacking context, to their masters at higher headquarters. The Operation RYAN effort at the field level was met with skepticism by agents who were much more in tune with the West than their more isolated leadership in Moscow. Thus, the overall quality of intelligence reporting Soviet leaders received from Operation RYAN was often poor and highly

misleading. Bad inputs (intelligence) significantly contributed to bad outputs (current situation assessments).

Receptivity – Soviets leaders, especially Yuri Andropov, were highly receptive to the intelligence they received. Andropov had served as KGB Chairman for 15 years prior to becoming the General Secretary and was in a great position to be aware of the KGB's capabilities and limitations. He surrounded himself with former KGB protégés as General Secretary which further demonstrated the level of trust he placed in that organization and their personnel. Despite proximate incidents such as the shootdown of KAL 007 and the early warning incident of September 26, 1983, which could have led Soviet leaders to categorical reject or at least seriously discount the validity of intelligence, Soviet leaders continued to receive and act on Operation RYAN intelligence. They worked to further refine their indicator list in 1984 and 1985 after Able Archer 83 and reaffirmed discipline in their Residencies when field operatives did not comply with KGB Center directives on Operation RYAN. There is no indication up to or during the Able Archer exercise that Soviet leaders were unreceptive to the intelligence this operation produced.

Interpretation – At the macro level, Soviet leader's interpretation of the intelligence they received was influenced by both motivational and cognitive biases. Fear of Western military capabilities (which was rational) and intent (which was not rational) was a primary factor which led Andropov and other key senior officials in the Politburo and in the KGB to interpret intelligence in a way which convinced them of US intent to launch an imminent nuclear strike. Leaders

suffered from confirmation bias. They interpreted the already biased intelligence they received in a way which confirmed their pre-existing belief that President Reagan was intent on launching a nuclear attack. This was a case of confirmation bias (KGB field officers politicized their reporting to conform with their superior's view of the world and the intelligence recipients (Soviet leaders) integrated this intelligence to reinforce their pre-existing view of the current international situation). Soviet leaders also were victim of the fundamental attribution error. They failed to recognize US/NATO actions such as the Pershing II/Gryphon missile deployment as defensive in nature, a systemic feature of the international security environment but rather ascribed them to nefarious intentions based on US/NATO intent to preemptively attack the Soviet Union. One might ague Soviet leaders correctly interpreted biased, flawed intelligence which provided fragmentary, misleading indicators of an imminent nuclear attack – they believed the inflammatory reporting the KGB provided. There is an element of truth to that, however, the aged Soviet leaders also harbored deep biases based on fears which can reasonably be described as paranoia. Their experiences with surprise in World War II, a lifetime of intense ideological indoctrination, and limited on the ground experience with the West, also contributed to biases which led them to misjudging Western intentions.

In summary, Soviet leaders were operating under a dangerously flawed assessment of the current situation immediately prior to and during the Able Archer Exercise in November 1983. Gordievsky claims, this led to the most dangerous period for the two superpowers since the Cuban Missile Crisis of

October 1962. The fact that this crisis did not end in a nuclear exchange, initiated by the Soviet Union might lead one to downplay the significance of this crisis or concluded that at the end of the day the Soviets accurately assessed the current situation and exercised restraint by not launching a nuclear attack against the US/NATO. That may be true. An alternate explanation may be found based on any or a combination of four key situational factors:

1) Most immediately, the Able Archer Exercise (which lasted five days, from November 7-11, 1983) came to an end before the Soviets made any final decisions regarding using nuclear weapons to pre-empt what they believed were US/NATO preparations for a strike.

2) Andropov's rapidly declining health between late September 1983 until his death in February 1984[83] resulted in Soviet decision making paralysis.[84]

3) Over the medium term, there was a change in the senior Soviet leadership which ushered in a relatively less paranoid group of individuals who eased tensions.

4) Western leaders, notably British Prime Minister Margaret Thatcher and President Reagan, upon hearing about the Able Archer crisis from Gordievsky, took deliberate steps to reduce tensions with the Soviets. Director of Central

[83] Andropov suffered from chronic hypertension and diabetes which were complicated by kidney disease. In mid-October 1983, he possibly had one kidney removed. His failing health caused the cancellation of a state visit to Bulgaria (The intense international climate was the official reason given for the cancelation.) and on November 7, 1983 Andropov failed to appear at the annual Kremlin celebration of the 1971 Bolshevik Revolution (PFIAB Report, *The Soviet War Scare*, 1990, p. 69).

[84] Andropov was the Soviet leader charged with nuclear release authority. Andropov's deteriorating health did cause consternation among senior Soviet military officials who feared the US might take advantage of the situation to launch a preemptive strike nuclear against the Soviet Union.

Intelligence William Casey sent a memo in June 1984 to President Reagan about the crisis and convinced a very surprised president that Soviet fear and rhetoric was not simply hostile propaganda but represented genuine, if misplaced, fear of US intentions to launch a nuclear strike (PFIAB Report, *The Soviet War Scare*, 1990, pp. 15-18).

Soviet leaders received mixed quality intelligence from intelligence services they trusted (they were receptive) and failed to objectively interpret that information due to their own biases and those of their intelligence services. The Soviets may have correctly assessed NATO nuclear capabilities but completely misunderstood US/NATO intent. This led to an inaccurate understanding of the current situation immediately prior to and during Exercise Able Archer.

CHAPTER 5 – THE RUSSIAN NUCLEAR THREAT TO THE UNITED STATES

Despite the end of the Cold War, the threat of nuclear war between the United States and Russia continues. Both sides maintain strategic nuclear forces on constant alert and the deteriorating relationship between the US/NATO and Russia means the potential for conflict is now greater than for much of the post-Cold War period. This chapter serves as a bridge between the two historical case studies and the contemporary Russian nuclear threat to the United States. It presents Russia's threat perceptions and their strategic goals. This chapter also discusses Russian national security strategy, military doctrine, and Russia's current and future strategic nuclear capabilities. Russian military forces are undergoing a significant nuclear force modernization effort which extends and enhances the nuclear threat to the United States and our allies. The risk of an accidental nuclear war or a nuclear exchange based on a faulty current situation assessment remains a possibility today as it was during Cuban Missile Crisis or the Soviet War Scare. Contemporary nuclear risks are presented to apply what we have learned from investigating the two case studies in terms of the theory of warning intelligence and current situation assessment to suggest what can be done in the future to reduce the risk of accidental nuclear conflict between the U.S. and Russia.

Russia's Threat Perceptions and Strategic Goals

Russia' nuclear forces are designed to underpin President Vladimir Putin's campaign to restore Russia's status as a great power. Putin is determined to develop capabilities and display the political will to reestablish Russia as a key player in international affairs. He seeks to actively restructure the international order that the United States and our allies have worked hard in the post-World War II era to build and maintain but which Putin believes is skewed too heavily to benefit the United States and the West at Russia's expense. Russia, as well as China, seeks to diminish US influence by promoting a multi-polar world order based on the principles of state sovereignty (with a strong emphasis on non-interference in the domestic affairs of other states), a strong role for the United Nations, and a concept of balance of power politics which seeks to prevent one or more states from dominating the international order (Defense Intelligence Agency, 2017, pp. 14-15).

Putin views past US and NATO interventions in Bosnia, Kosovo, Iraq, and Libya as dangerous precedents, violating state sovereignty to protect human rights or to change ruling regimes. Putin also sees US and Western influences as responsible for the instability in former Soviet republics which resulted in the various color revolutions and in the Arab Spring. Based on US and NATO actions since the end of the Cold War in 1991, Putin believes the West has actively worked to undermine Russia both domestically and internationally. He fears democracy promotion activities are targeted at Russia and make him the possible future target of regime change under the guise of spreading democracy to

Russia. Beyond Vladimir Putin's personal fears, he seeks to rebuild Russia as a great power and requires the political, economic, military, and informational power to support that lofty ambition. Russia today seeks to enhance their military capabilities which allow their armed forces to project power, enhance the credibility of Russian diplomacy, and ensure Russia's international interests are not routinely disregarded (as Putin believes has been the case in the post-Cold War era). The fact that President Putin is engaging in a broad modernization of Russia's strategic nuclear forces is a sign of his conviction that these weapons are critical to Russia's security and status as a re-emerging great power.[85]

Threat Perceptions

Russian government leaders, despite early efforts by the U.S. and NATO in the 1990s to better integrate Russia into the international community, sees the U.S. and our allies as the principle threat to Russian security, its geostrategic goals, and even the current government's continued hold on power (Defense Intelligence Agency, 2017, p. 15). The current Russian National Security Strategy explicitly identifies the United States and NATO as its main threats and charges the West with continuing the Cold War strategy of containment to sustain

[85] Please see Mankoff, 2014 and Coats, *Worldwide Threat Assessment of the US Intelligence Community*, 2018 for additional analysis regarding how Russia views its place in the world, its "privileged interests" in Eastern Europe, and the former Soviet Republics, and how Russia seeks to enhance its position through greater political, economic, and military integration with former Soviet Republics. For additional military capability information and analysis of the Russian nuclear threat to the United States, please see: Lowther and Dodge, 2017; Russia and Eurasia, *The Military Balance*, 2018; Oliker, 2016; and *The Global Nuclear Weapons Environment*, 2017. Congress has also addressed the Russian military threat and force modernization plans in several hearings including: *Nuclear Deterrence in the 21st Century*, 2015*; Understanding and Deterring Russia*: *U.S. Policies and Strategies*, 2016; and *The Growing Russian Military Threat in Europe*, 2017.

its continued domination of the current international order and prevent Moscow from realizing its hard-earned and rightful place in the international arena (Defense Intelligence Agency, 2017, p. 15). Additional US/NATO actions which contribute to Russia's dire assessment of the threat include NATO enlargement and its consequent buildup of military capabilities closer to Russia's western border, the deployment of NATO missile defense systems in Europe, and US research and development of strategic, conventional precision strike weapons systems (Defense Intelligence Agency, 2017, p. 15).

At a broader, ideological level, Russia has a continued fear and distrust of the U.S. based on our commitment, which transcends domestic partisan divides, to promote the spread of democracy around the world. Russia and other revisionist powers resent what they perceive as a moral crusade which they see as a mechanism for imposing a single set of values on others who have different historical, social, or cultural experiences. Moscow fears this continued effort to impose what the West believes is a universal set of norms is dangerous for Russian internal stability and, more precisely, for the continued rule of Vladimir Putin and his government. Putin believes democracy promotion efforts motivate non-governmental organizations and hostile intelligence services to actively agitate the Russian population which could lead, someday, to a people-power revolution in Russia. Putin directly ties the 2011 Arab Spring demonstrations and the various 2003-2005 "color revolutions" in the former Soviet Republics of Georgia, Ukraine, and Kyrgyzstan, and more recent events dealing with the ouster of President Victor Yanukovych in Ukraine (2014) with foreign meddling in the

internal affairs of sovereign states. He is convinced such a sequence of events could also lead to his personal downfall if the Russian people rise to openly oppose his rule.

Putin and other conservative political entities within Russia seek to combat this fear, in part, through appeals to nationalism by emphasizing the return to and preservation of traditional Russian cultural and spiritual values. Such thinking, which was also promoted in the Soviet period, seeks to protect Russians from "decadent" and dangerous Western values which seek to weaken or destroy Russia from within.

Russia is also working to develop a strategic partnership with China, which also seeks to contain US global influence and promotes itself as an alternative model of political and economic development. The Russian Foreign Policy Concept states this renewed relationship with China is intended "to promote foreign policy cooperation with China in various areas, including countering new challenges and threats, resolving urgent regional and global problems, and (sic) cooperation in international organizational and multilateral associations" (Putin, 2016). Yet, this relationship may not prove to be solid as China's dominant and growing economic power may alienate a prideful Russia, which faces a more pessimistic long-term economic and demographic outlook. Sharing a long border, far from the center of Russian conventional military power, Russia may someday fear Chinese designs on Russian territory which could result in a revival of military competition between these two large, nuclear-armed states.

This antagonistic vision Putin maintains against the West has grown stronger since his clear articulation of Russia's new foreign policy at the Munich Security Conference of 2007. This conference was a turning point in Russia's relationship with the U.S. and its western European allies. Putin strongly condemned the U.S. for its international actions which, in his view, had created international instability through the illegitimate use of force. Putin stated:

> We are seeing a greater and greater disdain for the basic principles of international law. And independent legal norms are, as a matter of fact, coming increasingly closer to one state's legal system. One state and, of course, first and foremost the United States, has overstepped its national borders in every way. This is visible in the economic, political, cultural, and educational policies it imposes on other nations. Well, who likes this? Who is happy about this? (Putin, Speech at the Munich Security Conference, February 10, 2007)

He called on the West to share international power and leadership with other rising economic powers, including Russia.

Russian National Security Strategy and Foreign Policy Concept

The current version of Russia's National Security Strategy was adopted in December 2015. This document explicitly defines Russia's stated strategic national interests and outlines foreign and defense priorities for six years, through 2021. This document guides strategic planning, defines national interests, and details Russia's national strategic priorities. It defines domestic and foreign

policy goals to strengthen national security and ensure sustainable, long-term national development. The previous national security strategy, released in 2009, served the same purpose and outlined similar national priorities but given the deterioration in relations between Russia and the West over the course of the period between 2009 and December 2015 the tone of the latest strategy is more aggressive (Defense Intelligence Agency, 2017, p. 16). The current strategy defines Russian national interests as:

- Strengthening the countries defense
- Ensuring political and social stability
- Raising the standard of living
- Preserving and developing culture
- Strengthening Russia's status as a leading international power

Section 14.A.B of Russia's military doctrine lists the following main military threats to the Russian Federation (Embassy of the Russian Federation to the United Kingdom of Great Britain and Northern Ireland, 2014, as cited in Boston and Massicot, 2017, p. 13):

Disruption of:

- State and military command and control systems
- Strategic nuclear forces
- Missile attack warning system
- Space surveillance system
- Nuclear weapons storage facilities and nuclear power engineering

- Nuclear chemical, pharmaceutical, and medical industries
- Other potentially dangerous facilities

Russia is to pursue these interests by focusing on eight strategic national priorities:

- National defense
- State and public security
- Economic growth
- Scientific, technology, and education
- Healthcare
- Culture
- Ecology of living systems and rational use of natural resources
- Strategic stability and equal strategic partnership

Key differences between the 2015 version and the 2009 version shed light on emerging and growing Russian national security concerns. New threats to the nation included the work of non-governmental organizations in Russia, "color revolutions," and the use of social media to promote internal instability. These threats are feared as mechanisms which could provoke mass political movements demanding regime change in Russia. The new strategy also highlights the continuing requirement to strengthen traditional Russian moral and spiritual values as a means of inoculating the population against subversive Western ideals (Defense Intelligence Agency, 2017, p. 17). Another area of the strategy which offers insight is the direct, explicit accusation that the U.S. and NATO are acting to undermine Russian internal stability and threaten its national security (Defense

Intelligence Agency, 2017, p. 17). Aligning with the 2014 version of Russia's Military Doctrine, the new National Security Strategy highlights the importance of conflict prevention, conventional and nuclear deterrence, and the need to improve Russia's force generation process (Defense Intelligence Agency, 2017, p. 17).

These three documents reflect many traditional Russian themes regarding its threat perceptions and its view of Russia's place in the world. Russia sees itself as one of the world's leading powers, a great power, whose sovereignty must be respected and whose foreign policy must be conducted independently to secure its national interests. These ideas are certainly not unique to modern Russia which has aspired to such status for several centuries. Several factors contribute to the sense that Russia is more than a regional power including: Russia identity as an Orthodox Christian nation, its geographic position at the cross-road between Europe and Asia, the incredible size of its territory, its great accomplishments during the Soviet period (the creation of an industrialized economy, defeat of Nazi fascism, its accomplishments in space, and its nuclear weapons and missile program). A certain nostalgia for its lost Cold War-era great power status leads Russia to believe it has a special responsibility as one of the major nuclear powers, alongside the United States, in international security affairs (Facon, 2017, p. 6). Facon, writing an official assessment for the European Union on Russia's new strategic planning documents, emphasizes Russian leaders today view the international environment as "dangerous, volatile, chaotic, and marked by stiff competition for resources, control of markets and transport routes, and

political influence amongst major powers." (Facon, 2017, p. 6). Putin believes the world is moving from a unipolar world, dominated by the United States and its western allies, to a multi-polar world characterized by regional and global competition. These documents reflect Russia's view, and again this is not new, that it is surrounded by threats and challenges on all sides. Facon points out the Russian population shares this acute threat perception. As of January 2016, 65% of the Russian people surveyed in a Levada opinion poll believed other countries are a military threat to Russia. This figure has grown in the 10-year period from 2006-2016 from 40% to 60% (Facon, 2017, p. 7).

The top priority for Russian foreign and security policy is maintaining influence in the independent states of the former Soviet Union. This priority reflects Russia's long-standing desire to protect itself with buffer states from external invasion and instability. From a Russian perspective, this means they have legitimate needs to exert political or military control over their immediate neighbors. Russia sees exerting such power also increases its international standing as a great power in the emerging multipolar world order. To achieve this position, Russia has built economic and political/military international organizations such as Eurasian Economic Union and the Collective Security Treaty Organization to unify former Soviet republics under Russian leadership. Russia's relationships with these states and concerted efforts to strengthen its leadership role in regional organizations which it dominates, are designed to influence its neighbors. These are Russia's top foreign policy priorities according to its 2016 Foreign Policy Concept (Facon, 2017, p. 7)

Russian Military Doctrine and Strategy

Russia has carefully observed the modern, American way of conventional war as exemplified by Operation Desert Storm in 1991. In that campaign, US strategists employed air power to attack targets deep in Iraq to isolate the regime leadership, pound frontline forces with heavy aerial bombing and artillery and then use armored maneuver warfare to quickly seize the initiative and defeat Iraq's fielded forces. Using the full spectrum of capabilities, the U.S. and our coalition partners accomplished their objectives very quickly and with minimal coalition casualties. Russia recognizes and has reformed its military to adapt to its view of modern warfare. Gone are large, conscription-based, mass mobilization ground forces designed for large-scale theater warfare. General Gerasimov, Chief of the General Staff, has stated, "frontal engagements of large formations of forces at the strategic and operational level are gradually becoming a thing of the past, while long-distance, contactless actions against the adversary are becoming a major means of achieving one's goals" (Facon, 2017, p. 11). Consequently, Russia has adapted its military doctrine from a posture of accumulating unlimited military power to devising operational concepts which better integrate conventional, nuclear, and unconventional elements of military power (Facon, 2017, p., 15). Specifically, Russia is modernizing weapons to support an anti-access/area-denial (A2/AD) strategy to prevent foreign military intervention in current or potential hot spots such as Crimea, Kaliningrad, and the Arctic (Facon, 2017, p. 15). These weapons include: air and missile defense systems, anti-submarine warfare capabilities, surface-to-surface ballistic missiles, land, and air and sea-launched cruise missiles and electronic warfare capabilities.

Today, Russia fears the effective use of precision-guided conventional weaponry which, in their view, can achieve results similar to nuclear weapons. Based on this assessment, equating the effects of US conventional precision weapons with nuclear weapons, Russia has articulated a doctrine which envisions using nuclear weapons in response to a conventional attack, if necessary, to preserve the existence and sovereignty of Russia. Thus, like the United States, Russia rejects calls for a no first-use nuclear weapons policy. This stance should not be surprising as the supreme national interest of any state is to guarantee the existence of the state and its people. However, Moscow has taken this policy a step further and has developed and publicly discussed the theoretical concept of using nuclear weapons to "de-escalate" conventional conflicts (Defense Intelligence Agency, 2017, p. 22). This has caused great concern among Western governments which have traditionally viewed nuclear weapons as weapons of last resort to be used in very limited circumstances including: retaliation for use of weapons of mass destruction, to forestall the complete defeat of their conventional military forces (for example in a massive Soviet/Russian invasion of Western Europe or a North Korean invasion of South Korea), or when their survival of the state is threatened with nuclear weapons. The emerging Russian "escalate-to-de-escalate" strategy signals a potential greater Russian willingness to use nuclear weapons beyond the narrower scenarios detailed above. US military leaders, including Admiral Haney, the recently retired commander of US Strategic Command, fears the Russians may use nuclear weapons in a very limited way early in a conflict to deter US and NATO action to defend or re-enforce the

defenses of a NATO ally or any other nation in which the U.S. or NATO has an interest. Haney stated, Russia "is declaring and recklessly demonstrating its willingness to escalate-to-de-escalate, if required" (Haney, 2016 as cited in Kristensen, 2017, p. 117). Russia may be willing to use a nuclear weapon or a small number of weapons to deter any Western involvement to forestall or reverse Russian aggression in the future (such as Russian territorial aggression against Georgia in 2008 and Ukraine in 2014). Such use may even be designed to prevent the targeted nation from defending itself using conventional capabilities.

Russia's most recent version of its military doctrine states:

> The Russian Federation reserve the right to use nuclear weapons in response to the use of nuclear and other types of weapons of mass destruction against it and (or) its allies, and also in the event of aggression against the Russian Federation involving the use of conventional weapons when the very existence of the state is under threat. (CSCE, 2017, p. 51 and Boston and Massicot 2017, p. 6)

According to Boston and Massicot (2017), Russian doctrine provides some ideas concerning which issues Russia considers jeopardizing the "very existence of the state." Russia is likely to use nuclear weapons in response to non-nuclear attack when it believes there is a grave threat to 1) its territorial integrity, 2) continuity of government, 3) viability of its strategic nuclear deterrent. The destruction of Russian integrated air defense system which protects western Russia or the approach to Russia via the Baltic region near

Kaliningrad or St. Petersburg could also be considered jeopardizing to the future existence of the state and might warrant Russia nuclear use (p. 6).

As explained by Alexy Arbatov (2017), the official Russian nuclear doctrine contains only two differences from US stated nuclear strategy as articulated in the 2010 Nuclear Posture Review. These two differences include America's willingness to defend our allies with nuclear weapons if they are attacked with convention force (note the Russian statement above indicates the Russians envisions using nuclear weapons to defend their allies only if they are attacked using weapons of mass destruction) and Russia's willingness to use nuclear weapons to defend Russia against conventional attacks which risk state survival. The U.S. has no need to make this type of statement given America's incredible conventional superiority (p. 35).

The main purpose of Russian strategic nuclear forces is to maintain a reliable, credible deterrent force. Potential nuclear mission scenarios include: preemptive (first strike) strike, counter-strike (launch on warning), and retaliatory strike (response to enemy nuclear detonations in Russia). The third nuclear mission set, retaliatory strike, poses the most challenging scenario from a war fighting perspective and requires robust, redundant C3 structures as well as nuclear forces hardened and capable of delivering a retaliatory, second-strike. This second-strike capability forms the core of Russia's deterrence posture against large nuclear forces such as those maintained by the United States.

Some debate exists regarding Russia's nuclear strategy. Some western analysts believe Russia has recently reduced its threshold for employing nuclear

weapons (Miller, 2015 as cited in Kristensen, 2017, p. 117), however, others believe Russia is building a nuclear capability to provide more flexible response options, similar to the U.S. nuclear strategy (Arbatov, 2016 as citied in Kristensen, 2017, p. 117). While a careful reading of Russia's official military doctrine is useful, the nation's political and military officials have made statements which suggest Russia is willing to use nuclear weapons in situations beyond the narrow scenarios defined in their official military doctrine. Russia has had a long-standing issue with US and NATO ballistic missile defense development and has threatened to use nuclear weapons against those facilities. They have threatened to use nuclear weapons in regional conflicts (Kristensen, 2017, p. 117) which has raised concerns among the former Warsaw Pact members of NATO in Eastern Europe. Russia has stated their willingness to use nuclear weapons when the survival of the state is not in jeopardy or when the use of other types of weapons of mass destruction (such as chemical, biological, or radiological) are not involved as a threat to Russia (Kristensen, 2017, p. 117). Russia has also conducted military exercises which involve simulated use of nuclear weapons against countries with no nuclear capabilities such as Sweden (Kristensen, 2017, p. 117). Since 1999, Russia has conducted military exercises which feature the first use of nuclear weapons in very calibrated ways designed to prevent further escalation of conventional conflict and to decisively end hostilities favorably for Moscow (Facon, 2017, p. 16).

Beyond exercises, nuclear weapons have played a role in real-world Russian military operations. According to Pavel Podvic, Director of the Russian

Nuclear Forces Project in Geneva, “Strategic forces play a role supporting whatever moves Russia makes,” including in Ukraine, Crimea, or Georgia. The threat of escalation in a regional conflict is “a deliberate policy of Russian leaders because nobody wants to engage in nuclear conflicts for limited stakes” (Cordesman, 2017, p. 4-5).

Russia has also escalated their political rhetoric regarding the use of nuclear weapons against NATO member states. Russia has threatened to target Denmark, Romania, and Norway with nuclear weapons in response to US exercise activity or the deployment of NATO ballistic missile defense systems (Cordesman, 2017 and CSCE, 2017, p. 42).

Anthony Cordesman from the Center for Strategic and International Studies believes nuclear threat statements from Russia’s leaders against the U.S. and NATO may be posturing and do not necessarily indicate a risk any greater than in the past. However, he also recognizes that rhetoric and political moves play an important role in deterrence and strategic intimidation. These threats may serve as a way to block the expansion of forward deployed conventional deterrent forces to NATO states along or near the Russian border, to delay or stop the further fielding of vital ballistic missile defense systems in forward NATO areas, or to politically paralyze NATO and European Union (EU) counter-measures designed in response to Russian pressure (Cordesman, 2017, p. 5-6).

Current Russian Nuclear Forces

The Soviet Union was the second world nuclear power, testing its first nuclear device in August 1949, four years after the first operational use of a nuclear weapon by the United States against Japan. Russia, which inherited the Soviet nuclear arsenal following the end of the Cold War in 1991, maintains the world's largest inventory of nuclear weapons. A key component of its national security strategy, Russia maintains and continues to modernize its strategic and tactical nuclear weapons. Nuclear weapons provide Russia deterrence, serve as a source of domestic, national pride, and enhance its international prestige. The nation's nuclear force posture is largely a legacy of how Soviet nuclear forces were developed and deployed during the Cold War when the Soviet Union, like the United States, developed a strategic triad of manned bombers, land-based intercontinental ballistic missiles (ICBMs), and submarine-launched ballistic missile systems (SLBMs). Russian Aerospace Forces control the manned bomber portion of their nuclear capability, while the Strategic Rocket Forces (SRF) is responsible for ICBMs, and the Navy controls SLBMs. Russia possess approximately 7,000 nuclear warheads in varying degrees of readiness, from operationally deployed to awaiting destruction. The majority of those weapons (4,300) are operationally deployed with the nation's strategic and tactical nuclear forces, including 1,950 strategic warheads deployed on ballistic missiles and at bomber bases. Five hundred strategic and 1,850 tactical warheads are in storage.

Strategic Rocket Forces – Intercontinental Ballistic Missiles

During the Soviet era, the Strategic Rocket Forces were the most prestigious military service of the Soviet Armed Forces. Established in December 1959 to operate the world's first land-based nuclear-armed intercontinental ballistic missile system (the SS-6), the SRF today remains one of the most powerful nuclear missile forces in the world (Defense Intelligence Agency, 2017, p. 47). The force is organized in three missile armies (27th, 31st, and 33rd) consisting of 12 missile divisions.[86] Eight division operate road-mobile missile systems while the remaining four operate silo-based systems (Defense Intelligence Agency, 2017, p. 47). Russia maintains and operates several Soviet-era ICBMs and three of the oldest system comprise more than half of the entire Russian ICBM force. However, Russia is approximately two thirds of the way through a major force modernization program designed to replace all Soviet-era missiles with newer types of systems by the early 2020s (Kristensen, 2017, p. 118). This will result in fewer missiles then currently deployed but with an increased number of warheads per missile. Current deployment modes include fixed, silo-based missiles as well as road-mobile weapons systems.[87] The oldest deployed ICBM systems are the silo-based, liquid-fueled, SS-19 (deployed 1979-1984) which carry 6 warheads per missile,[88] followed by the SS-18 (deployed 1988-1992), the workhorse of the Russian ICBM fleet, which carry 10 warheads

[86] Kristensen and Norris (2017) count 11 missile divisions with 39 missile regiments.
[87] Road- and rail-mobile systems are notoriously difficult for foreign intelligence services and operational forces to find, track, fix, and attack. Thus, their survivability in a nuclear conflict is enhanced over fixed, silo-based systems.
[88] Russian ICBMs and SLBMs which carry multiple warheads have a multiple, independently targeted, re-entry vehicle or MIRV. This allows a single missile to deliver warheads to several different, geographically dispersed, targets.

(Defense Intelligence Agency, 2017, p. 29). The SS-25 is a solid-fueled, single warhead, road-mobile ICBM (deployed 1985-1992). The Russian Strategic Rocket Forces operate 30 SS-19s and 46 SS-18s in silos and 72 road-mobile SS-25s (Defense Intelligence Agency, 2017, p. 48). These three systems are nearing the end of their designed service life and are expected to be removed from service between 2019-2021 (Defense Intelligence Agency, 2017, p. 30). The most modern system currently deployed, the SS-27 consists of 60 silo-based and 18 road-mobile missiles (SS-27 Mod 1) and 73 of the latest SS-27 Mod 2 (Defense Intelligence Agency, 2017, p. 48). In total, as of 2016, the SRF operated 299 intercontinental nuclear missiles with approximately half of those equipped with multiple warheads. Russia is undertaking an extensive nuclear force modernization program which will replace these three ICBM systems between 2020-2022 with a force evenly split between silo-based and road-mobile systems.

Table 1 – Current and Planned Russian ICBM Forces

(Listed by initial deployment year)

System (NATO Designation)	System (Russian Designation)	Deployment Period	Propellant	Missiles	Warheads/ Missile	Deployment Mode
Soviet-era Systems						
SS-19/M3 Stiletto	RS-18	1979-1984	Liquid	20	6	Silo
SS-25 Sickle	RS-12M (Topol)	1985-1992	Solid	72-90	1	Road-mobile
SS-18/M6 Satan	RS-20V	1988-1992	Liquid	46	10	Silo
Russian-era Systems						
SS-27 Mod 1	RS-12M2 (Topol-M)	1997	Solid	60	1	Silo
SS-27 Mod 1	RS-12M1 (Topol-M)	2006	Solid	18	1	Road-mobile
SS-27 Mod 2	RS-24 (Yars)	2010	Solid	70	4	Road-mobile
SS-27 Mod 2	RS-24 (Yars)	2014	Solid	12	4	Silo
SS-X-31	RS-26	2016	Solid		4	Road-mobile
SS-30	RS-28 Sarmat	Early 2020s			10	Silo

Sources: Defense Intelligence Agency, Russian Military Power, 2017 and Kristensen, 2017

Navy - Ballistic Missile Submarines

Russia currently maintains 12 submarines dedicated to launching strategic, ballistic missiles under the Naval High Command. The most modern Russian SLBN system is the DOLGORUKIY-class submarine which carries the SS-N-32 BULAVA sea-launched ballistic missile (SLBM) (Defense Intelligence Agency, 2017, p. 30). The Russian Navy also operates six DELTA IV- class and three[89]

[89] The Pacific fleet maintains three DELTA III boats but one is in overhaul status leaving two for operational deployment at any given time (Kristensen, 2017, pp. 120-121).

DELTA III-class nuclear powered ballistic missile submarines as part of its nuclear triad (Kristensen, 2017, p. 120). These submarines are split between the Russian Northern and Pacific Fleets. The Northern Fleet maintains and operates six DETLA IV and one DOLGORUKIY SSBNs. The Pacific Fleet SLBM component consists of two DELTA III and two DOLGORUKIY submarines. The SS-N-18 STINGRAY (3 warheads) submarine-launched ballistic missile carried by the DELTA III, the SS-N-23 SINEVA (4 warheads) on the DELTA VI, and the latest submarine launched missile, the SS-N-32 BULAVA (6 warheads), on the DOLGORUKIY class submarine can all strike targets in the U.S. from their home ports (Defense Intelligence Agency, 2017, p. 68-69). Russian ballistic missile submarines carry 16 missiles per boat and combined can deliver 800 nuclear warheads to targets in the U.S. (Kristensen, 2017, p. 120).

Aerospace Force – Manned Strategic Bombers

Russia operates several different types of manned, strategic nuclear bombers which are part of its Long-Range Aviation (LRA) Command. The three types of aircraft are all Soviet-era legacy systems but have undergone extensive technological upgrades and service life extension programs to remain viable threats into the future. The oldest Russian bomber currently active is the Tu-95 BEAR, followed by the Tu-22M BACKFIRE, and finally, the Tu-160 BLACKJACK. There are approximately 50 deployed Russia nuclear bombers which can carry more than 600 nuclear armed Air-launched Cruise Missiles (ALCMs) (Kristensen, 2017, p. 122) for use against the U.S. or our allies.

Table 2 – Operationally Deployed Russian Strategic Bombers

Bomber	Number	Armament
Tu-95MS BEAR	60	6-16 X AS-15 KENT (Kh-55) AS-X-21 (Kh-102)
Tu-22M3 BACKFIRE	50+	3 X Kh-32 or 12 AS-16 KICKBACK (Kh-15)
Tu-160 BLACKJACK	16	12 X AS-15 KENT (Kh-55) AS-X-21 (Kh-102)

Sources: Defense Intelligence Agency, Russian Military Power, 2017 and Kristensen, 2017

Russian Nuclear Command and Control

The current Russian command and control system is based on the Soviet experience with nuclear forces in the Cold War and meets the military requirements of reliability, speed, and security. Russian nuclear planners have designed a complex command and control system, which like the US system, protects Russian nuclear weapons from unauthorized or accidental launch and concentrates command authority in the most senior echelon of government. This enables Russian forces to respond quickly, if necessary, to an attack which necessitates a nuclear response. Similar again to the US system, the Russian president has immediate access to the nuclear briefcase, which is carried by military officers who accompany the president. According to Russia's military doctrine, the Russian president, as the Supreme Commander-in-Chief of the Russian Armed Forces, maintains primary release authority for the use of nuclear weapons. The Russian minister of defense and the head of the general staff also have nuclear briefcases. Due to strict secrecy, it is not known if nuclear launch authority requires only the president to authorize a launch of if that decision requires concurrence with the defense minister or head of the general staff

(Arbatov, 2017, p. 43). The Russian General Staff is responsible for monitoring the status of Russian nuclear forces and relays launch commands from the Russian president to the nation's nuclear forces. The Russian government has built a robust, redundant nuclear command, control, and communications system to ensure survivability and continuity of communication in a nuclear crisis. They also maintain a system, Perimeter, also known as the Dead Hand System, to ensure nuclear retaliation in the event the planned Russian nuclear command, control, and communication system breaks down under nuclear attack (Defense Intelligence Agency, 2017, p. 26-27).

Russia's Tactical Nuclear Forces

Russia also maintains a large stockpile of tactical, non-strategic nuclear weapons. These weapons were designed and built during the Cold War and intended for battlefield use. Compared with strategic nuclear systems, tactical nuclear weapons have limited range and cannot reach the U.S. from Russian territory. These weapons, nonetheless, still pose a threat to our NATO allies in Europe, our treaty allies in East Asia, and forward deployed US forces stationed in those areas. The Russian tactical nuclear arsenal contains warheads for air-delivered gravity bombs, short-range ballistic missiles, air-to-surface and surface-to-air missiles, air-delivered depth charges,[90] anti-ship, anti-submarine, and anti-aircraft missiles and torpedoes for surface ships and submarines (Defense Intelligence Agency, 2017, p. 31).

[90] Use for anti-submarine warfare

Russia's short-range nuclear missiles are a special concern for our NATO allies. Russia fields two types of these missiles systems, the SS-21 TOCHA and the SS-26 ISKANDER-M. The original SS-21 entered service in 1976 and the improved SS-21 version, the TOCHA-U, came on line in 1990 (Defense Intelligence Agency, 2017, p. 77). The latest missile, the SS-26 which was fielded in 2007, is replacing the SS-21 and is also a solid-fueled, road-mobile, single-warhead missile system. Compared with the SS-21, this missile has superior terminal guidance systems using either radar, electro-optical, or infrared imaging matching technology which enables the missile to strike mobile targets (Defense Intelligence Agency, 2017, p. 77). According to Kristensen (2017), Russia maintains approximately 140 missiles with 140 warheads for these two systems (p. 116). The SS-26 also brings an increased range of 400-500 km over the more limited 120 km range of the SS-21. This allows the SS-26 to strike targets in NATO territory. In 2016, Russia announced its intention to deploy the SS-26 ISKANDER-M system to Kaliningrad Oblast which borders NATO member states Poland and Lithuania. This missile can strike targets in Poland, the three Baltics states (which are also NATO allies), and Sweden. The Russian military completed the deployment in October 2016 and the government has declared the Kaliningrad SS-26 basing as permanent (Center for Strategic and International Studies, SS-26 Missile Threat Webpage, 2016).

Russia has also developed a new missile system, the SSC-8, with a range of approximately 1500-2000 km and has deployed at least one battalion of this ground-launched cruise missile in violation of the Intermediate-Range Nuclear

Forces (INF) Treaty. Each missile battalion is comprised of four mobile missile launchers which are very similar to the launcher used for the SS-26 ISKANDER missile system (which is allowed under current arms control treaties), making differentiation of these systems difficult for treaty monitoring/verification purposes and order of battle analysis. Each launcher is equipped with six ground-launched cruise missiles each with one nuclear warhead. On March 8, 2017, U.S. Air Force General Paul Selva, Vice-Chairman of the Joint Chiefs of Staff, testified before the House Armed Services Committee stating:

> We believe that the Russians have deployed a land based cruise missile that violated the spirit and intent of the intermediate nuclear forces treaty….The system itself presents a risk to most of our facilities in Europe and we believe that the Russians have deliberately deployed it in order to pose a threat to NATO and to facilities within the NATO area of responsibility. (Barrie & Boyd, 2017)

The SS-26 system missile is capable of striking targets in the three Baltic States and northeastern Poland, if deployed in western Russia and as far away as Germany and Denmark, if deployed in the Kaliningrad Oblast.

Russian Nuclear Force Modernization

Russia has embarked upon a large-scale conventional and nuclear force modernization plan. Between the fall of the Soviet Union in 1991 and the difficult but ultimately successful five-day military campaign against Georgia in 2008, the Russian military suffered across the board deterioration of its

operational effectiveness, readiness, and morale. In 2009, the Russian government, reacting to the debilitated state of the Russian Armed Forces adopted a comprehensive plan to reform and modernize the military. Entitled the "New Look," it is an effort to transform the Soviet-era Russian military force, which was built based on large infantry and mechanized ground forces designed for invading and occupying Western Europe, to a smaller, lighter, more professional force designed for expeditionary warfare. The Russian military has changed their command structure, the organizational structure of their military services, and reconfigured their military districts to adapt to changes they see in 21st century warfare.

A second component to the reform program, oriented toward planning and funding new weapons systems, is Russia's State Armaments Program. This plan emphasizes modernization of Russia's strategic nuclear forces, space, precision strike systems, and aerospace defense capabilities (Defense Intelligence Agency, 2017, p. 43). This plan, a priority for President Putin, seeks to modernize 70% of Russia's military equipment between 2011-2020 (Defense Intelligence Agency, 2017, p. 75). The Russian government plans to spend $28 billion through 2020 to modernize the various elements of the nation's nuclear triad (Defense Intelligence Agency, 2017, p. 29). The goal of this expansive modernization program is to replace rapidly aging Soviet-era nuclear systems which are reaching the end of their operational service life with modern systems. The Russians seek to maintain nuclear parity with the U.S. To maintain deterrence, they also want to ensure and improve the survivability of their nuclear force. At the geopolitical level, Russia

seeks to maintain the prestige that nuclear weapons provide and regain a position of power, on par with the U.S., in international affairs. From a military perspective, Russia is very concerned with US advances in conventional, precision strike capabilities, especially the prospects of quick, global strike weapons. It has also registered its displeasure with the 2002 US withdrawal from the Anti-Ballistic Missile (ABM) Treaty and subsequent continued development and deployment of US and NATO ballistic missile defense systems. From the Russian viewpoint, US quick, precision strike capabilities place many Russian targets at a risk of very quick destruction, and thus these new weapons possess the same effects as nuclear weapons. Additionally, Russia also fears their nuclear deterrent is substantially diminished with US/NATO ABM deployments. In addition to the operational need to modernize its nuclear forces, Russia seeks to develop and field nuclear weapons which compensate for US conventional precision strike developments and to counter improved US/NATO ABM defenses in both the United States and Europe.

US technological advances are broadening the Russian interpretation of the meaning of strategic warfare. American development and refinement of conventional, precision strike capabilities cause Russia significant concern. Long-range conventional weapons can now attack strategic targets that have historically only been held at risk by nuclear weapons. New cyberweapons are designed, in part, to augment the effects of both conventional and nuclear kinetic weapons by attacking command, control, communication systems, early warning (EW) systems, and intelligence collection systems. Additionally, Russia sees

US/NATO missile defense developments as further degrading their strategic and tactical nuclear deterrent. The combination of these factors provides the U.S. with significant superiority in the strategic competition with Russia (Rogov & Squassoni, 2017, pp. 51-52).

Russia is shifting its nuclear force posture away from Soviet-style mass to a position which places greater emphasis on survivability of its nuclear forces (Colby, 2016, p. 2). As discussed above, this is largely in response to Russian concerns over US technological superiority in precision strike capabilities; anti-ballistic missile systems; and command, control, communication, computer, and intelligence (C4I) networks. While other components of the US nuclear force have remained stable from a technological perspective, Russia believes US fielding of advanced capabilities in these three areas has tipped the strategic nuclear balance in the US's favor. Their emerging force modernization program is designed, in part, to counter these developments. Russia is increasing the number of strategic warheads deployed on road-mobile systems and is building a new class of quiet ballistic missile submarine with plans to more frequently keep these submarines on patrol. These efforts serve, from a Russian perspective, to enhance deterrence by complicating US nuclear targeting. The new Russian nuclear weapons systems are much more difficult to track and accurately attack compared to fixed, land-based silos and nuclear bomber airfields both of which are highly vulnerable to a first-strike.

Strategic Rocket Forces – Intercontinental Ballistic Missiles

Modernization of ICBMs for the Russian SRF is a high strategic priority for President Putin. To replace the heavy, silo-based, MIRVed SS-18, Russia is developing a new missile, the Sarmat with the goal of fielding this missile between 2018-2020. It is also deploying a second new missile, the Rubezh (Border), also known as the RS-26. This new road-mobile system is smaller than the current SS-27 Mod 2 and is designed to overcome Western missile defense systems. Russian research and development teams are working on a third missile, the Barguzin ICBM, a rail-mobile system (Defense Intelligence Agency, 2017, p. 48).[91] After the completion of the currently planned force modernization, the overall number of SRF missiles will decrease below the approximately 300 currently deployed but the number of missiles capable of carrying multiple warheads will increase. Additionally, between 2010-2020, all Russian road mobile systems will carry multiple warheads.[92] Russia's future deployment of mobile ICBM systems, which the U.S. does not have an equivalent capability, will continue to complicate our ability to find, fix, and destroy these systems in a potential nuclear conflict. Such complications serve the Russians well, enhancing the survivability of their ICBM force and thus enhancing deterrence.

The SRF of the future will remain the pride of Russia's nuclear attack force, operating approximately 1,200 nuclear warheads, the vast bulk of their

[91] Some reports indicate Russia may have either delayed or cancelled this system (Kristensen, 2017, p. 117).
[92] Prior to 2010 Russian road mobile systems were capable of delivery a single warhead. This will change as the SS-25 is phased out. The SS-27 and newer RS-26 are road-mobile, MIRVed systems.

nuclear capability under the New Strategic Arms Reduction Treaty (START). These missiles are expected, like their US equivalents, to remain on alert, capable of launch within minutes of receiving orders from President Putin and with the capability of impacting US targets 25-30 minutes after launch.

Navy - Ballistic Missile Submarines

The most modern Russian ballistic missile submarine is the DOLGORUKIY-class submarine with three operational boats. The Russian Navy plans to acquire eight additional DOLGORUKIY-class submarines and plans to build a new generation strategic ballistic missile submarines between 2031 and 2050 (Defense Intelligence Agency, 2017, p. 83). The DOLGORUKIY-class submarine is equipped with the SS-N-32 BULAVA solid-fuel missile with six MIRV warheads and an intercontinental range of 8,000 kilometers. This missile will also replace older SLBMs in the Russian Navy's missile inventory.

Aerospace Force – Manned Strategic Bombers

Russia is in the process of upgrading two manned bombers, the Tu-95 BEAR, and Tu-160 BLACKJACK bombers to allow their continued operation through 2030, and is developing a new, latest-generation bomber, the PAK-DA. All current Tu-160s will be upgraded to Tu-160 M1 or M2 and the production line will be re-opened for the TU-160M2 sometime after 2023 (Defense Intelligence Agency, 2017, p. 80). The new PAD-DA is scheduled for development over the next 10 years and will possess both conventional and nuclear weapon delivery options, stealth technology, and a short- and unimproved runway takeoff/landing capability (Defense Intelligence Agency, 2017, p. 30).

Russia is also modernizing its air-launched cruise missile systems for its Tu-95 and Tu-160 strategic bombers. The Kh-102 is the designation for the new missile which will replace the existing Kh-55 cruise missile (Defense Intelligence Agency, 2017, p. 78).

Nuclear Arms Control Treaties Currently in Force

New Strategic Arms Reduction Treaty (New START)

Nuclear arms control treaties are important in mitigating the level of potential destruction in the event of a nuclear conflict. The current strategic nuclear arms control treaty in force, the US-Russia New Strategic Arms Control Treaty, New START, cuts and limits each side to 1,550 operationally deployed strategic nuclear warheads.[93] The total number of deployed and non-deployed delivery systems (nuclear capable, manned bombers; ICBMs; and SLBMs) is limited to 800 with the number of operationally deployed systems limited to 700.[94] The treaty was signed on April 8, 2010 and entered into force on February 5, 2011. The agreement provided each side seven years to reach the treaty's limitations which must be fulfilled no later than February 5, 2018. The New START Treaty will expire in 2021 but allows for one, five-year extension. This treaty reduces the number of US and Russian nuclear weapons to their lowest levels since the 1950s (Rogov & Squassoni, 2017, p. 52).

[93] Note: Although each manned bomber carries multiple nuclear warheads, each bomber counts as one warhead under the New START Treaty.
[94] The difference between 800 and 700 delivery systems allow 100 delivery system to be in various states of non-operational status (such as in different stages of maintenance).

Intermediate-Range Nuclear Forces (INF) Treaty

The INF Treaty, negotiated by President Reagan and General Secretary Gorbachev and signed on December 8, 1987, required the destruction of ground-launched ballistic and cruise missiles with ranges between 500-5,500 kilometers within three years. The treaty entered into force on June 1, 1988 with the exchange of instruments of ratification in Moscow. This treaty is significant in that it eliminated an entire class of nuclear weapons and set the precedent for on-site inspection of nuclear facilities in both the U.S. and Soviet Union. The United States eliminated its Pershing-class intermediate-range ballistic missiles along with the Ground Launched Cruise Missile (GLCM), known as the Gryphon, and the Soviet Union eliminated their SS-4, SS-5, and SS-20 ballistic missile systems. By May 1991, with full treaty implementation, both sides had destroyed 2,692 missiles. (Department of State, Intermediate-Range Nuclear Forces Treaty Website). Despite the success of this treaty, Rogov and Squassoni believe this agreement is on the verge of collapse. The U.S. has accused Russia of violating the INF Treaty by testing and deploying a new ground-launched cruise missile system known in the West as the SSC-8. The 2,500 km range of this new system places it within the limitations set by the treaty. In response, the US Congress has ordered the Pentagon to start a research and development program on a new, US intermediate-range, road-mobile, ground launched missile system (Barnes, Sonne, & Forrest, 2017). Russia has responded by accusing the U.S. of violating the INF Treaty by deploying the Mk-41 Aegis Ashore ground-based missile defense system with the SM-3 missile in Romania. While the SM-3 is clearly designed to counter potential Iranian-launched ballistic missiles threatening our European

NATO allies, Russia asserts the system can launch offensive surface-to-surface missiles (Rogov & Squassoni, 2017, p. 53 and Barnes, Sonne, & Forrest 2017). The INF Treaty is key to strategic stability in Europe and the NATO Secretary General, Jens Stoltenberg, has endorsed efforts to resolve differences between the U.S. and Russia. Recalling the dangerous nuclear standoff in Europe of the 1980s, Stoltenberg stated:

> I'm part of a political generation in Europe which really grew up with the very intense debate related to the deployment of the SS-20s and the Pershing. We also very much welcomed the INF Treaty which then eliminated these weapons in Europe. So, I think that the INF Treaty is a cornerstone. (Barnes, Sonne, & Forrest 2017)

Moving forward it is interesting to note the current attitude of Russia's political leadership towards arms control. Contrary to the view of their Soviet predecessors, Russian leaders do not believe nuclear arms control treaties, in general, enhance Russian national security. They view them as tools the West used during the period of Russian weakness in the 1990s to exploit the geopolitical situation at Russia's expense in which Russia was forced to make unilateral concessions to the West. Arbatov notes the one exception to this view is the current strategic nuclear arms control treaty, New START, which the Russians view as clearly beneficial to both the U.S. and Russia. From the Russian perspective, this treaty led to reductions in the US nuclear arsenal, providing a period of strategic nuclear parity with the U.S. while Russia worked to withdraw aging strategic systems and replace them through their current nuclear force

modernization effort. However, this limited, positive Russian view of nuclear arms control may be short lived as the Russians view any additional reductions in nuclear arms as placing Russian national security at risk. Arbatov believes the role nuclear weapons play in Russia is greater today than at any period since the Soviet Union achieved nuclear parity with the Unities States in the early 1970s. Given the importance Russia attaches to its nuclear arsenal as a primary source of its standing in international relations and the ultimate guarantor of its security, further reductions are probably unlikely (Arbatov, 2017, p. 59-60).

Russian Doctrine: Escalate to De-escalate – Potential Scenarios

Potentially much more dangerous than Russian nuclear force modernization, which is largely centered around replacing aging capabilities, is an element of Russia's military doctrine known as "escalate to de-escalate". This doctrine is designed to capitalize on Russia's superior tactical nuclear capabilities and may partly be the result of their own perceptions of convention inferiority in relation to U.S. and NATO. This portion of their doctrine was closely examined in expert Congressional testimony in May 2017 before the Commission on Security and Cooperation in Europe. Dr. Michael Carpenter, Senior Director at the Penn Biden Center for Diplomacy and Global Engagement described the concept as one which:

> Allows for the first use of a nuclear weapon to compel adversaries to settle a conflict on Moscow's terms rather than to fight on or escalate the conflict. Under this doctrine, Russia could, for example, use a tactical

> nuclear weapon for a first-use "demonstration effect." If used in a conflict with a NATO ally, however, this could have the exact opposite of its intended effect and prove dangerously escalatory, with devastating consequences for all parties. (*The Growing Russian Military Threat in Europe*, 2017, p. 42)

This suggests Russia could use a nuclear weapon to de-escalate a conventional conflict that was not being fought on Russian territory, for example, in coordination with a Russian conventional attack against one of its neighbors (*The Growing Russian Military Threat in Europe*, 2017, p. 51).

Current and Future Risks of Accidental Nuclear War

In the current, post-Cold War era, it is reasonable to believe the risk of nuclear war between the United States and Russia is a remote possibility. Thankfully, the vast nuclear arsenals of both sides have shrunk based on nuclear arms control agreements negotiated from the early 1970s through 2010. The two nations have a much different relationship now than during the height of the Cold War. However, tensions are rising due, among many factors, to Russian perceptions of US and NATO expansion, intervention in the sovereign affairs of other nations (by supporting pro-democracy movements and even violent regime change), and the continued development of ballistic missile defenses. The U.S. and NATO view Russian acts of aggression against Georgia, Ukraine, renewed rhetorical threats against the U.S. and NATO, as well as more aggressive Russian military activities (military exercises, airspace violations, and dangerous acts near

NATO forces) as evidence of a new, more assertive Russian foreign and military policy. Many analysts believe the risk of an inadvertent nuclear war between the U.S. and Russia remains (Barrett, 2016, p. 1). The current situation remains inherently dangerous because both nations retain the two largest nuclear forces in the world and maintain many of those weapons on high alert states. This nuclear force posture allows each side to launch a nuclear strike within minutes of notification of an actual or perceived attack. Given the enormous destructive capability of even a single warhead, the use of a tactical or strategic nuclear weapon would be devastating and even a limited nuclear exchange would be catastrophic. This section will detail three potential scenarios, based on the impressive work of Anthony Barret, a Stanton Nuclear Security Fellow at the RAND Corporation. Barret conducted a comprehensive review to develop likely pathways and conditions under which the U.S. and/or Russia might misinterpret events which would lead to a nuclear strike by one or both sides in a future conflict. He uses fault tree models to analyze three scenarios which could lead to inadvertent nuclear conflict. Scenario 1 involves an early warning system false alarm, scenario 2 is centered on a conventional conflict in Russia's near abroad (in a former Soviet republic, involving a Russian ally, or in another area or in a situation deemed critical to its national security interests), and scenarios 3 deals with a false nuclear attack indication from Russia's "Dead Hand" system. The first scenario applies to either the U.S. or Russia while scenarios 2 and 3 involve only Russian nuclear forces. Barrett underlines the importance of other factors in all of these scenarios including how the level of tension between the U.S. and

Russia effects threat perceptions and the consequent actions each side might take in each of the three scenarios (Barrett, 2016, p. 2). One of the assumptions is the accidental or deliberate use of nuclear weapons increases in a conventional conflict or during a period of increased tensions or crisis (Barrett, 2016, p. 2). Senior leaders are more likely to escalate and cross the nuclear threshold in such situations when intelligence indicators of potential nuclear attack are active. Barrett notes there are two types of crises in which the U.S. and Russia have come close to nuclear disaster, 1) a two-sided crisis, such as the 1962 Cuban Missile Crisis, in which both Russia and the U.S. raised nuclear alert levels and engaged in a standoff and 2) a one-side crisis, such as the Soviet War Scare of 1983 during NATO Exercise Able Archer, in which only the Soviet side perceived/misperceived the situation as a crisis (Barrett, 2016, p. 2). The following describes Anthony Barrett's analysis of the three potential scenarios in more depth which could lead the U.S. and Russia to an inadvertent nuclear conflict.

Scenario 1 – Early Warning False Alarm Scenario

The early warning false alarm scenario involves the misinterpretation of data generated by either the Russian or US early warning systems. In the US case, the North American Aerospace Defense Command (NORAD) is responsible for maintaining 24/7 monitoring of missile and bomber threats to the United States. Both the Russian and US systems consist of ground-based radars designed to detect manned bombers in the atmosphere and missiles in space as well as a

space-based satellite component to detect missile launches.[95] The system is designed to provide multiple-source confirmation of enemy bomber and missile activity to improve the probability of launch confirmation. If a launch is confirmed, watch officers contact senior military leaders and the president to notify them of the activity and provide a situation assessment at which point the president must decide upon a course of action, given the situation, and make the decision to order a retaliatory attack or not.

The requirement to confirm a launch warning using multiple sources, including radar and satellite data is known as dual phenomenology (Barrett, 2016, p. 2). The multiple-source approach seeks to reduce the potential for false positives but is not foolproof. Barrett describes an incident in 1980 in which a faulty computer chip indicated a missile launch was in progress against the U.S. While system anomalies might be responsible for false launch indications, misinterpretation of valid data may also be a factor in the future. The proliferation of longer-range ballistic missiles and the proposed development and fielding of prompt global strike weapons using conventional ICBMs could lead to misidentification or misinterpretation of valid data with catastrophic consequences.

A potential scenario, from a Russian perspective, might look like the following: Due to budgetary shortfalls, Russian aerospace defense forces are unable to adequately maintain a key component or various elements of their

[95] The space-based satellite component uses a system of satellites which employ infrared sensors to detect the hot exhaust gasses from ballistic missile launches.

ground and/or space-based surveillance network. Resulting technical problems due to an aging system or one that is not properly maintained leads to an increasing number of false alarms. Russia receives a launch notification from its infrared satellite system but is unable to determine if it is a genuine launch or caused by a natural phenomenon such as the reflection of sunlight from high-altitude clouds or from a man-made phenomenon such as an oil field fire in the northern U.S. near a US ICBM field in Montana, Wyoming, or North Dakota. Soon after the potential launch detection, orbital debris strikes the Russian satellite, destroying it without warning. Russian officials interpret the loss of their early warning satellite as a potential US anti-satellite or cyber-attack designed to degrade Russian nuclear early warning capabilities. At this point, Russian warning officers possess limited information but could logically conclude, however erroneously, that Russia is under nuclear attack. With the physical loss of their warning satellite and loss of confidence in other elements of their warning system, Russian senior official might recommend a nuclear strike against the U.S. based on the limited information at hand. This scenario could take place during periods of calm or high tensions between the two countries.

The two critical risk factors at play in this scenario is the state of perceived relations between Russia and the U.S. (along a spectrum from calm to crisis-level relations) and whether the country receiving the launch indications has adopted a launch-on-warning or a launch-under attack response posture. According to Barrett, both postures result in launching a counter-attack based on the false indications and before the incoming attack can adversely affect key command and

control facilities (Barrett, 2016, p. 3). Put another way, the response strategy does not entail riding out an attack before launching a nuclear counter-attack. The main difference between a launch-on-warning and a launch-under-attack response deals with the amount of time available to gather additional warning surveillance data which affects evidence threshold for interpreting the data and declaring a valid attack. A launch-on-warning response requires a quicker attack validation than a launch-under-attack response but may provide senior decision makers with a slightly greater amount of time to decide upon a response. A launch-under-attack response allows warning officers more time to collect and evaluate launch warning data but may reduce the amount of time decision makers have to formulate a response.

Some nuclear strategists believe it is better for Russia to maintain a launch-on-warning response posture as a means for enhancing nuclear deterrence (Quinlivan & Oliker, 2011, pp. 25-27). Both the U.S. and Russia developed and potentially adopted such a response strategy during the Cold War. Given the compressed timeframe required for threat validation in the launch-on-warning posture, the potential for reaching erroneous conclusions based on false and/or incomplete interpretation of warning data is much greater than during a launch-under-attack response posture.

Clearly, false indicators of attack represent a danger of inadvertent nuclear war between Russia and the U.S. Given the long, nearly 70-year history of the nuclear standoff between the U.S. and Soviet Union/Russia, many may find it incredible that such a disaster has been averted for so long. Over that period,

several different events have indeed led to false attack alarms on both sides of the nuclear divide. Barrett points out four, well-known, false early warning incidents which moved beyond the theoretical problems and highlight real-world, historical breakdowns in the reliability of the nuclear early warning system. The following incidents occurred and thankfully did not lead to senior-level decisions to launch nuclear counter-strikes:

- 1979 – Operator Error - A training tape which simulated a large-scale Soviet nuclear attack against the U.S. was accidently inserted into a NORAD computer
- 1980 – Computer System Error – A computer chip failed in a NORAD early warning computer indicating a Soviet attack against the U.S.
- 1983 – Sensor or Data Interpretation Error – Russian infrared satellite misidentified sunlight reflected from high-altitude clouds as a US ICBM launch against Russia
- 1995 – Data Misinterpretation – Russian warning officers misidentified a Norwegian rocket launch to deploy a satellite as a US submarine-launched ballistic missile targeting Russia

Additional circumstances could also lead to false nuclear warning indications and attack validation. Terrorists could launch a missile resembling a US or Russian missile to provoke a nuclear response. Potentially more likely, a terrorist group, a cyber-hacking group, or a rogue state could launch an offensive cyber-attack on the Russian or US early warning system to simulate a false attack or communicate an erroneous nuclear attack via either state's nuclear command

and control system (Fritz, 2009 as cited in Barrett, 2016, p. 5). However, in comparison to other potential scenarios, the idea of terrorist induced false launch indication is low (Barrett, Baum, & Hostetler, 2013). Barrett believes Russian and American officials should still consider and plan for such remote possibilities (Barrett, 2016, p. 5).

The employment of current and future US global strike capabilities and similar Russian conventional capabilities could also lead either side to falsely conclude it was under nuclear attack. This is because the attack profile of these weapons types and resulting warning signatures are similar to nuclear ballistic and cruise missiles. Use of ICBMs, SLBMs, and cruise missiles with conventional warheads and flightpaths which cross Russia or operate near Russian territory could be difficult to distinguish from nuclear capable systems. Even if only a single weapon were launched, or the US or Russian operators determined the point of projected impact was not on their territory (which they currently have the technical capability of doing), warning officers might still assess the attack as a debilitating electromagnetic pulse (EMP) attack designed to degrade and disrupt the opposing side's command, control, and communication capability. Russian fears the U.S. might mask this type of specialized nuclear operation under the ruse of a conventional, global-strike attack against one of Russia's neighbors is plausible in the future and in fact, was one of the main concerns with the 1995 Norwegian rocket launch, which the Russians believed was a potential EMP attack (Barrett, 2016, p. 5).

Scenario 2 – Accidental Escalation of a Conventional Conflict

A classic scenario for nuclear conflict and potentially one of the more plausible concepts involves the escalation of a conventional war to the use of tactical and then strategic nuclear weapons. This is theoretically possible between any two nuclear powers and was a constant concern during the Cold War between the U.S. and Soviet Union and their respective allies. Today, this scenario remains a concern between the U.S. and Russia, India and Pakistan, and with the emerging North Korean nuclear program, between North Korea and the U.S. (including our allies South Korea and Japan). Barrett cites the danger of using conventional capabilities to degrade enemy nuclear capabilities to the point where the enemy starts to question the remaining deterrent value of its second strike nuclear capability. A further deliberate or potentially inadvertent risk involves degrading an enemy's early warning network during a conventional conflict which results in uncertainty and lack of confidence in that state's ability to detect a nuclear attack and thus protect its tactical and/or strategic nuclear deterrent. Accidental escalation could also result when national leaders have a good understanding of the various red lines they should not cross which could lead to a transition from a conventional to a nuclear conflict but their military forces inadvertently cross that threshold (Morgan, et al., 2008 as cited in Barrett, 2016, p. 6). This type of accident could result from leaders not providing proper rules of engagement for their forces, operators not understanding or misinterpreting the rules of engagement; lack of discipline; bombing the wrong targets; or straying across an international border.

The greatest risk for this type of scenario probably involves Russia and Poland/the Baltic States. Another potential flashpoint involves Ukraine, but this is probably a lesser risk given the US and NATO's tacit recognition of Russian interests in that country and the fact that it is not a NATO member state. Some analysts also cite the potential for conflict between Russia and NATO in the Arctic region in which a minor incident, such as a clash over mineral rights or an accident involving a Russian and NATO vessel at sea could escalate into a conventional and then nuclear conflict. According to Forrest Morgan, "There is a significant chance that either Russian or Western leaders would engage in escalatory actions while assuming that the other side would back down, fearing the runaway consequences of further escalation" (Morgan, 2012, p. 37 cited in Barrett, 2016, p. 9).

Of these various flashpoints, the conflict most likely to require a US response involves Russian actions which significantly threaten a NATO member state. In a scenario involving Russian aggression against the territory of these states, US and NATO military operations would not only pit them against Russia's invading forces but would put those forces in very close proximity to Russian territory. If the U.S. and NATO were to follow current doctrine, they would probably first have to gain air superiority to allow a forcible entry into the country to regain control. Such operations would probably entail attacking air defense systems (missile sites and air bases) and command and control facilities located in Russia responsible for enemy operations in NATO territory. To prevent a NATO intervention, Russia might employ its escalate-to-de-escalate

doctrine to deter any pending military action to reverse Russian military gains. Conversely, should Russia begin to see their gains reversed on the battlefield, they may consider using one or a small number of lower yield, tactical nuclear weapons to prevent a NATO victory, avoid national humiliation, and preserve Russia's international prestige. In summary, the potential for nuclear conflict between the U.S. and Russia in scenario 2 could come about when 1) national leaders recognize and respect the threshold between conventional and nuclear conflict but somehow their operational military forces in the field make critical errors which lead to nuclear conflict or 2) national leaders intend to accomplish their objectives using conventional weapon systems, and then either miscalculate their adversary's political/military response to the crisis or find the tide of battle turning on them and resort to using tactical nuclear weapons to deter military intervention or to reverse their fortunes on the battlefield.

Scenario 3 – "Dead Hand" Scenario

The third inadvertent nuclear conflict scenario deals with the "Dead Hand" or Perimeter system as known in Russia. Dead Hand is a semi-automated system designed to launch Russia nuclear weapons against the United States when there is evidence of nuclear detonations in Russia and there is a break in the normal nuclear command and control system between Russia's senior leaders and nuclear weapons system operators. The system is believed to operates as follows: A network of specialized sensors detect nuclear detonations in Russia by measuring

light, radioactivity, seismic shocks, and atmospheric overpressure.[96] If the sensor system detects what it believes to be nuclear detonations and the Dead Hand system cannot communicate with the national leadership, it would conclude Russia is under nuclear attack. The system incorporates a "man-in-the-loop", probably a senior Russian defense official at a hardened nuclear command and control facility to make the final decision regarding launching Russian nuclear weapons in retaliation. However, it is important to note that in a crisis in which the Dead Hand system would come into play, the individual who would make the final nuclear weapons release decision would probably have very little information beyond the nuclear detonation data and the communication-link failure (Barrett, 2016, p. 10).

This Russian doomsday system addresses the fear that the U.S. could launch a nuclear strike to decapitate the Soviet leadership (Colby, 2016) and thus paralyze their nuclear forces, leaving their military forces and other valuable targets susceptible to systematic nuclear destruction. The system was initially fielded in the 1980s to enhance deterrence against this type of US nuclear first strike. According to DIA and the commander of the Russian Strategic Rocket Forces, this system remains operational. In 2011, Russian Lieutenant General Sergey Karakayev confirmed the Cold War-era system still exists and is on alert, "If there is a need for a retaliatory strike, the command for an attack may come from the system, not people" (Sudakov, 2017). DIA also described Russian

[96] This is known in the US Intelligence Community as Measurement and Signature Intelligence (MASINT).

nuclear command and control and the Dead Hand system in its recent, unclassified 2017 Russia Military Power edition (Defense Intelligence Agency, 2017, p. 26). Given the dearth of official Soviet/Russian information on the Dead Hand system, some analysts have questioned the real deterrent value of this system (Barrett, 2016, p. 10). However, others believe the system is really designed not necessarily for deterrence, but to provide Russia the option of *not* being forced into a launch-on-warning scenario (Blair, 1995; Hoffman, 2009; Thompson, 2009 as cited in Barrett, 2016, p. 10). As long as this system functions properly, this might be seen as a positive, stabilizing posture which relieves pressure on senior leaders to launch-on-warning if attack indications are ambiguous.

A potential scenario involving the Dead Hand could look like the following: a crisis which raises tensions between the U.S. and Russia leads to Russian activation of the Dead Hand system including the dispatch of a senior defense official to the underground command and control bunker near Moscow where the Dead Hand system operates. Potential crises that could trigger Dead Hand activation include Russian conventional military activity in its "near abroad" (in former Soviet states), US direct military support for the Ukrainian government to retake eastern Ukraine which involves the potential for direct confrontation between US and Russia forces, or a Korean scenario (including the entire range of options from a US pinprick, warning attack against North Korean nuclear/ballistic missile facilities, to a full-scale North Korean nuclear attack against the continental United States). As a precaution, Russian officials also

raise their nuclear force alert level. The Russian official at the Dead Hand bunker has the authority and ability to launch Russian nuclear weapons against the U.S. if he believes Russia is under nuclear attack and communication with the nation's other senior leaders is severed. Unattributed cyber activity adversely affects the quality, consistency, and integrity of the data Dead Hand bunker officials are receiving from the Russian nuclear early warning network. A few days into this hypothetical crisis, apocalyptic terrorists detonate a nuclear weapon in Washington, DC followed a few minutes later with a similar detonation in Moscow (Barrett, 2016, p. 10). The nuclear detonation in the Moscow area triggers the Dead Hand nuclear alert sensors which Russian officials correctly interpret as confirmation that Russia is under nuclear attack. The staff in the Dead Hand bunker also feel the shock of nuclear blast and all communication with the senior Soviet political and military leadership is severed. Yet, some of the nuclear command, control, and communication links remain operational. Soviet officials in the Dead Hand bunker are not aware of the nuclear attack against Washington, DC and must decide to launch Russian nuclear weapons against the U.S. with no additional information. The ability of Russian sensors to precisely discriminate between weapons design and thus positively attribute the origin of the weapon is unknown. However, the risk of the Dead Hand system identifying the nuclear detonation source as the U.S. if the nuclear terrorists were to acquire a US nuclear weapon design or acquire a device with similar detonation signatures, is an additional risk.

Barrett also discusses several other potential triggers which could lead Dead Hand operators to misleading conclusion regarding a nuclear detonation in Russia. He cites the potential for meteorite impacts to exhibit signatures similar to nuclear blasts which the US Department of Defense have sometimes initially attributed to nuclear detonations. Meteorite impacts with greater than one kiloton of explosive force occur routinely with approximately eight such incidents per year. While one kiloton is a very small nuclear detonation compared with the nuclear capabilities of both the Russian and US arsenals, EMP weapons are designed with low yields (Barrett, 2016, p. 11). Although a larger meteor strike might resemble a nuclear detonation which could lead to a Dead Hand nuclear launch, such an event is highly unlikely.

Barrett raises the additional possibility of a potential cyber-attack which could precipitate a Dead Hand launch. Although the Dead Hand system operates on a closed network and is not connected to the internet, that does not make it immune from computer viruses which could lead to erroneous attack indications. There are precedents for viruses adversely affecting closed, secure computer networks. In 2008, a foreign intelligence service penetrated US Department of Defense (DoD) classified networks using a computer virus which a DoD employee transferred unwittingly via a removable USB drive (Barrett, 2016, p. 11). This led to the ban of USB drives on all DoD computers. Similarly, the STUXNET computer virus which corrupted industrial control systems the Iranian government used for Uranium enrichment processing, was also introduced into a closed, secure computer network via a USB drive. The introduction of a

malicious computer virus into the Dead Hand system is plausible and represents a future risk should the Russian government activate this system during a future crisis.

Deliberate Nuclear Attack Risks

Given the mutual vulnerability of both sides to a devastating nuclear attack, it may seem completely implausible that deliberate nuclear conflict (vice the accidental scenarios detailed above) between the U.S. and Russia is possible. However, Elbridge Colby argues nuclear weapons remain relevant and plausible scenarios unfortunately exist which involve the deliberate use of nuclear weapons. Perceptions of vulnerability and/or deliberate escalation are two ways which could lead to nuclear use.

Perceptions of Vulnerability

The perception of vulnerability is not new in nuclear strategy and involves the belief that the adversary has key or overwhelming capabilities which could motivate its launch of a disarming first strike. This may not objectively be the case but remains a problem nonetheless if the perception of vulnerability exists. Russia has been and remains fearful of US and Western rapid technological advances and our ability to successfully integrate new capabilities into our military doctrine and employ them in the battlespace. Russia fears it may not be able to survive a preemptive nuclear attack or that it may not have sufficient surviving nuclear forces to deter a US first-strike. Historically, it has been difficult, if not impossible for the U.S. to convince Russia of its intent, especially

regarding anti-ballistic missile defenses, despite strenuous efforts by past administrations. Colby cites numerous factors which contribute to Russian perceptions of vulnerability as a combination of: distrust, Russian paranoia, concealment of military capabilities to attain or retain military advantage, verification challenges, Russia's sub-standard early warning system, and US reluctance to enter binding agreements.

Russia, if faced with deteriorating political or military situation or with an outright crisis, may feel time is not on their side and that could lead them to rapidly increase the readiness levels of their tactical and/or strategic nuclear forces. Russian leaders could reasonably believe, given their perception of superior US capabilities, the decision window for obtaining critical intelligence, validating facts, and making reasoned judgements, was narrowing or rapidly closing. Without fast, decisive action, Russia would leave itself open for almost certain military defeat. In such a scenario, senior Russian leaders might believe they need to use their nuclear forces before they lose them to a US preventive strike. While this fear of a deliberate conflict based on perceptions of vulnerability is not new, Colby explains new technologies such as cyberwar, space/counterspace, and remotely controlled or autonomous capabilities may improve targeting of C4I, early warning systems, and nuclear forces which would exacerbate existing Russian fears and thus contribute to lowering the threshold of nuclear weapons use.[97]

[97] Colby and James N. Miller Jr are studying this problem as part of a project at the Center for a New American Security and the Harvard Kennedy School funded by the Carnegie Corporation of New York.

Deliberate Escalation

Controlled use of nuclear weapons, as opposed to full-scale, general nuclear use, is another potential strategy both Russia and the U.S. are capable of employing. Historically, in response to growing Soviet nuclear capabilities the U.S. shifted it nuclear strategy from Massive Retaliation under the Eisenhower Administration to Flexible Response under President Kennedy. The U.S. and NATO used the strategy which envisioned the employment of tactical nuclear weapons to forestall defeat of NATO forces in Europe from a massive Soviet conventional attack. Today, the threat of limited, tactical nuclear use or even the actual use of a small number of nuclear warheads could serve to credibly communicate one side in the conflict is prepared to escalate to general, full-scale nuclear use. As previously detailed, Moscow has developed this escalate to de-escalate strategy to deter a conflict or quickly terminate a conflict before the U.S. and its NATO allies can mobilize and employ their superior conventional forces. Colby emphasizes Russia has "such an approach, possesses the capability to undertake it, and exercised for its implementation" (Colby, 2016, p. 5). Such a limited nuclear war could occur but just like during the Cold War, the risks of further nuclear escalation are potentially great. This fear of further escalation may serve as a brake on this type of scenario given the risk of uncontrollable, general nuclear war is too great for either side to contemplate.

Future Risk Trends

The potential risk of conflict between the US/NATO and Russia has increased since 2014 due to Russian aggression against Ukraine. The increased

tensions and Russia strategic shift towards a more competitive, adversarial relationship with the West increases the overall probability of a nuclear conflict, either by accident, by miscalculation, or by intent. The potential for Russian misinterpretation also hinges on their ability to upgrade and maintain enough infrared missile launch detection satellites and early warning radars. The number of satellites Russia has available for this important mission has varied from a height during the Cold War of eight to nine satellites in highly elliptical orbits (HEO) and one in geostationary earth orbit (GEO) from 1987-1996 (Podvig, 2002, p. 49 as cited in Barrett, 2016, p. 13) to a low of one HEO and no GEO satellites as of November 2015. The Russian Aerospace Defense Forces are moving to a new generation of early warning satellite, the EKS, and two are currently in HEO orbits with a total of six satellites planned for operational use with the goal of completing the deployment of the latest generation of warning satellites sometime after 2020 ("Launch of the Second Satellite of the EKS Early-warning System", 2017 and "GLONASS vs. GPS: An Aerospace Forces Colonel on the Status of Russia Military Space Program," 2016 cited in Boston & Massicot, 2017, p. 6). This represents a positive trend, providing the effort is sustained as a budget priority and does not experience technical problems.

Russian perceptions of US first-strike nuclear capabilities also remains a future risk. The U.S. is undergoing a nuclear force modernization program and has deployed operational ballistic missile defense systems. These developments, combined with US conventional precision-strike capabilities have led Russian leaders to believe the US could launch a debilitating first strike against Russian

nuclear forces (Quinlivan & Oliker, 2011, p. 22 as cited in Barrett, 2016, p. 14). Russian fear of US effectiveness in a first-strike scenario increases the probability during any of the three crisis scenarios presented above that Russia may adopt a launch-on-warning posture. The potential for a Russian nuclear launch during a period of crisis is naturally higher than during a non-crisis period. Additionally, a launch-on-warning posture enhances the deterrent value of Russia's nuclear force.

Risk-reduction Options – What can be done to help prevent inadvertent nuclear conflict between the U.S. and Russia?

Anthony Barret in his RAND study of potential nuclear conflict between the U.S. and Russia outlines several measures which the U.S. and Russia could pursue to reduce the probability of an accidental nuclear war between these two respective states. Barrett recognizes that some of these options will involve significant tradeoffs which might entail assuming risk in other areas of each nation's nuclear deterrence strategy. However, it is worth considering some of these possibilities to reduce the potential for catastrophic, accidental nuclear conflict. Specifically, US and Russian planners and decision makers could study and implement some of the following measures, which will be discussed in turn:

- Enhance Russian Early Warning Capabilities
- Enhance C4I Capabilities and Survivability
- Reduce Dead Hand Vulnerabilities
- Use Risk Models to Mitigate Risk

We certainly have a large stake in ensuring Russia feels certain the U.S. is not launching a surprise nuclear attack against their homeland. The U.S. should

find ways of enhancing Russian early warning system capabilities. Assisting Russia in enhancing and maintain confidence in their early warning system is in America's interest and serves to reduce the probability of an early warning false alarm or a miscalculation associated with the Dead Hand system. Barrett recommends the U.S. take specific, concrete measures to compensate for the periodic gaps in Russian early warning system coverage and occasional reliability issues. Specifically, Barrett details measure including keeping US ballistic missile submarines in specific geographic areas covered by Russian early warning satellite systems, establishing a joint US-Russian early warning center, and allowing Russia to place launch sensors on or near US ICBM silos. He also believes the U.S. should encourage Russia to make further investments to improve the coverage reliability of their early warning systems and to improve the survivability of their command and control systems as well as their fielded nuclear forces. Placing additional launch detection satellites in orbit with enhanced sensors would certainly improve system reliability and would mitigate the potential for misidentification of incoming missile threats to Russia. Improving Russian command and control facilities will reduce Russian fears of leadership decapitation in a potential US first strike and will thus reduce incentives to launch-on-warning. To further reduce this fear, Barrett also suggests re-shaping the US nuclear arsenal to reduce threats to Russia's second-strike capability by employing less accurate SLBM warheads, or partial de-alerting of some US ICBMs.

Some of these proposed risk-reduction measures are more realistic than others. Confining US ballistic missile submarines to specific geographic areas under Russian missile launch warning satellites coverage is counter to the preeminent reason for developing submarine-launched missiles as a deterrent strategy. These submarines are designed to be stealthy, to hide, and to allude enemy anti-submarine warfare capabilities to ensure second-strike options and serve to enhance nuclear deterrence. Confining these boats to certain areas reduces the survivability of these platforms and therefore diminishes their deterrent value. Additionally, and perhaps most importantly, if these submarines are performing their mission correctly, there is no way for the Russians to verify these boats are operating in the zone of coverage or outside their zone of coverage.

The idea of establishing a joint US-Russian early warning center could serve to build trust and facilitate timely, clear communication in times of nuclear crisis. There is also a risk such a center could contribute to fear and miscalculation if, during a nuclear crisis, communication was lost between one or both national governments and this joint warning center, either from one side preventing such communication or from a system outage. Despite these potential problems, overall, this is probably a positive, feasible recommendation.

Allowing Russia to place sensors near US ICBMs is a novel approach which could serve to enhance early warning confidence. Such measures would have to be reciprocal and both sides would have to allow technicians from the other state routine, unhindered access to the sensors on their territory to perform

maintenance, guard against tampering, and ensure reliability. Such a system, would enhance warning confidence as long as both sides maintained confidence in the integrity of their sensors and associated communication systems (meaning the systems had not been tampered with or subjected to spoofing).

Barrett recommends the U.S. should encourage Russia to further invest to enhance its early warning system and its command and control system. The US Government can certainly do this, but such measures are probably unnecessary as these upgrades are already in Russia's self-interest and it is unlikely advice or "encouragement" from the U.S. would have any positive or negative effect on the pace of such Russian modernization or enhancement efforts.

Reducing the accuracy of US SLBMs is probably an unworkable solution as it would be difficult, if not impossible, for Russia to verify and thus have confidence in this measure to reduce the vulnerability of Russia's second-strike nuclear forces. However, reducing the number of silo-based ICBMs on alert would serve to reduce launch-on-warning decision time pressures. These weapons, based on their fixed geographic position, are highly vulnerable to attack during a first-strike. Additionally, these forces are on continuous alert, ready to immediately launch upon lawful orders from their respective national command authority. Two factors contribute to the potentially devastating effects of this type of weapons system: First the vulnerability of silo-based nuclear missiles puts immense time pressure on decision makers to use these systems in a crisis before they are destroyed by highly accurate enemy nuclear weapons. Additionally, silo-based missiles are currently on continuous, high-readiness alert in both Russia and

in the United States (as they were during the Cold War). This status facilitates their quick launch upon authentication of lawful launch orders. Unlike manned bombers, these systems cannot be recalled or aborted and will strike targets using a polar flight path 25-30 minutes after launch. Several former US defense leaders, based on their experience during the Cold War, have advocated "de-alerting" both sides' silo-based nuclear forces for these reasons.

Barrett also presents other factors which contribute to Russian fears of a disarming first-strike and these factors raise the probability of misperceptions leading to miscalculations. Potentially destabilizing capabilities such as EMP and cyber weapons are designed to disrupt, degrade, or destroy enemy command, control, communications, and intelligence systems (C3I) (Lin, 2013 as cited in Barrett, 2016, p. 15). Russian knowledge of such US capabilities could lead them, during a nuclear crisis, to interpret loss of communications or data from EW or intelligence collection sensors to the conclusion that the U.S. had used an EMP or cyber weapon as a prelude to a limited or full-scale nuclear attack. Barrett asserts the U.S. should consider stopping further development of EMP weapons to avoid such Russian perceptions during a crisis and reduce launch-on-warning pressures. The mere Russian knowledge that the U.S. possibly has such C3I denial capabilities, whether true or not, probably renders any future effort to reduce or eliminate EMP or cyber capabilities ineffective. Both the U.S. and Russia know it is impossible to completely verify these systems do not exist and therefore, would not have confidence they would not be used in a future nuclear conflict.

The final recommendation Barrett makes to reduce the probability of and inadvertent nuclear conflict concerns reducing the risks associated with Russia's Dead Hand system. Some Russian and US analysts believe the Dead Hand system is a useful element in maintaining strategic stability because it reduces Russian reliance on a launch-on-warning nuclear strategy (Blair, 1995, pp. 54-55 as cited in Barrett, 2016, p. 16). The Dead Hand system, if it functions properly, reduces the danger of an inadvertent launch as it allows Russian leaders more time to make decisions and provides firmer evidence Russia is actually under nuclear attack (nuclear detonations have taken place in Russia vice merely indications of inbound nuclear delivery vehicles). Russian senior leaders would not feel the same time pressure associated with a mentality of "use them-or-loose-them" when faced with the possibility of an inbound US first-strike. Barrett recommends the Russian's make a few improvements to the current Dead Hand system to ensure it contributes to mitigating potential false alarms. The system must have sensors and associated data processing capabilities to differentiate between US, Chinese, and terrorist-built nuclear weapons as well as naturally occurring phenomena such as meteor strikes to ensure attacks are properly attributed to their source. The improved Dead Hand system would need to also incorporate measures to thwart internal and external tampering or spoofing by nefarious actors to prevent system operators from being tricked into believing an actual attack was underway. The United States could play a role by refraining from preparing for what Russia may perceive as a disabling first-strike.

Conclusion

Russia under President Putin is pursuing a strategy designed to place Russia in position as a leading global military power. This is a key component to his drive to restore national pride and regain international prestige as a truly global power in a multipolar world. To achieve this status, Russia must develop and field forces capable of deterring and, if necessary, fighting and defeating states which have developed capabilities to challenge Russia across the full spectrum of conflict. Russia is building offensive and defensive forces to initiate or respond to action across this spectrum of conflict, from information warfare through full-scale nuclear war. Economic sanctions imposed by the West in response to the Russian annexation of Crimea and its continued support for rebel forces in Eastern Ukraine have hurt the Russian economy and slowed Russian defense modernization efforts. Additionally, the untimely slump in global energy prices have also hurt the Russian State Armaments Program as a large proportion of the Russian government budget is based on revenue from its energy sector. Despite these setbacks, Russia is continuing with its comprehensive effort to modernize its military and, although progress has slowed, the country continues to make headway, developing and fielding powerful, modern military capabilities in each of its military service components.

Material capabilities aside, how Russia thinks about nuclear strategy, nuclear deterrence, and arms control also affects the US-Russian relationship. Alexy Arbatov (2017) believes the U.S. and Russia are as far apart from each other as during the nuclear war scare of the early 1980s regarding their

understanding of the role of nuclear weapons, nuclear deterrence, and strategic stability (p. 41).

Arbatov highlights a paradox of nuclear deterrence in our current age. Although the number of nuclear weapons has radically decreased since the end of the Cold War, he sees a much higher probability of nuclear weapons use today than at any time since the fall of the Soviet Union. He believes the reduction in the number of nuclear weapons has decreased the perception of a nuclear war fought under the strategy of mutually assured destruction. Today, we are moving from an era when large numbers of nuclear weapons could catastrophically end human civilization into a much more abstract notion of the realities of nuclear conflict in the current world with fewer nuclear weapons. Additionally, current Russian and American political leaders have had a much different experience than their Cold War predecessors who faced real, catastrophic nuclear destruction. Arbatov notes current US and Russian leaders have not made categorical statements rejecting nuclear use such as President Reagan's maxim that "nuclear war can never be won and must never be fought." Other technical issues which provide Russian and US decision makers more flexibility in their use of nuclear weapons may also lead to increased potential for nuclear use, including improved accuracy, and yield variability which provides more limits on civilian casualties than earlier nuclear weapons. As nuclear weapons become relatively less destructive then their earlier counterparts and as delivery accuracy improves, the perceived gap between some lower yield, tactical nuclear weapons and the most powerful, precision, convention weapons may be narrowed to such a point where

the line between the use of these two types of weapons is significantly blurred. Such a development may invite leaders to use nuclear weapons in the future in scenarios that would have been unthinkable in the past. Additionally, Arbatov (2017) fears this next generation of political and military leaders on both sides lacks the knowledge gained by living through the Cold War and experiencing the long evolution in strategic nuclear thinking which took place between 1945 and the demise of the Soviet Union. These leaders may not have strong memories of past nuclear crises between the two superpowers. Given these factors and the renewed confrontation between the U.S. and Russia over Ukraine, Georgia, Syria and other issues, the potential for mishandling future crises could lead to dire consequences (p. 51). Interestingly, Arbatov (2017) sees the main risk of conflict between the U.S. and Russia not from Russia expansionist tendencies but from Russia's own sense of isolation and vulnerability which leads it to taking risks to consolidate its position and avoid being perceived as weak. Other factors which point toward potential conflict include the lack of civilian input on operational military plans, programs, and exercises (this is a legacy of the Soviet military planning system, that was somewhat overcome in the post-Cold War era but has regressed under President Putin) as well as the Russian propensity to militarily challenge NATO near Russia (p. 59).

A final concluding thought from Alexy Arbatov may serve as a transition to the final chapter of this study:

> Peace is not to be taken for granted; it requires relentless efforts to sustain--whether relations between the great powers are good or bad. This is the

main lesson to be learned from the quarter-century after the end of the Cold War. (Arbatov, 2017, p. 62)

CHAPTER 6 – CONCLUSION

This dissertation examined how the most senior leaders of two nuclear armed superpowers used intelligence to formulate current situation assessments during the two most dangerous nuclear crises in history. To better understand this phenomenon, I proposed the following theory of intelligence in nuclear crisis management: To assist leaders in making accurate current situation assessments intelligence must be accurate, leaders must be receptive to intelligence, and they must objectively evaluate intelligence. These conditions are most likely when intelligence agencies produce independent, objective, non-politicized intelligence, when senior leaders trust the quality of the intelligence produced to support their decision making and the senior intelligence community leaders responsible for leading that effort, and finally, when leaders are conscious of their own potential biases and work to more objectively interpret relevant intelligence.

While this might seem obvious, in reality, the quality of intelligence, despite the best efforts of dedicated analysts and their leaders can fall short. Additionally, intelligence failures damage respect for intelligence and for those who produce it which adversely affects intelligence receptivity. Finally, leaders are subject to psychological factors which influence their interpretation of intelligence. They can and often fall victim to biases inherent in all attempts to interpret, evaluate, and integrate information when making current situation assessments.

This theory argues all three key factors, (provision of quality intelligence, receptivity towards intelligence, and objective interpretation) must be operating for leaders to make accurate situation assessments during a nuclear crisis. A failure in any one of those areas will lead to a distorted, inaccurate view of enemy capabilities and/or intent which could prove catastrophic during a high-stakes, high-stress nuclear crisis.

In this final chapter, I first briefly review this theory and how I applied it to the two case studies. I will then summarize the findings and describe how this theory explains how key US and Soviet governments leaders reached situation assessment before and during the two key nuclear crises. Finally, I explain the study's implications for intelligence and decision making in light of the growing Russian nuclear threat to the United States and suggest areas for additional research on this fascinating topic.

Developing and Testing the Theory

I began my thinking on this study by posing three research questions. The first and most obvious question dealt with the quality of intelligence the US and Soviet intelligence communities produced to support their senior political and military leadership during the respective nuclear crises. Recognizing it is highly unlikely, maybe even impossible, for leaders to make accurate assessments of the enemy threat without quality foreign intelligence, I wanted to examine how well intelligence agencies supported their political leaders with timely, accurate, relevant intelligence. To answer that question, I proposed two hypotheses:

H1(a) – Intelligence Quality - Senior US leaders received quality warning intelligence of the Soviet threat prior to and during the Cuban Missile Crisis which contributed to an accurate current situation assessment.

H1(b) – Intelligence Quality - Senior Soviet leaders received inaccurate and/or highly biased intelligence reporting prior to and during the Soviet War Scare of 1983 which contributed to a distorted current situation assessment.

The second question transitioned from a focus on intelligence quality to the relationship between intelligence and policy. This question was designed to examine the bridge between two communities—intelligence officers, charged with objectively and independently evaluating threats to their respective states and policy makers, charged with assessing the situation, defining courses of action, making national security decisions, implementing those decisions, and overseeing their implantation. To answer that question, I proposed two additional hypotheses:

H2(a) – Leadership Receptivity - US leaders were receptive of the threat warning and their receptivity increased over time based on the strength of the intelligence evidence which contributed to an accurate current situation assessment.

H2(b) – Leadership Receptivity - Soviet leaders were highly receptive of the threat warning to the extent that it led to an inaccurate, distorted current situation assessment (irrational fear of imminent US nuclear attack).

My final research question centered on leaders and how they interpret intelligence. Given that leaders are human, and all humans are subject to

psychological biases which affect how they interpret information, this question examines how biases might interfere with objective intelligence interpretation. My final two hypotheses concerned objective intelligence interpretation:

H3(a) – Objective Interpretation - US leaders objectively interpreted warning intelligence during the Cuban Missile Crisis which contributed to an accurate current situation assessment.

H3(b) – Objective Interpretation - Soviet leaders did not objectively interpret warning intelligence during the Soviet War Scare which contributed to an inaccurate, distorted current situation assessment.

My dependent variable was an *accurate situation assessment*, and the three independent variables were: 1) *intelligence quality*, 2) *intelligence receptivity*, and 3) *intelligence interpretation.*

In the body of the dissertation I examined the two most dangerous nuclear crises between the superpowers since the dawn of the nuclear age in 1945. The 1962 Cuban Missile Crisis is widely regarded as the closest point the US and Soviet Union came to nuclear war. The 1983 Soviet War Scare, which culminated with NATO Exercise Able Archer 83, was not recognized by the US, at the time, as a particularly dangerous event, but it was dangerous based on serious Soviet fears of US intent to launch a nuclear attack. Thankfully, during the long history of the Cold War, there were not many such cases, but these two support my theory as the following table summarizes:

	Cuban Missile Crisis	Soviet War Scare
Intelligence Quality	X	
Receptivity	X	X
Objective Interpretation	X	

Figure 2 - Case Study Summary

The factors of quality intelligence, receptivity, and objective interpretation of intelligence are all present in the cases when senior leaders made accurate situation assessment[98] (in the case of the Cuban Missile Crisis) but only one factor was present in the alternate case (Soviet War Scare). Both cases are similar in terms of receptivity. President Kennedy was receptive towards intelligence. He was a voracious intelligence consumer before the crisis and routinely received and engaged with intelligence analysts during the Cuban crisis. Conversely, General Secretary Andropov and the senior Soviet military leadership were receptive to the intelligence regarding the Soviet War Scare as evidenced by their rhetoric prior to the Able Archer exercise and their unusual military reaction during the exercise itself. As the Soviet case demonstrates, being receptive to intelligence is not enough to arrive at accurate current situation assessments.

The table above demonstrates there is a correlation between the variables in the Cuban Missile Crisis case. The question remains, how does one explain the finding that the combination of quality intelligence, receptivity, and objective interpretation of intelligence leads to accurate current situation assessments? The

[98] At the start and during the crisis

theory of accurate situation assessment may shed light on why these three factors are significant.

First, quality intelligence warning is essential. Strategic intelligence is important because it allows leaders to direct resources toward major, long-term, enduring national security threats. However, quality strategic intelligence was not the decisive factor in either of these two cases. Both nations were well aware of the nuclear capabilities of the other side and the ever-present, long-term nuclear threat those weapons posed. The US had succeeded in collecting critical nuclear intelligence through the U-2 overflights of the Soviet Union.[99] Both the U.S. and the Soviets were well aware that despite Khrushchev's bluster, the Soviet Union was *not* turning out nuclear missiles "like sausages", they suffered from strategic nuclear inferiority. Indeed, that may have been a major reason Khrushchev gambled by placing Soviet missiles in Cuba in the first place, to correct the strategic imbalance he and other leaders were acutely aware of. From a strategic intelligence warning perspective both sides were aware of each other's nuclear capabilities and made assumptions regarding each other's intentions. Overall, they were relatively confident with their assessment of the threat the other side posed. However, in terms of tactical intelligence the cases were different. The U.S. relied heavily on the collection of technical intelligence from the U-2 and largely discounted human intelligence from refugees.[100] Imagery intelligence

[99] Which abruptly ended on May 1, 1960 with the shootdown of Francis Gary Powers. The brief intelligence gap of approximately 100 days was quickly filled with the Corona satellite imaging program which provided even more coverage of Soviet denied territory than the U-2.
[100] With the benefit hindsight, the CIA was criticized for not taking more seriously human intelligence which indicated the Soviets were importing missiles to Cuba. The key unknown question at the time was were the missiles defensive or offensive systems.

from the U-2 provided concrete evidence of the presence of nuclear missiles in Cuba. The Soviets placed a high value on field reports, intelligence provided by their KGB Residences, based on observations which were driven by their budding indicator list. US intelligence which supported situation assessments during the Cuban Missile Crisis was highly accurate in terms of assessing military capabilities, but President Kennedy still had a challenge in assessing Soviet intent. Aerial reconnaissance and human intelligence from Oleg Penkovsky[101] provided the president the time he needed to define various potential courses of action and decide on the US strategy to eliminate the Soviet missile threat to the United States. Despite the value decision makers placed on strategic intelligence, tactical intelligence was more important in dealing with the imminent or current crises. The US had high quality tactical intelligence during the Cuban Missile Crisis. The Soviets had poor quality tactical intelligence during the Soviet War Scare.

Second, leadership receptivity towards intelligence occurs when policy makers regard the pending threat as serious, trust intelligence professionals, and their leaders and believe in the credibility of intelligence. To evaluate intelligence receptivity, this study examined potentially significant preceding intelligence failures, the relationships between the President/General Secretary and the DCI/KGB Chairman, and how the leaders interacted during and after the respective crises. In the Cuban case, President Kennedy remained receptive to intelligence despite potential negative consequences of the previous Bay of Pigs

[101] Penkovsky provided operations manuals on the two types of offensive missiles systems in Cuba which allowed CIA analysts to make assessments regarding the operational timeline for the Soviet missiles in Cuba.

failure. He maintained a professional relationship with his DCI John McCone and the intelligence briefers who supported the various EXCOMM meetings during the crisis. The president trusted the intelligence he received and made high-stakes policy decisions based on that intelligence. Although there was some negative fallout following the crisis in terms of Kennedy's perceptions of McCone, McCone continued to serve the President Kennedy for the remainder of his presidency and remained the DCI under President Johnson until 1965. In the Soviet War Scare case, General Secretary Andropov and other senior political and military leaders were presumably receptive of intelligence. This assessment is based on Andropov's previously long tenure as KGB Chairman, his relationship with KGB Chairman Chebrikov, and Soviet military reactions which indicate they recognized the seriousness of the US/NATO nuclear threat during Exercise Able Archer based on their unusual military reaction to that exercise. In summary, both leaders were receptive towards intelligence. The level of their receptivity was driven by the seriousness of the nuclear threat which focused leaders on using intelligence to maximize their situational awareness. They also trusted the intelligence products and the personnel presenting that intelligence during the respective crises.

The third key factor in building an accurate current situation assessment is leadership interpretation of intelligence. Motivational and cognitive factors work to distort our perceptions of reality. This is a true wildcard factor in this theory as it is not easily subject to improvement. While intelligence can be improved through organization or process changes, receptivity and interpretation fall in the

realm of human psychology and are not easily recognized or corrected. President Kennedy interpreted intelligence to reinforce his previously held worldview that the Soviet Union represented an opportunistic, aggressive world power. This was based on his historical knowledge of past Soviet behavior, how Khrushchev treated him at the Vienna Summit in 1961, and his concern the Soviets were operating in Cuba as a prelude to a move against Berlin to diminish America's international standing. This offensive view may have led Kennedy to dismiss or discount Soviet defensive motivations. Potentially defensive motivations included: 1) The Soviet placed missiles in Cuba to guarantee Cuba's territorial integrity and political independence. The Soviets and Cubans feared a US or another US-back invasion to rid the island of Castro's communist government and 2) The Soviets sought to quickly redress the strategic nuclear imbalance by placing offensive nuclear missiles in Cuba. To Kennedy's credit, the EXCOMM examined these possibilities but discounted them. In contrast, Andropov and his closest advisors, including KGB Chebrikov, Defense Minister Ustinov, and Chief of the General Staff Ogarkov, developed such a state of paranoia that they were unable to objectively evaluate the intelligence the KGB provided. Additionally, that intelligence was heavily skewed to reinforce their pre-existing beliefs which also reinforced the confirmation bias that is clearly evident. In summary, President Kennedy and his advisors more objectively interpreted intelligence while General Secretary Andropov and his key advisor did not.

Contribution of This Study

This dissertation contributes to our understanding of theory by describing the role intelligence plays in informing senior leaders' current situation assessments. In terms of theory, it shows poor quality intelligence which reinforces pre-exiting, biased beliefs leads to distorted, inaccurate situation assessments. That is not a surprising finding. More interesting is the fact that the skillful, objective use of tactical intelligence can overcome shortcomings in strategic intelligence. This study adds to the literature on warning intelligence by analyzing the use of intelligence in nuclear crises. It also adds to the literature on the relationship between intelligence professionals and leaders in the policy community, advancing and reinforcing Erik Dahl's theory[102] concerning the role receptivity (belief in the threat and trust in intelligence) plays in intelligence-policy relations. It also adds to the policy literature on focusing events.

Regarding intelligence, this dissertation demonstrates despite shortcomings in strategic intelligence, effective situation assessment and consequent policy making can still occur if the intelligence community can deliver quality tactical intelligence. The bulk of the February 1963 PFIAB study focused on US Intelligence Community shortcomings which precluded earlier detection of Soviet missiles in Cuba. This comprehensive after-action report focused on the failure of the intelligence community to follow up on earlier strategic assessments which mentioned the possibility of the Soviets placing

[102] As articulated in his April 2008 dissertation "Preventing Terrorist Attacks: Intelligence Warning and Response" and subsequent work.

offensive nuclear weapons in Cuba but then quickly dismissed that possibility. That assessment led to a less aggressive intelligence collection posture than would have been necessary to find the missiles in a timelier manner. Despite this shortcoming in strategic intelligence, the tactical intelligence President Kennedy and the EXCOMM received to inform their situation assessments during the crises was excellent and a true point of pride in US intelligence history. US intelligence quickly recovered and effectively supported senior-level decision making during the crisis.

A key focus of this study is the relationship between the intelligence and policy communities. Receptivity, a concept advanced by Erik Dahl, is the bridge between these two communities. This study contributes to Dahl's work by adding two additional cases to the three terrorism cases he studied to further confirm the important role intelligence receptivity plays as a necessary but insufficient element for accurate assessments. When leaders are receptive, they understand the seriousness of the current threat and trust the intelligence provided. They used this information to constantly improve their understanding of an enemy's capabilities and intentions in a fast moving, dynamic, threat environment. In both cases in this study, senior leaders were highly receptive of intelligence. However, in the Soviet case, receptivity simply reinforced their pre-existing beliefs and thus did not contribute to an objective assessment of the situation. The lack of Soviet critical thinking and more vigorous questioning of their intelligence contributed to a failure to accurately understand Western intentions (which did not include nuclear attack) during the 1983 nuclear crisis.

To improve receptivity, national political and military leaders must remain vigilant of national security threats, appoint trusted and respected intelligence leaders to key intelligence positions, and ensure the intelligence community maintains the highest professional standards of integrity and objectivity and a commitment to remain outside the political fray.

This study also demonstrates leaders can improve intelligence quality through organizational changes, processes changes, additional resources, et cetera., but those measures are not the complete answer to periodic calls for intelligence reform and improvement. Intelligence quality must also be improved through constant training and recognition of the dangers bias, both overt and implicit, play in distorting intelligence assessments. Conversely, on the policy side of the equation, human attitudes and perceptions are also in play. Thus, systematic improvement in making current situation assessments will be difficult. Progress will require a disciplined approach to recognize and overcome biases which hinder our ability to objectively evaluate intelligence information as part of the situation assessment process.

This study appears to be unique. It is the only one I am aware of which develops a theory concerning how the intelligence and policy communities work together to ideally build an accurate, comprehensive, objective picture of the current situation to inform leadership deliberation on possible courses of action to address nuclear threats. While there have been countless studies of the Cuban Missile Crisis focusing on decision making and many studies regarding the role of

intelligence, this is the first which compares the Cuban Missile Crisis with the Soviet War Scare based on my theory of current situation assessment.

Suggestion for Future Research

Working in the East German Ministry for State Security archive (BStU), the National Security Archive, and the John F. Kennedy Presidential Library archives and drafting this dissertation were amazing experiences. This effort stimulated thought on potential, future research to advance both theoretical and practical aspects of intelligence warning and nuclear conflict. Further research on this topic will advance our theoretical understanding of how leaders use or fail to use intelligence properly to make informed decisions regarding the most effective policies to maintain peace and security in the ever more dangerous nuclear environment we find ourselves in today. The following questions are ripe for additional research:

Theoretical Questions

- What other factors (beyond those examined in this study) may be relevent in improving our understanding of how intelligence informs current situation assessments?
- What other superpower nuclear case studies could be included to increase/decrease the power of this study's findings?
- Do other, non-US/non-Soviet case studies of potential nuclear conflict confirm/refute these findings? Would looking at other nuclear states, such as India and Pakistan, during periods of crises advance this theory.

- Looking at historical indications and warning case studies involving large-scale, conventional, force-on-force conflicts, do the findings strengthen or weaken this theory? How could the theory be modified to be generalizable across the entire spectrum of conflict?

Suggestion for Additional Research on the Soviet War Scare of 1983

The Soviet War Scare and/or Operation RYAN are briefly discussed in the literature on the KGB, the Cold War, nuclear conflict and in memoirs as far back as at least 1991. A renewed interest has flowed from the recent 2015 declassification of the 1990 PFIAB study. Despite the deep interest, many questions remain. Potential research projects include the following:

- Most of the available data and subsequent literature deals with the role of the KGB and human intelligence. What role did Soviet technical intelligence collection play in shaping finished intelligence assessments on US/NATO capabilities and intentions during the War Scare period and specifically Exercise Able Archer?
- If the KGB and/or GRU archives are opened, a quality evaluation of Soviet finished intelligence products provided to senior Soviet leaders in the early 1980s would provide greater insight into intelligence quality. The same could be said for an evaluation of intelligence receptivity and intelligence interpretation (based on potential hand-written notes, memos, sounds recordings, et cetera., if they exist)
- A comparative study of Soviet KGB and East German MfS indicators across time would trace the evolution in thinking regarding Soviet and

East German knowledge and Western war plans and perception of intentions. An evaluation of the indicators' strengths and weaknesses (the indicators' ability to accurately and reliably describe the steps US/NATO would have to take to launch a nuclear attack) could shed light on risks of accidental nuclear war based on flawed indicators.

- An evaluation of MfS/KGB knowledge on the Pershing II and Gryphon systems (technical capabilities, deployment locations, communication networks, standard operating procedures, et cetera.) would be interesting in revealing the level of Soviet/Warsaw Pact operational knowledge of these highly sensitive nuclear delivery systems during the Cold War.

Potential Research on the Current/Future of the Russian Nuclear Threat and the US Intelligence Warning System

- In general terms, does the current US warning methodology need revision? If so, what would a more effective methodology include? This would be a classified study.
- How does the current US Intelligence Warning system work in practice (vice in theory) and how effective is it in monitoring Russian, Chinese, North Korean, India/Pakistan nuclear capabilities and intentions (threats)? Include recommendations for improvements. This would be a classified study.
- Given the significant reduction in US intelligence collection and analytic capabilities directed against the Russian threat over the past 28 years, how can the U.S. most effectively reorient our analytic community to better

focus on the new, evolving Russian conventional and nuclear threats to the United States, NATO, and our other allies?

- What type of US intelligence collection capabilities (both technical and human) are/will be required to effectively monitor Soviet nuclear systems to provide quality warning intelligence? What are the costs? What are the tradeoffs? What would an implementation plan look like?

Warning Intelligence and the Contemporary Nuclear Threat

The United States and our allies currently face nuclear threats from Russia, China, and North Korea. The US Intelligence Community is closely monitoring Iran whose nuclear program is constrained by the Joint Comprehensive Plan of Action. The previous chapter extensively outlined the current and long-term Russian nuclear threat to the United States. While arms control agreements, including the two currently in force, the New Start Treaty and the Intermediate-Range Nuclear Force Treaty have served both US and Russian interests, the future of nuclear arms control is in doubt given Russia's violation of the INF Treaty.[103] Despite the remarkable political transformation which ended the Cold War and arms control treaties which have significantly reduced the number of strategic nuclear warheads and delivery systems, Russia and the United States maintain nuclear arsenals which pose significant threats to each other and the rest of mankind.

[103] The US has accused Russia of violating the INF Treaty with the Russian deployment of the SSC-8 ground-launched cruise missile. The New Start Treaty is set to expire in Feb 2021. It can be extended for an additional five years. The INF Treaty is of unlimited duration but a state party can withdrawal from the treaty.

At this point in the study it is reasonable to ask, "Is a Russian War Scare of 20XX possible?" Some would argue no—the events which were recounted in Chapter 4 were unique to the Cold War and are unlikely to be repeated. Soviet fear of US imminent nuclear attack in the early 1980s was born out of vivid memories of the 1941German invasion. The fear of surprise attack permeated the consciousness of aging Soviet leaders who experienced that tragedy first hand. That historical memory is certainly a part of President Putin but is not as large a factor in the current generation of Russian leaders. A second factor which points to the improbability of such a scenario concerns the level of Soviet/Russian leadership isolation. Soviet leaders were isolated during 1983 and despite extensive intelligence operations against the West, had fundamental misunderstandings regarding Western society and Western military intent. The current crop of Russian leaders has been operating in and profiting from a globalized environment which has emerged since the fall of the Soviet Union. This has allowed them to gain better knowledge and understanding of the West and may have reduced the possibility of misinterpretations and misperceptions which could lead to catastrophic nuclear conflict. Potentially, Russian trade and investment with the outside world might also reduce the risk of nuclear conflict. The quality of Russian intelligence may have also improved to better include situational context and rich, all-source assessments regarding US/NATO intent. All of these factors argue against a potential future Russian War Scare.

Unfortunately, a case can also be made that a Russian War Scare may be possible in the future. Based on similar factors which were operating in the early

1980s, it is conceivable the level of deep fear, isolation, and mistrust could also permeate Russian thinking in the future. Current trends in Russia and the Russia-US relationship suggest this is possible. President Putin, who won re-election on March 18, 2018 for another six-year term, has built a foundation of power based on Russian nationalism and the idea that only he stands between Russia and the nefarious intentions of the West. Putin's control of Russian mass media allows him to stoke fear of the West through false news stories which promote conspiracy theories involving Western plots to deny Russia its rightful place as a proud, global power. Putin's background as a KGB officer probably has a strong influence on how he sees the world. As a KGB counter-intelligence officer, he was trained to see the outside world in fairly hostile terms.

At the personal level, he has repeatedly observed two phenomena which have generated deep fear: 1) US and NATO military interventions which alter events on the ground (such as in Bosnia and Kosovo) or drastically change sovereign political regimes (such as Iraq and Libya) and 2) People-power revolutions which bring down governments resulting in the imprisonment or death of the ruling senior leaders (such as the color revolutions, close to home in the former Soviet republics of Georgia, Ukraine, and Kyrgyzstan or in other regions such as in Libya or the states affected by the Arab Spring). These fears are exacerbated by Putin's belief that the United States, the CIA, the State

Department and National Endowment for Democracy, are the hidden hand guiding these event—part of the US democracy promotion agenda.[104]

Another factor which might contribute to a future Russian War Scare revolves around strategic nuclear vulnerability. Although Russia is pursuing a nuclear force modernization strategy and President Putin publicly announced several new types of "invincible" nuclear weapons[105] at a well-staged press conference on March 1, 2018[106] (BBC 2018; Roth, 2018; and Cameron, 2018), Russia may face fear of strategic nuclear vulnerability similar to what the Soviet Union experienced in the early 1980s. The U.S., NATO, along with Japan and Israel, are continuing efforts to research, develop, and field anti-ballistic missile capabilities which Russia has long feared and continues to denounce as a threat to strategic stability.[107] A long-held Russian technological inferiority complex will also continue to contribute to a sense of strategic vulnerability. Additionally, the U.S. released a new Nuclear Posture Review in early February 2018 which highlighted the Russian nuclear threat, "Russia is elevating the role of nuclear weapons, expanding and modernizing its nuclear forces, violating arms control treaties, and engaging in aggressive behavior" (Department of Defense, *2018*

[104] These fears represent mirror imaging. The KGB has highly active in these types of "active measures" during the Cold War and Russian intelligence and cyber elements are actively engaged in such operations today. It would seem only logical that Putin would conclude the West was also involved in such activities against Russia.
[105] Including a very long range nuclear cruise missile and long-range nuclear torpedoes designed to attacks ports and port cities. Nuclear weapons experts have assessed Russia currently does not possess this type of technology but may be aspiring to develop these capabilities.
[106] Putin's highly public display of these largely theoretical weapons was probably part of his re-election campaign, coming just 17 days before the March 18, 2018 presidential election.
[107] US and allied anti-ballistic missile (ABM) efforts are directed against N. Korea and Iran. The United States has repeatedly made clear and demonstrated through extensive talks with Russia that these systems are purely defensive, of limited capability, and are not designed for use against Russia but that has not dampened Russian opposition to this effort.

Nuclear Posture Review Fact Sheet, 2018, p. 1). The 2018 Nuclear Posture Review called for the United States to modernize all three legs of the nuclear triad, specifically detailing the need to replace "Cold War-era ICBMs, ballistic missile submarines, strategic bombers, and air launched cruise missiles last modernized in the 1980s" (Department of Defense, *2018 Nuclear Posture Review Fact Sheet*, 2018, p. 1). These US moves, while necessary to maintain the strategic nuclear balance and prevent war, may be seen by Russia as further widening a strategic gap between the two countries, resulting in a growing sense of nuclear vulnerability akin to the situation in the early 1980s.

The psychological factors discussed in this study in terms of how leaders interpret intelligence will also remain relevant. Leaders, as human beings, are subject to motivational and cognitive factors which often distort their interpretation of new information (such as intelligence in nuclear crises). This problem probably cannot be fully overcome. It can be mitigated through awareness of potential overt and implicit biases, improved critical thinking skills, and the use of a moderate number of advisors with a wide variety of divergent views.[108] Given human nature, faulty interpretation of intelligence and other information could contribute to misperceptions of enemy intent which could lead to a catastrophic nuclear war.

[108] To avoid group-think.

Conclusion

The conclusion in this study are much different than my original expectations. I originally thought President Kennedy would have had much less trust of the US Intelligence Community than he did during the Cuban Missile crisis based on the failed Bay of Pigs invasion. Kennedy overcame that potential mistrust by enlarging his pool of policy advisors and developing a more critical attitude towards military advice. He replaced key intelligence leaders which restored his trust in the intelligence community. I had no illusions regarding the seriousness of the threat these two crises posed to international peace, so I fully expected both US and Soviet leaders would be receptive to the intelligence provided as long as they trusted the sources of that intelligence. Initially, I falsely assumed the Soviet KGB would provide objective, finished intelligence products, as the US Intelligence Community strives to provide to our senior leaders, only to discover their reporting was deliberately tailored to conform with the hardline, biased views of their leaders which field operatives provide KGB Center in raw, unevaluated form, lacking the key context field agents were in a unique position to provide. I also assumed the harsh rhetoric from Soviet leaders towards the United States was simply a continuation of their long-standing anti-American propaganda program targeted to desensitize the Reagan Administration and the American populace in the early 1980s. This study gave me a much better understanding of the depth and the true, genuine fear the Soviets felt during this period.

I hope this study will shed some light on the importance of quality warning intelligence, the intelligence-policy maker relationship, and the need to recognize and overcome motivational and cognitive biases when evaluating intelligence. Moving forward, our nation faces a robust, modernized, highly capable Russian nuclear threat. The Chinese government has also developed improved road-mobile and submarine launched ballistic missiles which also represent increased threats to the United States. North Korea, probably at some point in 2018, and potentially Iran, at some point in the future, could strike the U.S. with nuclear weapons systems. The challenge for US intelligence is to revitalize our intelligence warning system to remain ever vigilant with the goal of reliably communicating timely, accurate, warning intelligence to our senior political and military leaders. The challenge for our decision makers is to be receptive to intelligence warning without sacrificing sound critical thinking skills, to challenge that warning when warranted, and to accept it when the facts support the legitimacy of the warning. Potentially, the greatest enduring challenge for senior leaders in both the United States and Russia will remain—overcoming biases which can significantly distort intelligence interpretation to the point of catastrophic miscalculation, leading to inadvertent nuclear war between the United States and Russia. It is my hope that senior leaders and intelligence professional in both the United States and Russia can work to improve their respective strategic and tactical warning capabilities, that leaders will continue to recognize the seriousness of the nuclear threat, be receptive to critically evaluated intelligence, and work to overcome/mitigate biases which distort their

interpretation of enemy intent. The future of our two countries and the fate of mankind hang in the balance.

References

Alexseev, M. A. (1997). *Without Warning: Threat Assessment, Intelligence, and Global Struggle*. New York, NY: St. Martin's Press.

Allison, G., & Zelikow, P. D. (1999). *Essence of Decision*. New York, NY: Longman.

Andrew, C., & Gordievsky, O. (1990). *KGB: The Inside Story of its Foreign Operations from Lenin to Gorbachev*. New York, NY: Harper Collins.

Andrew, C., & Gordievsky, O. (Eds.). (1993). *Comrade Kryuchkov's Instructions: Top Secret Files on KGB Foreign Operations, 1975-1985*. Stanford, CA: Stanford University Press.

Andrew, C., & Mitrokhin, V. (1999). *The Sword and the Shield: The Mitrokhin Archive and the Secret History of the KGB*. New York, NY: Basic Books.

Arbatov, A. (2017). Understanding the US–Russia Nuclear Schism. *Survival, 59*(2), 33–66. https://doi.org/10.1080/00396338.2017.1302189

Barnes, J. E., Sonne, P., & Forrest, B. (2017, November 17). U.S., Russia Scrap Over Missiles. *Wall Street Journal*, p. 7.

Barrett, A. (2016). *False Alarms, True Dangers? Current and Future Risks of Inadvertent U.S.-Russian Nuclear War* (Perspective No. PE-191-TSF). Santa Monica, CA: RAND, Project Air Force. Retrieved from https://www.rand.org/pubs/perspectives/PE191.html

Barrett, A. M., Baum, S. D., & Hostetler, K. R. (2013). Analyzing and Reducing the Risks of Inadvertent Nuclear War Between the United States and Russia. *Science and Global Security, 21*(2), 106–133.

Barrie, D., & Boyd, H. (2017, March 27). Slingshot redux: Russia's alleged ground-launched cruise missile. Retrieved from https://www.iiss.org/en/militarybalanceblog/blogsections/2017-edcc/march-f0a5/russias-alleged-ground-launch-missile-0be2

Blair, B. G. (1995). *The Logic of Accidental Nuclear War*. Washington, DC: Brookings Institution.

Boston, S., & Massicot, D. (2017). *The Russian Way of Warfare* (Perspectives No. PE-231-A) (p. 16). RAND, Project Air Force. Retrieved from https://www.rand.org/pubs/perspectives/PE231.html

Brugioni, D. A. (1991). *Eyeball to Eyeball: The Inside Story of the Cuban Missile Crisis*. (R. F. McCort, Ed.) (1st ed). New York: Random House.

Bundy, M. (1963, March 4). *Facts for John McCone to Emphasize from President's Standpoint.* [Memorandum]. National Security File (Box 63, Folder: Cuba Subjects, Testimony, Director McCone, 2/6/63-2/26/63). John F. Kennedy Presidential Library, Boston, MA.

Bundy, M. (1964, March). *An Oral History with McGeorge Bundy/Interviewer: Richard Neustadt.* John F. Kennedy Library Oral History Program, John F. Kennedy Presidential Library, Boston, MA.

Cameron, J. (2018, March 5). Putin Just Bragged about Russia's Nuclear Weapons. Here's the real story. *Washington Post*. Retrieved from https://www.washingtonpost.com/news/monkey-cage/wp/2018/03/05/putin-claims-russia-has-invincible-nuclear-weapons-heres-the-story-behind-this/?utm_term=.dcdd1025bfe2

Central Intelligence Agency. (1984). *Implications of Recent Soviet Military-Political Activities* (Special National Intelligence Estimate No. SNIE 11-10-84). Washington, DC. Retrieved from https://www.cia.gov/library/readingroom/docs/CIA-RDP09T00367R000300330001-9.pdf

Central Intelligence Agency. (1962). *The Military Buildup in Cuba* (Special National Intelligence Estimate No. SNIE 85-3-62). Washington, DC.

Chan, S. (2017, September 18). Stanislav Petrov, Soviet Officer Who Helped Avert Nuclear War, Is Dead at 77. *The New York Times*. Retrieved from https://www.nytimes.com/2017/09/18/world/europe/stanislav-petrov-nuclear-war-dead.html

Chebrikov, V.M. and Mielke, E. (1983, February 9). *Note about the talks of Comrade Minister with the Chairman of the KGB, Comrade Chebrikov, on February 9, 1983 in Moscow.* [Memorandum for Record]. Wilson Center International History Declassified Digital Archive. Original documentation from the Federal Commissioner for the Records of the State Security Service of the former German Democratic Republic (BStU), MfS, Abt. X, Nr. 1863, pp. 1-31. Translated by Bernd Schaefer. Retrieved from http://digitalarchive.wilsoncenter.org/document/119319

Clausen, I., & Miller, E. A. (2012). *Intelligence Revolution 1960: Retrieving the Corona Imagery that Helped Win the Cold War*. Chantilly, VA: National Reconnaissance Office, Center for the Study of National Reconnaissance. Retrieved from http://www.nro.gov/history/csnr/corona/Intel_Revolution_Web.pdf

Clifton, C.V. (1962, December 3). *Memorandum for: Director McCone.* [Memorandum]. National Security File (Box 47, Folder: Cuba Subjects, Commendations, 4/62-1/63, Clifton Memorandum to McCone). John F. Kennedy Presidential Library, Boston, MA.

Coats, D. R. (2018). *Worldwide Threat Assessment of the US Intelligence Community*. Washington, DC: Office of the Director of National Intelligence. Retrieved from https://www.dni.gov/files/documents/Newsroom/Testimonies/2018-ATA---Unclassified-SSCI.pdf

Colby, E. (2016). *The Role of Nuclear Weapons in the U.S.-Russian Relationship* (Task Force on U.S. Policy Towards Russia, Ukraine, and Eurasia). Washington, DC: Carnegie Endowment for International Peace. Retrieved from http://carnegieendowment.org/files/2-17-16_Colby_US_Russia_Nuclear_Relations_clean.pdf

Coleman, D. G. (2007). The Missiles of November, December, January, February...: The Problem of Acceptable Risk in the Cuban Missile Crisis Settlement. *Journal of Cold War Studies*, *9*(3), 5–48.

Cordesman, A. H. (2017). *NATO and the Delicate Balance of Deterrence: Strategy versus Burden Sharing*. Washington, DC: Center for Strategic and International Studies. Retrieved from https://www.csis.org/analysis/nato-and-delicate-balance-deterrence-strategy-versus-burden-sharing

Dahl, E. J. (2008). *Preventing Terrorist Attacks: Intelligence Warning and Policy Response* (Doctoral dissertation). Fletcher School of Law and Diplomacy, Tufts University, Boston, MA. Retrieved from ProQuest Dissertations Publishing. (3320166)

Dahl, E. J. (2013). Why Won't They Listen? Comparing Receptivity Toward Intelligence at Pearl Harbor and Midway. *Intelligence and National Security*, *28*(1), 68–90.

Davis, J. (2003). Sherman Kent's Final Thoughts on Analyst-Policymaker Relations. *CIA Sherman Kent Center for Intelligence Analysis, Occasional Papers Volume 2*(3). Retrieved from https://www.cia.gov/library/kent-center-occasional-papers/vol2no3.htm#_ftnref1

Davis, J. (2007). Strategic Warning: Intelligence Support in a World of Uncertainty and Surprise. In L. K. Johnson (Ed.), *Handbook of Intelligence Studies* (pp. 173–188). New York, NY: Routledge.

Defense Intelligence Agency. (2017). *Russia Military Power: Building a Military to Support Great Power Aspirations* (No. DIA-11-1704-161). Washington, DC. Retrieved from https://permanent.access.gpo.gov/gpo82226/Russia%20Military%20Power%20Report%202017.pdf

Department of Defense. (2018). *2018 Nuclear Posture Review Fact Sheet*. Washington, DC. Retrieved from https://media.defense.gov/2018/Feb/02/2001872888/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW.PDF

Department of Defense Dictionary of Military and Associated Terms. (2018). Department of Defense. Retrieved from http://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/dictionary.pdf

Dobrynin, A. (1995). *In Confidence: Moscow's Ambassador to America's Six Cold War Presidents (1962-1986)*. New York, NY: Times Books.

Doyle, J. (2016). A Record that Falls Short of Lofty Ambitions. *Arms Control Today*, *46*(10), 8.

Dunne, T., Kurki, M., & Smith, S. (2010). *International Relations Theories: Discipline and Diversity* (2nd ed.). Oxford, United Kingdom: Oxford University Press.

Ebon, M. (1983). *The Andropov File: The Life and Ideas of Yuri V. Andropov, General Secretary of the Communist Party of the Soviet Union*. New York, NY: McGraw-Hill Book Company.

Facon, I. (2017). *Russia' s National Security Strategy and Military Doctrine and Their Implications for the EU* (In-Depth Analysis No. PE578.016) (p. 27). Brussels, Belgium: European Parliament - Directorate-General for External Policies, Policy Department. Retrieved from http://www.europarl.europa.eu/RegData/etudes/IDAN/2017/578016/EXPO_IDA(2017)578016_EN.pdf

Fischer, B. B. (2007). A Cold War Conundrum: The 1983 Soviet War Scare. *Central Intelligence Agency, Center for the Study of Intelligence*. Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/a-cold-war-conundrum/source.htm

Fischer, B. B. (2014). Comments on the Soviet-East German Intelligence Alert. In *Forecasting Nuclear War*. Washington, DC: Wilson Center. Retrieved from https://www.wilsoncenter.org/publication/forecasting-nuclear-war

Fischer, B. A. (1998). Perception, Intelligence Errors, and the Cuban Missile Crisis. In J. G. Blight & D. A. Welch (Eds.), *Intelligence and the Cuban Missile Crisis* (pp. 150–172). London, UK: Frank Cass and Co. Ltd.

Foreign Relations of the United States, 1964–1968, Volume XII, Western Europe. (n.d.) (Vol. XII-Western Europe). Washington, DC: U.S. Department of State, Office of the Historian. Retrieved from https://history.state.gov/historicaldocuments/frus1964-68v12/actionsstatement

Fritz, J. (2009). *Hacking Nuclear Command and Control*. Canberra, Australia: International Commission on Nuclear Non-proliferation and Disarmament. Retrieved from http://icnnd.org/Documents/Jason_Fritz_Hacking_NC2.pdf

Garthoff, R. L. (1998). US Intelligence in the Cuban Missile Crisis. In J. G. Blight & D. A. Welch (Eds.), *Intelligence and the Cuban Missile Crisis* (pp. 18–63). London, UK: Frank Cass and Co. Ltd.

Garthoff, R. L. (1985). *Détente and Confrontation: American-Soviet Relations from Nixon to Reagan*. Washington, D.C: Brookings Institution.

Garthoff, R. L. (2015). *Soviet Leaders and Intelligence: Assessing the American Adversary During the Cold War*. Washington, DC: Georgetown University Press.

Gates, R. M. (1996). *From the Shadows: The Ultimate Insider's Story of Five Presidents and How They Won the Cold War*. New York, NY: Simon and Schuster.

George, A. L., & Bennett, A. (2005). *Case Studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.

Global Nuclear Weapons Environment: Hearing Before the Committee on Armed Services, Senate, 115th Cong. 1 (2017). Retrieved from https://www.armed-services.senate.gov/hearings/17-03-08-global-nuclear-weapons-environment

GLONASS vs. GPS: An Aerospace Forces Colonel on the Status of Russia's Military Space Program. (2016, November 26). Retrieved from https://life.ru/t/%D0%B7%D0%B2%D1%83%D0%BA/937760/ghlonass_protiv_gps_polkovnik_vks_o_sostoianii_rossiiskogho_voiennogho_kosmosa

Gordon, M. R. (2017, February 15). Russia Deploys Missile, Violating Treaty and Challenging Trump. *The New York Times*, p. 16.

Grabo, C. M., & Goldman, J. (2015). *Handbook of Warning Intelligence: Complete and Declassified Edition*. Lanham, MD: Rowman and Littlefield.

Growing Russian Military Threat in Europe: Hearing Before the Commission on Security and Cooperation in Europe, 115th Cong. 1 (2017). Retrieved from https://www.gpo.gov/fdsys/pkg/CHRG-115jhrg25605/pdf/CHRG-115jhrg25605.pdf

Hilsman, R. (1970, August 14). *An Oral History with Roger Hilsman/Interviewer: Dennis O'Brien.* John F. Kennedy Library Oral History Program, John F. Kennedy Presidential Library, Boston, MA.

Helgerson, J. L. (1996). *CIA Briefings of Presidential Candidates 1952-1992*. Washington, DC: Central Intelligence Agency, Center for the Study of Intelligence. Retrieved from https://permanent.access.gpo.gov/websites/www.cia.gov/www.cia.gov/csi/books/briefing/index.htm

Hersh, S. M. (1986). *The Target is Destroyed: What Really Happened to Flight 007 and What America Knew About It*. New York, NY: Random House.

Hoffman, D. E. (2009). *The Dead Hand: The Untold Story of the Cold War Arms Race and Its Dangerous Legacy*. New York, NY: Doubleday.

Hulnick, A. S. (1987). Relations Between Intelligence Producers and Policy Consumers: A New Way of Looking at an Old Problem. In S. J. Cimbala (Ed.), *Intelligence and Intelligence Policy in a Democratic Society*. Dobbs Ferry, NY: Transnational Publishers, Inc.

Johnson, L. K. (2007). *Handbook of Intelligence Studies*. New York, NY: Routledge.

Joint Publication 2-0, Joint Intelligence. (2013, October 22). Department of Defense, Joint Chiefs of Staff. Retrieved from http://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp2_0.pdf

Jones, N. (Ed.). (2016). *Able Archer 83: The Secret History of the NATO Exercise that Almost Triggered Nuclear War*. New York, NY: The New Press.

Karalekas, A. (1984). History of the Central Intelligence Agency. In W. M. Leary (Ed.), *The Central Intelligence Agency*. Tuscaloosa, AL: University of Alabama Press.

Kennedy, J. F. (1961, January 20). *President Kennedy's Inaugural Address*, January 20, 1961. Retrieved from

https://www.jfklibrary.org/Research/Research-Aids/Ready-Reference/JFK-Quotations/Inaugural-Address.aspx

Kennedy, J.F. (1962, January 16). *Memorandum for Director of Central Intelligence.* [Memorandum]. White House Central Subject File (Box 112, Folder FG: Central Intelligence Agency (11-2): Executive, 1 Jan 1961-30 Apr 1962, Kennedy memo to McCone). John F. Kennedy Presidential Library, Boston, MA.

Kennedy, J. F. (1962, September 27). *Remarks of the President Announcing the Appointment of John McCone as the Director of CIA.* President's Office Files (Speech Files, Announcement of Appointment of John A. McCone as Director of Central Intelligence). John F. Kennedy Presidential Library, Boston, MA.

Kennedy, J. F. (1962, December 12). *Presidential Press Conference*. National Security File (Box 61, Folder: Cuba Subjects, Guidelines for Public Comments, 11/20/62-3/31/1963, Press Conference, Offensive Weapons and Verification). John F. Kennedy Presidential Library, Boston, MA.

Kennedy, J.F. (1963, January 9). [Letter to John McCone]. National Security File (Box 47, Folder: Cuba Subjects, Commendations, 4/62-1/63, John F. Kennedy Letter to Chairman, US Intelligence Board, John McCone). John F. Kennedy Presidential Library, Boston, MA.

Kennedy, J. F. (1963, February 7). *Presidential Press Conference*. National Security File (Box 61, Folder Cuba Subjects, Guidelines for Public Comments, 11/20/62-3/31/1963, Press Conference, Evaluation and Implications of Intelligence Reports). John F. Kennedy Presidential Library, Boston, MA.

Kennedy, J.F. (1963, March 4). *Telephone Conversation with Robert F. Kennedy.* [Telephone Recording]. President's Office Files (Dictation Belt 9A, Digital Identifier JFKPOF-PTH-09A). John F. Kennedy Presidential Library, Boston, MA.

Kennedy, J. F. (1963, March 6). *Presidential Press Conference*. National Security File (Box 61, Folder Cuba Subjects, Guidelines for Public Comments, 11/20/62-3/31/1963, Press Conference, Intelligence Gap). John F. Kennedy Presidential Library, Boston, MA.

Kent, S. (1949). *Strategic Intelligence for American World Policy*. Princeton, NJ: Princeton University Press.

Kent, S. (1972). *From Sherman Kent's Strategic Intelligence for American World Policy*. Retrieved from

https://www.cia.gov/library/readingroom/document/cia-rdp79t01762a000400020010-2

Killian, J. R., Jr. (1963). *President's Foreign Intelligence Advisory Board Report, Soviet Military Buildup in Cuba*. Washington, DC: President's Foreign Intelligence Advisory Board. Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/Cuban%20Missile%20Crisis1962.pdf

Kristensen, H. M., & Norris, R. S. (2017). Russian Nuclear Forces, 2017. *Bulletin of the Atomic Scientists*, *73*(2), 115–126.

Kryuchkov, V.A. and Wolf, M. (1983, November 7). *About the Talks with Comrade V.A. Kryuchkov*. [Memorandum for Record]. Wilson Center International History Declassified Digital Archive. Original documentation from the Federal Commissioner for the Records of the State Security Service of the former German Democratic Republic (BStU), MfS, Abt. X, Nr. 2020, pp. 1-7. Translated by Bernd Schaefer. Retrieved from http://digitalarchive.wilsoncenter.org/document/119320

Kryuchkov, V.A. and Mielke, E. (1983, September 19). *About the Talks of Comrade Minister (Erich Mielke) with the Deputy Chairman of the KGB, Comrade V.A. Kryuchkov on 19 September 1983 in Berlin.* [Memorandum for Record]. Wilson Center International History Declassified Digital Archive. Original documentation from the Federal Commissioner for the Records of the State Security Service of the former German Democratic Republic (BStU), MfS, ZAIG 5306, pp. 1-19. Translated by Bernd Schaefer. Retrieved from http://digitalarchive.wilsoncenter.org/document/115718

Launch of the Second Satellite of the EKS Early-warning System. (2017, May 25). Retrieved from http://russianforces.org/blog/2017/05/launch_of_the_second_satellite.shtml

Lin, P. (2013, April 15). Pain Rays and Robot Swarms: The Radical New War Games the DoD Plays: An Insider's Look at Why Ethics, Policy, and Law Matter to Current and Future Warfare. Retrieved from http://www.theatlantic.com/technology/archive/2013/04/pain-rays-and-robot-swarms-the-radica-new-war-games-the-dod-plays/274965/

Lowther, A., & Dodge, M. (2017). The Threat Environment Demands Nuclear Weapons Modernization. *Air & Space Power Journal*, *31*(3), 4–17.

Mankoff, J. (2014). Russia's Latest Land Grab: How Putin Won Crimea and Lost Ukraine. *Foreign Affairs*: New York, NY, *93*(3), 60–68.

May, E. R., & Zelikow, P. D. (Eds.). (1997). *The Kennedy Tapes: Inside the White House During the Cuban Missile Crisis*. Cambridge, MA: Belknap Press of Harvard University Press.

McAuliffe, M. S. (Ed.). (1992). *CIA Documents on the Cuban Missile Crisis 1962*. Central Intelligence Agency, History Staff. Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/Cuban%20Missile%20Crisis1962.pdf

McCone, J. (1962, August 22). *Memorandum of Meeting with the President at 6:00 p.m., on August 22, 1962.* [Memorandum]. In M. McAuliffe (Ed.), *CIA Documents on the Cuban Missile Crisis, 1962*. Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/Cuban%20Missile%20Crisis1962.pdf

McCone, J. (1962, August 23). *Memorandum of Meeting with the President, 23 August 1962.* [Memorandum]. In M. McAuliffe (Ed.), *CIA Documents on the Cuban Missile Crisis, 1962*. Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/Cuban%20Missile%20Crisis1962.pdf

McCone, J. (1962, October 31). *Soviet MRBMs in Cuba.* [Memorandum for Record]. In M. McAuliffe (Ed.), *CIA Documents on the Cuban Missile Crisis, 1962*. Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/Cuban%20Missile%20Crisis1962.pdf

McCone, J. (1962, December 14). *Memorandum for the President.* [Memorandum]. National Security File (Box 47, Folder: Cuba Subjects, Commendations, 4/62-1/63, McCone memo to President Kennedy). John F. Kennedy Presidential Library, Boston, MA.

McCone, J. (1963, February 28). *Memorandum of Meeting with the President, 28 February 1963.* [Memorandum]. In M. McAuliffe (Ed.), *CIA Documents on the Cuban Missile Crisis, 1962*. Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/books-and-monographs/Cuban%20Missile%20Crisis1962.pdf

Medina, C. (2002). What to do When Traditional Models Fail: The Coming Revolution in Intelligence Analysis. *Studies in Intelligence, 46*(3). Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol46no3/article03.html

Medvedev, Z. (1983). *Andropov*. New York, NY: W.W. Norton and Company.

Miller, F. (2015, July). *Keynote Speech at the 2015 USSTRATCOM Deterrence Symposium*. Offutt AFB, NE. Retrieved from http://www.stratcom.mil/Media/Speeches/Article/986412/keynote-2015-usstratcom-deterrence-symposium/

Ministry for State Security. (1983, January 14). *Issues to Discuss with the Leadership of the KGB of the USSR, Note in reference to 1/83 of 6 Jan 1983.* [Memorandum for Record]. Federal Commissioner for the Records of the State Security Service of the former German Democratic Republic (BStU), MfS, ZAIG 5172, pp. 33-36. Translated by Bernd Schaefer. Retrieved from http://digitalarchive.wilsoncenter.org/document/119308.pdf?v=02dd5bd2a2465dc76b46fc8c74c90ff5

Ministry of Defence, United Kingdom. Soviet Union Concern About a Surprise Nuclear Attack. [Report]. In Jones, N. (2016). *Able Archer 83: The Secret History of the NATO Exercise that Almost Triggered Nuclear War*. New York, NY: The New Press.

Morgan, F. E. (2012). Dancing with the Bear: Managing Escalation in a Conflict with Russia. *Proliferation Papers*, *40*(Winter). Retrieved from https://www.ifri.org/en/publications/enotes/proliferation-papers/dancing-bear-managing-escalation-conflict-russia

Morgan, F. E., Mueller, K. P., Medeiros, E. S., Pollpeter, K. L., & Cliff, R. (2008). *Dangerous Thresholds: Managing Escalation in the 21st Century* (No. MG-614-AF). Santa Monica, CA: RAND Corporation. Retrieved from http://www.rand.org/pubs/monographs/MG614.html

Nuclear Deterrence in the 21st Century: Hearing before the Committee on Armed Services, House of Representatives, 114th Cong. 1 (2015). Retrieved from https://www.gpo.gov/fdsys/pkg/CHRG-114hhrg95318/pdf/CHRG-114hhrg95318.pdf

Oliker, O. (2016). *Russia's Nuclear Doctrine* (Russia and Eurasia Program). Washington, DC: Center for Strategic and International Studies. Retrieved from https://www.csis.org/analysis/russia%E2%80%99s-nuclear-doctrine

Oxford Living Dictionary. (n.d.). Retrieved from https://en.oxforddictionaries.com/

Podvig, P. (2002). History and the Current Status of the Russian Early Warning System. *Science and Global Security*, *10*, 21–60.

Powell, C. (2012, May 13). Colin Powell on the Bush Administration's Iraq War Mistakes. Retrieved from http://www.newsweek.com/colin-powell-bush-administrations-iraq-war-mistakes-65023

Priess, D. (2016). *The President's Book of Secrets: The Untold Story of Intelligence Briefings to America's Presidents from Kennedy to Obama*. New York, NY: Public Affairs.

Putin, V. (2016). *Foreign Policy Concept of the Russian Federation*. Moscow, Russia: Ministry of Foreign Affairs of the Russia Federation. Retrieved from http://www.mid.ru/foreign_policy/official_documents/-/asset_publisher/CptICkB6BZ29/content/id/2542248

Putin, V. (2015). *Russian National Security Strategy*. Moscow, Russia. Retrieved from http://www.ieee.es/Galerias/fichero/OtrasPublicaciones/Internacional/2016/Russian-National-Security-Strategy-31Dec2015.pdf

Putin, V. (2007, February). *Speech at the Munich Conference on Security Policy*. Presented at the Munich Conference on Security Policy, Munich, Germany. Retrieved from http://en.kremlin.ru/events/president/transcripts/24034

Quinlivan, J. T., & Oliker, O. (2011). *Nuclear Deterrence in Europe: Russian Approaches to a New Environment and Implications for the United States* (Monograph No. MG-1075-AF). Santa Monica, CA: RAND Corporation. Retrieved from http://www.rand.org/pubs/monographs/MG1075.html

Roberts, P. (Ed.). (2014). *Cuban Missile Crisis: The Essential Reference Guide*. Santa Barbara, CA: ABC-CLIO, LLC. Retrieved from https://ebookcentral-proquest-com.ezproxy.lib.ou.edu

Rogov, S., & Squassoni, S. (2017). Strategic Stability in the Twenty-first Century. In *A Roadmap for U.S.-Russia Relations*. Washington, DC: Center for Strategic and International Studies. Retrieved from https://www.csis.org/analysis/roadmap-us-russia-relations

Roth, A. (2018, March 1). Putin Threatens US Arms Race with New Missiles Declaration. *The Guardian*. Retrieved from https://www.theguardian.com/world/2018/mar/01/vladimir-putin-threatens-arms-race-with-new-missiles-announcement

Russia and Eurasia. (2018). In *The Military Balance* (Vol. 118, pp. 169–218). Retrieved from https://doi.org/10.1080/04597222.2018.1416981

Russia's Putin Unveils "Invincible" Nuclear Weapons. (2018, March 1). *BBC News*. Retrieved from http://www.bbc.com/news/world-europe-43239331

Schaefer, B., Jones, N., & Fischer, B. (2014, November 13). Forecasting Nuclear War. Retrieved from https://www.wilsoncenter.org/publication/forecasting-nuclear-war

Schlesinger, A. M. (1965). *A Thousand Days: John F. Kennedy in the White House*. Boston, MA: Houghton Mifflin Company.

Schneider, M. B. (2017). Escalate to De-Escalate. *U.S. Naval Institute Proceedings*, *143*(2), 26–29.

Shah, S. (2017, March 31). India and Pakistan Escalate Nuclear Arms Race. *Wall Street Journal*, p. 6.

Shankar, M., & Paul, T. V. (2016). Nuclear Doctrines and Stable Strategic Relationships? The Case of South Asia. *International Affairs*, *92*(1), 1–20.

Solvyov, V., & Klepikova, E. (1983). *Yuri Andropov: A Secret Passage Into the Kremlin*. New York, NY: Macmillan Publishing Company.

SS-26 (Iskander). (2016, September 27). Retrieved from https://missilethreat.csis.org/missile/ss-26/

Sudakov, D. (2017, February 2). Russia's secret shield: Perimeter, aka Dead Hand. Retrieved from http://www.pravdareport.com/russia/politics/02-02-2017/136776-perimeter-0/

The Capture and Execution of Colonel Penkovsky, 1963. (2010, March 5). Central Intelligence Agency. Retrieved from https://www.cia.gov/news-information/featured-story-archive/2010-featured-story-archive/colonel-penkovsky.html

The Growing Russian Military Threat in Europe, Pub. L. No. CSCE 115-1-2, § Commission on Security and Cooperation in Europe (2017). Washington, DC: U.S. Government Publishing Office. Retrieved from https://www.gpo.gov/fdsys/pkg/CHRG-115jhrg25605/pdf/CHRG-115jhrg25605.pdf

The Secret Cuban Missile Crisis Documents. (1994). Washington, DC: Brassey's.

Thielmann, G. (2011). The Missile Gap Myth and Its Progeny. *Arms Control Today*. Retrieved from https://www.armscontrol.org/act/2011_05/Thielmann#17

Thompson, N. (2013, June 28). Inside the Apocalyptic Soviet Doomsday Machine. Retrieved from http://www.wired.com/politics/security/magazine/17-10/mf_deadhand?currentPage-all

Understanding and Deterring Russia: U.S. Policies and Strategies: Hearing before the Committee on Armed Services, House of Representatives, 114th Cong. 2 (2016). Retrieved from https://www.gpo.gov/fdsys/pkg/CHRG-114hhrg98915/pdf/CHRG-114hhrg98915.pdf

U.S. Department of State. (n.d.). Intermediate-Range Nuclear Forces Treaty (INF Treaty). Retrieved from http://www.state.gov/t/avc/trty/102360.htm

U.S. Department of State, Bureau of Public Affairs, Office of the Historian. (n.d.). The Bay of Pigs Invasion and its Aftermath, April 1961-October 1962. Retrieved from https://history.state.gov/milestones/1961-1968/bay-of-pigs

Ward, S. R. (2002). Evolution Beats Revolution in Analysis: Counterpoint to "The Coming Revolution in Intelligence Analysis." *Studies in Intelligence*, *46*(3). Retrieved from https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol46no3/article04.html

Wirtz, J. J. (2013). Indications and Warning in an Age of Uncertainty. *International Journal of Intelligence and CounterIntelligence*, *26*(3), 550–562.

Wirtz, J. J. (2017). Understanding Intelligence Failure: Warning, Response, and Deterrence. In *Studies in Intelligence*. New York, NY: Routledge.

Wolf, M. (1984, August 29). *Consultations with Comrade Major General Shapkin on RYAN from 14-18 August 1984 in Berlin.* [Memorandum for Record]. Federal Commissioner for the Records of the State Security Service of the former German Democratic Republic (BStU), MfS, ZAIG 5384, pp. 1-16.

Wolf, M. (1997). *Man Without a Face: The Autobiography of Communism's Greatest Spymaster*. New York, NY: Public Affairs.

Work, R., & Winnefeld, J. Statement of Robert Work, Deputy Secretary of Defense and Admiral James Winnefeld, Vice Chairman of the Joint Chief of Staff Before the House Committee on Armed Services, § House

Committee on Armed Services (2015). Washington, DC. Retrieved from https://docs.house.gov/meetings/AS/AS00/20150625/103669/HHRG-114-AS00-Wstate-WinnefeldJrUSNJ-20150625.pdf

Appendix A – Acronym List

AEC – Atomic Energy Commission

A2 – Anti-access

AD – Area Denial

ABM – Anti-ballistic Missile

AS – Air-to-surface

BStU – Federal Commissioner for the Records of the State Security Service of the former German Democratic Republic. Der Bundesbeauftragte für die Unterlagen des Staatssicherheitsdienstes der ehemaligen Deutschen Demokratischen Republik

CIA – Central Intelligence Agency

COA – Course of Action

DCI – Director of Central Intelligence

DDR – German Democratic Republic. Deutsche Demokratische Republik

DIA – Defense Intelligence Agency

EMP – Electro-magnetic Pulse

EXCOMM – Executive Committee of the National Security Council

EU – European Union

EW – Early Warning

FBI – Federal Bureau of Investigation

FOIA – Freedom of Information Act

GEO – Geostationary Earth Orbit

GLCM – Ground-launched Cruise Missile

GLONASS – Global Navigation Satellite System

GPS – Global Positioning System

GRU – Main Intelligence Directorate of the Soviet/Russian General Staff. Glavnoye Razvedyvatel'noye Upravleniye (ГРУ)

HEO – Highly Elliptical Orbit

HUMINT – Human Intelligence

HVA – Hauptverwaltung Aufklärung – Foreign Intelligence Service of the Ministry for State Security of the German Democratic Republic

HQ – Headquarters

ICBM – Inter-continental Ballistic Missile

INF – Intermediate-range Nuclear Forces

IR – Infrared

IRBM – Intermediate-range Ballistic Missile

HUMINT – Human Intelligence

IMINT – Imagery Intelligence

JCS – Joint Chiefs of Staff

JFK – John Fitzgerald Kennedy

KAL – Korean Air Lines

KGB – Soviet Committee for State Security. Комите́т госуда́рственной безопа́сности (КГБ)

LRA – Long-range Aviation

MASINT – Measurement and Signature Intelligence

MfS – Ministry for State Security of the German Democratic Republic. Ministerium für Staatssicherheit

MRBM – Medium-range Ballistic Missile

MIRV – Multiple Independently-retargetable Re-entry Vehicle

NATO – North Atlantic Treaty Organization

NIE – National Intelligence Estimate

NORAD – North American Aerospace Defense Command

NPIC – National Photographic Interpretation Center

NPT – Nuclear Non-Proliferation Treaty

NSC – National Security Council

ONI – Office of Naval Intelligence

PFIAB – President's Foreign Intelligence Advisory Board

PICL – President's Intelligence Checklist

PKK – Kurdistan Worker's Party

PRC – People's Republic of China

RC – Reconnaissance

RYAN – Sudden or surprise nuclear attack vnezapnoe raketno yadernoye napadeniye

SA – Surface-to-air

SACEUR – Supreme Allied Commander Europe

SALT – Strategic Arms Limitation Talks/Treaty

SAM – Surface-to-air Missile

SDI – Strategic Defense Initiative

SICAR – Wilson Center Summer Institute on Conducting Archival Research

SIGINT – Signals Intelligence

SLBM – Submarine-launched Ballistic Missile

SM – Standard Missile

SNIE – Special National Intelligence Estimate

SRF – Strategic Rocket Forces

SS – Surface-to-surface

SSC – Surface-to-surface Cruise missile

START – Strategic Arms Reduction Treaty

Stasi – Ministry for State Security of the German Democratic Republic. Ministerium für Staatssicherheit. Colloquial term

TU – Tupolev Design Bureau

UK – United Kingdom

US – United States

USIB – United States Intelligence Board

WMD – Weapon(s) of Mass Destruction

Appendix B – Definitions of Key Terms

Intelligence professionals and policymakers are linked by the process of intelligence warning. The intelligence community collects, processes, exploits, and analyzes information to provide warning and decision makers must decide whether and how to act on that information. This interaction is intelligence warning. Mary O. McCarthy, former National Intelligence Officer for Warning, defined intelligence warning as, "Warning is a process of communicating threat information to decision makers in time for them to take action to manage or deter the threat" (Dahl, 2008, p. 8).

The following key terms are defined for this study to provide clarity and to further the reader's understanding of warning intelligence:

Current Situation Assessment – Conclusions decision makers draw about the current state of events and an estimate of the next series of adversary courses of action.

Indication – Information in various degrees of evaluation, all of which bear on the intention of a potential enemy to adopt or reject a course of action (Joint Publication 2-0 - Joint Intelligence, 2013, pp. GL-8).

Indicator – An item of information which reflects the intention or capability of an adversary to adopt or reject a course of action (Joint Publication 2-0 - Joint Intelligence, 2013, pp. GL-8).

Interpretation – The action of explaining the meaning of something (Oxford English Dictionary, accessed January 24, 2018).

Nuclear Release Authority – The senior leader in the chain of command who possesses nuclear weapon release authority for their state. In the United States this official is the President of the United States and in the Soviet Union it was the General Secretary of the Central Committee of the Communist Party of the Soviet Union.

Objective – Not influenced by personal feelings or opinions in considering or representing facts (Oxford English Dictionary, accessed January 24, 2018).

Receptivity – A combination of belief in the seriousness of a threat and trust in the intelligence being provided (Dahl, 2008, p. 12).

Strategic Warning – Assists policy officials decide - in advance of specific indications of danger - which of the many plausible general threats to US security interests deserve concerted preemptive and defensive preparations (Johnson, 2007, p. 174).

Tactical Warning – Warns policy makers of imminent adversary moves to launch an attack, develop a weapon, or effect a policy initiative that can harm US interests (Johnson, 2007, p. 173).

Threat Warning – Urgent communication and acknowledgement of time-critical information essential for the preservation of life and/or vital resources (DoD Dictionary of Military and Associated Terms, 2018, p. 234).

Warning Intelligence – Those intelligence activities intended to detect and report time-sensitive intelligence information on foreign developments that forewarn of hostile actions or intentions against United States entities, partners, or interests (Joint Publication 2-0 – Joint Intelligence, 2013, pp. GL-12).

Appendix C – Chronology of Events: Cuban Missile Crisis

1945	
16 July	U.S. tests first atomic bomb at the Trinity Test Site, New Mexico.
6 August	U.S. deploys first atomic weapon in combat against Hiroshima, Japan.
1949	
29 August	Soviet Union tests its first atomic bomb at Semipalatinsk, Kazakh Soviet Socialist Republic.
1956	
4 July	First U-2 mission flown from Wiesbaden Air Base, West Germany over the Soviet Union.
1957	
27 August	Soviets successfully test the first Intercontinental Ballistic Missile.
4 October	Soviet successfully launch the first satellite, Sputnik, from Tyuratam into low earth orbit.
November	U.S. intelligence discovers a new, Soviet surface-to-air missile, the SA-2.
1959	
1 January	Cuban revolutionary forces enter the Cuban capital, Havana, ending the rule of pro-American President Batista.
1960	
1 May	U-2 pilot, Francis Gary Powers, is shot down by an SA-2 over the Soviet Union, ending U-2 flights over Soviet territory.
18 August	First successful US satellite imagery reconnaissance mission (Corona 14).
1961	
20 January	John F. Kennedy inaugurated as 35th President of the United States.

17-20 Apr	Cuban exiles, with CIA support, launch the failed Bay of Pigs invasion to topple the communist dictatorship of Fidel Castro.
September	US Intelligence Community revises estimate of Soviet ICBMs on alert from 140-200 to 10-25 based on Corona imagery.

1962

April	Soviet Presidium approves Cuban request for conventional, defensive weapons.
24 May	Soviet Presidium briefed on plan to deploy offensive nuclear weapons to Cuba (Operation Anadyr).
May	Director of Central Intelligence McCone, imposes analytic requirement to verify HUMINT reporting of military order of battle with imagery intelligence.
10 June	Soviet Presidium approves plan to deploy offensive nuclear weapons to Cuba (Operation Anadyr).
Late-Aug	President Kennedy orders the Department of Defense to study military options to "eliminate any installations in Cuba capable of launching nuclear attack on the U.S."
31 August	President Kennedy limits publication of intelligence on offensive weapons in Cuba.
8 September	First Soviet nuclear missiles reach Cuba. Chinese Nationalist U-2 lost over mainland China.
8-16 Sep	U-2 missions targeting Cuba suspended based on 8 September U-2 loss over China.
14 September	President Kennedy meets with Defense Secretary McNamara and the Joint Chiefs of Staff to discuss a contingency attack plan should the Soviet deploy nuclear weapons to Cuba.
19 September	Central Intelligence Agency releases Special National Intelligence Estimate, *The Military Buildup in Cuba*, which mistakenly assesses the likelihood of a Soviet offensive nuclear deployment to Cuba.
Late-Sep	IL-28 nuclear capable jet bombers and the first MiG-21 fighters deployed to Cuba.

26 September	First successfully U-2 targeting Cuba since 8 September stand-down.
October	The U.S. has 14 ICBMs on alert and 200 manned bombers on airborne alert. The Soviets have 44 ICBMs on alert.
1 October	Secretary of Defense McNamara and the Joint Chiefs of Staff discuss the potential of a suspected Soviet Medium Range Ballistic Missiles (MRBM) deployment to Cuba.
4 October	The Targeting Working Group of the Interagency Committee on Overhead Reconnaissance (COMOR) recommends direct U-2 overflights of Cuba based on growing HUMINT reporting of Soviet military activity in western Cuba.
4 October	Soviet ship *Indigirka* delivers 36 nuclear warheads for SS-4 MRBM, 36 warhead for Sopka/FKR coastal defense cruise missiles, as well as 6 nuclear bombs for the IL-28, and 12 nuclear warheads for the Luna/FROG short-range tactical nuclear rocket arrive in Mariel, Cuba. This was unknown to the U.S. at the time.
9 October	President Kennedy issues instructions to tightly control publication of intelligence on offensive weapons in Cuba but imposes no collection or analytic restrictions or restriction on dissemination of this information with a strict need to know. US Intelligence Board misinterprets this instruction as an injunction against printing any intelligence on offensive weapons in any intelligence publication.
14 October	First clear-weather U-2 mission which collects imagery intelligence of a Soviet offensive nuclear weapons buildup in Cuba.
15 October	U-2 imagery processed and interpreted by NPIC analysts.
16 October	President Kennedy first informed of Soviet missiles in Cuba. First NSC crisis meeting. Two main courses of action discussed are: 1) an air strike and invasion and 2) naval quarantine with the threat of further military action.
18 October	President Kennedy meets Soviet Foreign Minister Andrei Gromyko who asserts Soviet aid to Cuba is purely defensive and is not a threat to the U.S.
19 October	President Kennedy meets with the Joint Chiefs of Staff to discuss military options.

20 October	President Kennedy decides a naval quarantine of Cuba is the best option to address the crisis.
21 October	President Kennedy meets with Commander, Tactical Air Command. General Sweeney cannot guarantee 100% destruction of the Soviet ballistic missiles.
22 October	President Kennedy phones former Presidents Hoover, Truman, and Eisenhower as well as British Prime Minister Harold Macmillan to brief them on the situation. President Kennedy sends first letter to Soviet First Secretary Khrushchev. President Kennedy makes televised/radio address to the nation announcing Soviet actions and the US response. The president increases the US military alert posture to DEFCON 3 (subsequently DEFCON 2 for strategic nuclear forces). Soviet Presidium discussed using tactical nuclear weapons in the event of a US invasion of Cuba.
23 October	President Kennedy signs orders to implement a naval quarantine of Cuba. First low-level, imagery intelligence flight over Cuba. US Permanent Representative to the United Nations, Adlai Stevenson bring the Soviet nuclear deployment before the UN Security Council. Attorney General Robert Kennedy meets Soviet Ambassador Anatoly Dobrynin at the Soviet Embassy.
23 October	Soviet ship *Aleksandrovsk* arrives in La Isabella, Cuba with 24 SS-5 nuclear warheads and 44 warheads for the Sopka/FKR coastal defense cruise missiles. This was unknown to the US at the time.
24 October	Khrushchev responds to Kennedy's letter. Soviet ships approach quarantine line but some halt and turn back while others, not carrying offensive weapons are allowed to proceed to Cuba.
25 October	Soviet MRBM missiles become operational. President Kennedy sends another letter to First Secretary Khrushchev. US United Nations Ambassador, Adlai Stevenson, despite Soviet denials, confronts Soviet Ambassador Valerian Zorin with imagery intelligence evidence of the Soviet nuclear missile deployment in Cuba.
26 October	Imagery intelligence reveals accelerated missile site construction and uncrating of IL-28 bombers. Fidel Castro sends letter to Khrushchev urging him to initiate a nuclear first strike against the US if the US launches an invasion of Cuba. President Kennedy receives a letter from First Secretary Khrushchev in which Khrushchev proposes removal of Soviet missiles for lifting of the naval quarantine and a US pledge to not invade Cuba.

27 October	President Kennedy receives a second letter from Khrushchev demanding an additional US concession of removing Jupiter missiles from Turkey. Kennedy responds to Khrushchev's earlier letter and ignores responding to this more militant, demanding letter. Soviet Presidium sends cable to military commanders in Cuba forbidding use of tactical nuclear weapons without authorization from Moscow. A U-2 accidentally penetrates Soviet airspace on an air sampling mission flown from Alaska. Soviet air defense forces shoot down a US U-2 targeting Cuba with an SA-2. Robert Kennedy meets with Ambassador Dobrynin. They agree the Soviet will withdraw missiles in exchange for a US no invasion pledge. A secret agreement for the US to withdrawal Jupiter missiles from Turkey is also included but was unknown at the time.
28 October	Radio Moscow announces the Soviet Union has agreed to the negotiated settlement reached on 27 October and releases the text of a Khrushchev letter agreeing to these terms.
3 November	Soviet ship *Aleksandrovsk* departs Cuba with 36 SS-4 nuclear warheads and 24 SS-5 nuclear warheads for the Soviet Union.
21 November	President Kennedy ends US naval quarantine of Cuba.
1 December	Soviet ship *Arkhangelsk* departs Cuba with all tactical nuclear warheads. All Soviet nuclear warheads are withdrawn from Cuba.
20 December	Soviet ship *Arkhangelsk* arrives in Severomorsk.
28 December	President's Foreign Intelligence Advisory Board sends interim report on the Cuban Missile Crisis to President Kennedy.

1963

4 February	President's Foreign Intelligence Advisory Board sends final report on the Cuban Missile Crisis to President Kennedy.

Appendix D – Chronology of Events: Soviet War Scare

1979

Soviets operationalize the VRAN computer model to provide strategic warning of surprise nuclear attack.

1980

23 June — Soviet Central Committee resolution condemns the "adventuristic actions of the United States" which it asserts will lead to a "heightening of the danger of war."

17 November — Brezhnev indicates in a speech he would not dwell on statements made by President-elect Reagan during "the heat of the election struggle" and would welcome any "constructive steps" to improve US-Soviet relations.

December — Soviet Premier Kosygin, a more moderate voice regarding US-Soviet relations, dies.

1981

March — Soviet leaders possibly conclude a period of increased US-Soviet confrontation had arrived.

25 March — Soviet leaders attack US foreign policy in Pravda newspaper article, the first such attack since President Reagan entered office.

7 April — Brezhnev makes major speech critical of the U.S. followed by another major anti-US speech on 27 April.

May — KGB chief Andropov declares at a major KGB conference that the new US Administration is actively preparing for war and a nuclear first strike is possible. Andropov elevates strategic intelligence warning of a potential nuclear attack as the most important KGB/GRU mission.

May — Soviet naval officials launch program to shorten launch times for ballistic missile submarines in port.

August — Brezhnev secretly meets Warsaw Pact leaders in Crimea to obtain signatures on a strategic war planning document which streamlines the decision-making process to go to war. This document provides the Soviet Union the authority to order Warsaw Pact forces to war without prior political consultations among the member states.

October	Defense Minister Ustinov convenes a conference for senior Soviet military leaders and declares, "the acute intensification of the aggressive nature of imperialism threatens to incite the world into flames of a nuclear war." Brezhnev attends the conference and promises the Soviet military all their needs will be met.
October	KGB Headquarters issues formal instructions to KGB Residencies abroad to strengthen their strategic warning efforts.
	Soviets install new over-the-horizon radars to enhance early warning of nuclear attack capabilities.

1982

May	KGB Chairman Andropov resigns post to take a post in the Central Committee Secretariat. Vitaly Fedorchuk named as new KGB Chairman.
10 November	General Secretary Brezhnev dies, Andropov named as General Secretary.
10-15 Nov	Fearing the US would exploit the leadership transition immediately following Brezhnev's death, KGB/GRU Residencies are placed on alert to monitor and report preparations for a nuclear attack against the Soviet Union.
17 December	Andropov appoints Viktor Chebrikov as new KGB Chairman. Outgoing KGB Chairman Fedorchuk appointed Interior Minister.
December	The Soviet Strategic Air Forces Commander-in-Chief authorizes plan to improve Artic air base combat readiness.

1983

January	The Soviet military adds a new readiness condition, "Surprise Enemy Attack Using Weapons of Mass Destruction in Progress" to its existing four readiness levels.
February	KGB Headquarters issues new operational directive, the Permanent Operational Assignment to uncover NATO Preparation for a Nuclear Attack on the Soviet Union, to Residencies in NATO nations. The directive uses the upcoming Pershing II missile deployment to highlight the critical need to gain insight on NATO war planning.

8 March	President Reagan makes “evil empire” speech. The Soviet press charges Reagan “can think only in terms of confrontation and bellicose, lunatic anti-communism.”
March	Andropov responds to the “evil empire” speech in Pravda by condemning the US drive towards acquiring a nuclear first-strike capability.
Summer	KGB/GRU pressures residencies to collect VRYAN requirements.
June	KGB Headquarters warns Residencies “the US Administration is continuing it preparation for nuclear war and is augmenting its nuclear potential.”
August	KGB Headquarters issues additional, more specific VRYAN collection requirements to Residencies.
Late-summer	Soviet population is preparing for war through increased civil defense activities.
1 September	KAL 007 shootdown
September	Soviet officials conclude President Reagan intentionally engineered the KAL 007 indecent to poison the international atmosphere and ensure Pershing II and GLCM deployment to Western Europe. Soviet spokesmen accuse President Reagan and his advisors of “madness,” “extremism,” and “criminality.”
26 September	Serpukhaov-15 Early Warning launch detection false alarm.
28 September	General Secretary Andropov issues harsh condemnation of the U.S. in reaction to the KAL 007 shootdown.
September	General Secretary Andropov experiences kidney failure, continuing a long period of illness marked by hypertension and diabetes.
5 October	Lech Walesa awarded Nobel Peace Prize.
23 October	US Marine Corp barracks in Beirut is bombed. Security alert at US bases in Europe raised triggering a Soviet intelligence indicator.
26 October	US military forces invade Grenada heightening Soviet fear the US might overthrow Daniel Ortega’s communist regime in Nicaragua.

October	Warsaw Pact Commander, Marshal Kulikov, announces preparations for deploying new nuclear missiles to East Germany and Czechoslovakia.
October	Soviet/Warsaw Pact forces receive a new readiness directive to improve timelines for operational deployment of nuclear weapons.
October	General Secretary Andropov becomes gravely ill and has one kidney removed.
13/14 Oct	Warsaw Pact Commander, Marshal Kulikov, characterizes the international situation as "pre-war" and calls for more active reserve training and stockpiling of ammunition, food, and fuel while attending the Warsaw Pact Defense Ministers' Conference in Sofia, Bulgaria.
20 October	Soviets initiate significant military preparations to counter a potential US/NATO nuclear attack during upcoming NATO Exercise Able Archer which they believe will occur between 3-11 November 1983.
7 November	General Secretary Andropov misses the annual Kremlin ceremony commemorating the 1917 Bolshevik Revolution.
7 November	NATO conducts annual nuclear release procedure exercise known as Exercise Able Archer 83.
8/9 Nov	KGB issues orders to Residencies in Western Europe to report increased alert status at US military bases.
11 November	Exercise Able Archer 83 concludes. Soviet military alert reduced and Soviet flight activities in East Germany return to normal levels.
11 November	Soviet Defense Minister Ustinov delivers speech in Moscow criticizing US activities as "reckless" and "adventurist," and states the U.S. was pushing the world toward "nuclear catastrophe". The speech suggests Soviet fear of US/NATO exercise activities as cover for a potential nuclear attack is authentic.
November	General Secretary Andropov sends a letter to Prime Minister Thatcher stating the upcoming GLCM deployment to RAF Greenham Common is a threat to the Soviet Union which must be removed.

December	US begins Pershing II missile deployment to West Germany. General Secretary Andropov orders Soviet arms negotiators to leave Geneva strategic arms talks until the missiles are removed.
December	Rumors of imminent nuclear war circulate at all levels of Soviet society.
	Soviets launch new infra-red launch detection satellites to enhance early warning of nuclear attack capabilities.

1984

January	KGB convenes a special conference and emphasizes the continuing importance of Operation RYAN. KGB Deputy Chairman and Chief, First Directorate, General Kryuchkov, told KGB officers the threat of nuclear war had reached "dangerous proportions."
9 February	General Secretary Andropov dies, Chernenko becomes new General Secretary. Chernenko accelerates the anti-US/NATO media campaign, intelligence collection efforts, and military preparations to counter a potential US/NATO nuclear first-strike.
March	Soviet diplomats receive telegram highlighting past themes regarding potential surprise attack.
March/April	Soviet armed forces conduct most comprehensive rehearsal for nuclear war ever detected.
April	KGB Headquarters released new, refined Operation RYAN collection requirements. Foreign Minister Gromyko issues an unprecedented instruction to Soviet embassies to not interfere with or obstruct the work of KGB/GRU officers.
May	Defense Minister Ustinov, continuing the anti-U.S. media attack, accuses the U.S. of trying to "achieve military superiority" and to blackmail the Soviet Union.
May	General Secretary Chernenko's health begins to decline. This may have led to a power shift to younger Politburo members, including Gorbachev.
June	Gorbachev speech in Smolensk does not highlight the "war scare" themes pervasive in past Soviet speeches. However, Soviet senor leader fear of imminent nuclear attack continues into the fall.

Summer	Moscow orders additional Warsaw Pact measures to increase combat readiness.
June	Soviets conduct largest unilateral combat exercise in Eastern Europe consisting of 60,000 Soviet troops in Hungary and Czechoslovakia.
June/July	KGB emphasis begins shifting from surprise nuclear attack to collection/analysis of US scientific-technical developments that could lead to weapons technology breakthroughs.
Fall	The Minister of Defense, Chief of the General Staff, and other senior military and KGB leaders are restricted from traveling far from their offices. First Deputy Minister of Defense, Marshal Akhromeyev compares the situation in Europe with the weeks preceding the Nazi attack on the Soviet Union in 1941. Warsaw Pact members increase harassment of Western military attaches and restrict their travel.
2 September	General Secretary Chernenko omits reference to past requirements to remove US Pershing II or GLCM missiles from Western Europe as a condition for returning to the Geneva arms control talks in an interview.
September	Chief of the General Staff Ogarkov suddenly removed and re-assigned, probably in a move for the Politburo to regain more control over the military and to improve relations with the U.S. This possibly represents a power struggle between the younger generation of Politburo members (Gorbachev, Romanov, and Aliev) vs. older, hard-line members (Gromyko and Ustinov). Marshal Akhromeyev, more flexible on arms control, named as new Chief of General Staff.
6 October	Foreign Minister Gromyko delivers harsh speech at the United Nations attacking Reagan's "reckless designs" and "obsession" with achieving military superiority.
17 October	General Secretary Chernenko's Washington Post interview offers a lighter, improved tone towards US-Soviet relations.
6 November	President Reagan re-elected.
November	General Secretary Chernenko agrees to return to the Geneva arms control talks in January 1985.
20 December	Suffering from pneumonia, Defense Minister Ustinov dies.

	The VRYAN computer model calculates Soviet power at 45% of US power.
1985	
	KGB attitudes shift markedly. The threat of surprise nuclear attack is no longer taken seriously, even in the First Chief Directorate. Scientific-technical intelligence now an equal collection requirement with RYAN requirements.
10 March	General Secretary Chernenko dies after several months of deteriorating health, Gorbachev named as new General Secretary.
July	General Secretary Gorbachev distances himself from his predecessor's' policies and stresses importance of arms control agreements in a speech for military officers in Minsk.
19 July	Colonel Oleg Gordievsky, Resident-designate, KGB Residence London, defects to the United Kingdom.