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1. AGENCY USE ONLY (LEAVE BLANK)		2. REPORT DATE April 26, 2019	3. REPORT TYPE AND DATES COVERED STUDENT RESEARCH PAPER	
4. TITLE AND SUBTITLE  MILITARY DECEPTION IN THE CONTACT LAYER THROUGH PERCEPTION MANAGEMENT			5. FUNDING NUMBERS  N/A	
6. AUTHOR(S)  Major Sara Wood				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  USMC COMMAND AND STAFF COLLEGE 2076 SOUTH STREET, MCCDC, QUANTICO, VA 22134-5068			8. PERFORMING ORGANIZATION REPORT NUMBER  NONE	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)  SAME AS #7.			10. SPONSORING/MONITORING AGENCY REPORT NUMBER:  NONE	
11. SUPPLEMENTARY NOTES  NONE				
12A. DISTRIBUTION/AVAILABILITY STATEMENT  NO RESTRICTIONS			12B. DISTRIBUTION CODE  N/A	
ABSTRACT (MAXIMUM 200 WORDS) The Marine Corps is not currently training or equipping intelligence analysts and deception planners to effectively create the desired perceptions through exploitation of cognitive biases or the conduit analysis framework to create effective military deception operations that will contribute to military forces competing in the contact layer. The creation of the Marine Expeditionary Force Information Groups (MIGs) is a step in the right direction to achieve parity with our peer adversaries' capabilities and the right structure for a Perception Management Working Group (PMWG). Investments in both COTS applications and equipment designed for predictive analysis and advanced training in psychology will enhance to effectiveness of the PMWG and deception operations.				
14. SUBJECT TERMS (KEY WORDS ON WHICH TO PERFORM SEARCH)  Perception Management; Deception; Cognitive Bias; Contact Layer			15. NUMBER OF PAGES: 25	
			16. PRICE CODE: N/A	
17. SECURITY CLASSIFICATION OF REPORT  UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE:  UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT  UNCLASSIFIED	20. LIMITATION OF ABSTRACT	

United States Marine Corps  
Command and Staff College  
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Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

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**TITLE:**

Military Deception in the Contact Layer through Perception Management

SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF MILITARY STUDIES

**AUTHOR:**


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AY 18-19

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## **Executive Summary**

**Title:** Military Deception in the Contact Layer through Perception Management

**Author:** Major Sara Wood

**Thesis:** The Marine Corps is not currently training or equipping intelligence analysts and deception planners to effectively create the desired perceptions through exploitation of cognitive biases or the conduit analysis framework to create effective military deception operations that will contribute to military forces competing in the contact layer.

**Discussion:** The National Defense Strategy introduces a Global Operating Model consisting of four layers: Contact, Blunt, Surge, and Homeland Defense and apportions a combination of forces U.S. based forces to mitigate the challenges of complex terrain, technology proliferation, information as a weapon, the battle of signatures, and contested domains in the future operating environment. The overarching goal is to stay in the competitive in the Contact Layer in order to create a decisive time and place to transition to the Blunt and Surge layers if necessary.

Emulative and conduit analysis, cognitive bias examination, and perception management are all necessary components of planning and achieving a successful military deception goal. These components are not currently taught or resourced inside the military and are usually tasked out to other Intelligence Agencies resulting in time and opportunities often lost.

**Conclusion:** The creation of the Marine Expeditionary Force Information Groups (MIGs) is a step in the right direction to achieve parity with our peer adversaries' capabilities and the right structure for a Perception Management Working Group (PMWG). Investments in both COTS applications and equipment designed for predictive analysis and advanced training in psychology will enhance to effectiveness of the PMWG and deception operations.

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THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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## *Preface*

This paper is the result of my participation in the Marine Corps University (MCU) Command and Staff College (CSC) AY2018-2019 Gray Scholars Program. Through the course of numerous wargames focused on future Marine Corps fights with peer and near-peer adversaries, I became interested in how cognitive biases inform perceptions and how these perceptions inform decision-makers. The Marine Corps has re-invigorated discussions on deception and introduced new concepts such as Operations in the Information Environment (OIE) and Signature Management (SIGMAN) but there has been a lack of focus on how to effectively employ these concepts against key decision-makers in the Contact Layer to remain competitive without escalation.

Special thanks to Dr. Benjamin Jensen and Dr. Nathan Packard for leading the Gray Scholars Program. Additionally, thanks to the staff at the Ellis Group at the Marine Corps Warfighting Laboratory. Finally, thanks to my fellow Gray Scholar colleagues and Conference Group 4 colleagues for their insights that helped shape this concept.

*"Though fraud in other activities may be detestable, in the management of war it is laudable and glorious, and he who overcomes the enemy by fraud is as much to be praised as he who does so by force."* – Machiavelli

**General:**

According to Analytics Week, data is growing at a faster rate than ever before, and by 2020 about 1.7 megabytes of new information will be created every second for every human being on the planet. Our accumulated digital universe of data by 2020 will have grown from 4.4 zettabytes in 2017 to around 44 zettabytes, or 44 trillion gigabytes.<sup>1</sup> The sheer amount of information available today coupled with the requirement to make form judgements and make decisions faster leaves the door open to miscalculations and mistakes. Research from the fields of cognitive psychology and behavioral economics, by Amos Tversky and Daniel Kahneman, tells us that under constrained conditions such as time restrictions, too much information, and uncertainty, individuals are likely to make errors in judgment caused by cognitive biases.<sup>2 3</sup> Cognitive biases are natural tendencies or mental shortcuts that the mind subconsciously uses to shorten the decision-making process often times resulting in errors of judgement or decision making. While we are often times focused on limiting these biases in our own decision-making cycle, exploitation of these biases can be leveraged to shape perceptions of adversaries and contribute to successful military deception planning. The historical example presented in this paper, OPERATION ANADYR, a successful military deception executed in the contact layer that relied heavily on perception management and the exploitation of cognitive biases.

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<sup>1</sup> Vishal Kumar, "Big Data Facts," Analytics Week, 26 March 2017. <https://analyticsweek.com/content/big-data-facts/> Retrieved 20 April 2019.

<sup>2</sup> Amos Tversky and Daniel Kahneman, "Judgment Under Uncertainty: Heuristics and Biases," *Science* 185, no. 4157 (1974): 1124.

<sup>3</sup> Daniel Kahneman. *Thinking, Fast and Slow*. London: Penguin Books. 2011.

**Purpose:**

Joint Publication 3-13.4 defines military deception as actions executed to deliberately mislead adversary military, paramilitary, or violent extremist organization decision makers, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission.<sup>4</sup> The focus of military deception is generally on a decision maker, yet there is little focus in terms of training or education in understanding how individuals make decisions, methods to conduct conduit analysis, and how to create desired perceptions to lead an adversary to take these specific actions or inactions. The Marine Corps has heavily invested in new concepts such as Signature Management (SIGMAN) and Operations in the Information Environment (OIE) both of which included elements of military deception, but has neglected investing in creating an environment conducive to deception.

**Time Horizons, Assumptions, and Risks:**

This concept paper is informed by the OPERATION ANADYR historical case study described below, how the Marine Corps has operated over the last 18 years in Iraq and Afghanistan and where it needs to be in order to compete and gain an advantage over our adversaries in the contact layer. This paper rests on two key assumptions. First, the Marine Corps will continue to invest in the OIE and SIGMAN concepts and the DOTMLPF-C structure that accompanies these concepts. Second, the current identification of China and Russia as peer or superior adversaries in the information environment. The risks identified by not addressing the issues outlined in the concept paper include ineffective deception operations and wasted investment in equipment and resources identified to support SIGMAN and OIE.

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<sup>4</sup> United States Department of Defense. Military Deception. Joint Publication 3-13.4. 2017.

### **Description of the Military Problem:**

The 2018 National Defense Strategy (NDS) introduces a Global Operating Model consisting of four layers: Contact, Blunt, Surge, and Homeland Defense and apportions a combination of U.S. based forces to mitigate the challenges of complex terrain, technology proliferation, information as a weapon, the battle of signatures, and contested domains in the future operating environment.<sup>5 6</sup> The overarching goal is to stay competitive in the Contact Layer in order to create a decisive time and place to transition to the Blunt and Surge Layers if necessary. This goal can effectively be achieved through carefully designed deception operations based on perception management and the exploitation of cognitive biases. The Marine Corps is not currently training or equipping intelligence analysts and deception planners to effectively create the desired perceptions through exploitation of cognitive biases or the conduit analysis framework to create effective military deception operations that will contribute to military forces competing in the contact layer.

### **Central Idea:**

Perception Management is defined by the Department of Defense dictionary as “actions to convey and/or deny selected information and indicators to foreign audiences to influence their emotions, motives, and objective reasoning as well as to intelligence systems and leaders at all to influence official estimates, ultimately resulting in foreign behaviors and official actions

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<sup>5</sup> General Neller, Robert B. The Posture of the United States Marine Corps. Statement to the Senate Armed Service Committee, April 19, 2018:3

<sup>6</sup> James N. Mattis. Summary of the 2018 National Defense of the United States of America: Sharpening the American Military’s Competitive Edge. Arlington, VA: Office of the Secretary of Defense, 2018:7

favorable to the originator's objectives. In various ways, perception management combines truth projection, operations security, cover and deception, and psychological operations.”<sup>7</sup>

Human factors are the physical, cultural, psychological, and behavioral attributes of an individual or group that influence perceptions, understanding, and interactions.<sup>8</sup> These factors affect the interpretation of information and decision making. Intelligence analysts and deception planners analyze factors that affect enemy decision making by conducting emulative analysis (EA). EA reproduces what or how the enemy thinks and provides the basis for the assessment of what information the deception target must receive in order to reach the deception objective.<sup>9</sup> Along with helping to determine what information the adversary decision makers should receive, EA also attempts to discover the adversary’s methods and patterns of receiving information, predispositions, and biases. Emulative analysis is crucial to deciding what, where, when, and why deceptive material must be revealed to the adversary and in what form.<sup>10</sup> EA is the starting point to reach the desired perception necessary to deceive a deception target.

In military deception, a desired perception is what the deception target must believe for it to make the decision that will achieve the deception objective<sup>11</sup>. These perceptions are individual conclusions, official estimates, and assumptions that the target of the deception must believe in order to make the decision that will achieve the deception objective.<sup>12</sup> Perceptions of reality are important because they influence decisions and outcomes, which is often described in the field of sociology as the Thomas theorem: “If men define situations as real, they are real in their

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<sup>7</sup> United States Department of Defense Dictionary of Military and Associated Terms, Joint Publication 1-02, 12 April 2001 (As Amended Through 17 December 2003).

<sup>8</sup> U.S. Department of Defense. Military Deception. Joint Publication 2-0. 2013

<sup>9</sup> U.S. Department of the Army. Army Military Deception. FM3-13.4. 2019. <https://fas.org/irp/doddir/army/fm3-13-4.pdf>

<sup>10</sup> Ibid.

<sup>11</sup> U.S. Department of Defense. Military Deception. Joint Publication 3-13.4. 2017.

<sup>12</sup> U.S. Department of the Army. Army Military Deception. FM3-13.4. 2019. <https://fas.org/irp/doddir/army/fm3-13-4.pdf>

consequences.”<sup>13</sup> These enemy perceptions are heavily impacted by cognitive biases and preconceptions that are applied when interpreting information from various conduits which in turn create his or her concept of reality. Conduits are information or intelligence gateways to the deception target, such as foreign intelligence entities, intelligence collection platforms, open-source intelligence, and foreign and domestic news media.<sup>14</sup> Conduits shape how the adversary will observe activity in the information environment ultimately leading to his or her perceptions of the reality of the operating environment.

Emulative Analysis, desired perceptions and conduits are all necessary components of planning and achieving a successful military deception goal. These components are not currently effectively taught inside the military and are usually tasked out to other Intelligence Agencies. The creation of the Marine Expeditionary Force Information Groups (MIGs) is a step in the right direction to achieve parity with our peer adversaries’ capabilities and the right structure for a Perception Management Working Group (PMWG).

### **Historical Example: OPERATION ANADYR and the Cuban Missile Crisis**

Before describing the concept of a Perception Management Group further, revisiting a successful historical military deception executed in the contact layer is worth examining. History is ripe with examples of military deception. From the use of the Trojan Horse by the Greeks, Operation Bodyguard in World War II, and the false amphibious landing by Marine Forces in Iraq, deception can not only help even the odds but is often the decisive action that

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<sup>13</sup> Bouwmeester, Han. “Lo and Behold: Let the Truth Be Told—Russian Deception Warfare in Crimea and Ukraine and the Return of ‘Maskirovka’ and ‘Reflexive Control Theory.’” in Netherlands Annual Review of Military Studies: Winning Without Killing: The Strategic and Operational Utility of Non-Kinetic Capabilities in Crises, edited by Paul Ducheine and Frans Osinga, 125-153. The Hague, Netherlands: Asser Press, 2017:130

<sup>14</sup> U.S. Department of Defense. Military Deception. Joint Publication 3-13.4. 2017.

success hinges upon. In the United States we often refer to American employment of deception in World War II as the preeminent example. This historical study will examine a Soviet/Russian example of deception or “maskirovka” that took place in 1962 during the Cuban Missile Crisis, known as OPERATION ANADYR.<sup>15</sup> Deception operations have contributed to Soviet/Russian victories in war time in the Battle of Stalingrad, the Battle of Kursk, and Operation Bagration. In peacetime, deception operations in the Prague Spring and the annexation of Crimea has served as warnings to the International Community that these tactics and techniques are not only reserved for military operations but can be employed to gain an early advantage prior to conflict.

### *Russian Deception Operations*

Deception operations in the United States and Russia are understood and employed differently. The United States has very strict rules that must be conformed to when employing deception operations and these operations are often used to trick or mislead an enemy as to intent, location, or operational numbers. Russia’s understanding of military deception is much less restrictive and it views deception as a whole of government approach as opposed to a single event. The Russian military and political apparatus see deception as an indispensable component of war, warfare, and operational art.<sup>16</sup> Russia’s concept of maskirovka is the combination of camouflage, concealment, psychological operations and perception management, decoy employment, information and intelligence denial, counterintelligence, disinformation/misinformation, and operational security. The central tenet of maskirovka is to prevent an adversary from discovering Russian intentions by deceiving him about the nature,

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<sup>15</sup> James H. Hansen. “Soviet Deception in the Cuban Missile Crisis.” *Studies in Intelligence* 46, no. 1, 2002: 49-58.

<sup>16</sup> Norta Trulock III. “The Role of Deception in Soviet Military Planning.” In *Soviet Strategic Deception*, edited by Brian D. Dailey and Patrick J. Parker, 275-292. Stanford, CA: Hoover Institution Press, 1987.

scope, and timing of an operation.<sup>17</sup> Russian, and previously the Soviet Union spend large amounts of manpower studying Western leaders and culture, trying to determine what biases leaders hold and how to exploit and use these biases to their advantage.

Maskirovka covers a broad range of concepts, from deception at the strategic planning level to camouflage at the troop level.<sup>18</sup> Increasingly, maskirovka has played an important role in Russian military operations, as evident by the actions in Georgia, Crimea, and Ukraine. Russia employs the techniques of maskirovka to conceal and deceive the nature of military operations and political activities, conduct clandestine and intelligence operations. Disinformation, a key component of maskirovka and essential to the conduct of OPERATION ANADYR, is false information that is spread for the purpose of deliberately deceiving a target audience.<sup>19</sup> In fact, the English word disinformation is a loan translation of the Russian *dezinformatsiya*. Joseph Stalin coined the term and gave it a French-sounding name to falsely claim it had a Western origin. So even the name itself is intended to mislead.<sup>20</sup>

### *OPERATION ANADYR*

OPERATION ANADYR was the code name used by the Soviet Union for the Cold War era secret operation carried out in 1962 to place ballistic missiles, medium-range bombers, and a division of mechanized infantry to Cuba to create an army group that would be able to prevent an invasion of the island by the United States.<sup>21</sup> The mission was partially motivated by Nikita Khrushchev's fear that the United States had a distinct advantage in ability to strike first because

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<sup>17</sup> Julian Lindley-French. "NATO: Countering Strategic Maskirovka." Canadian Defence & Foreign Affairs Institute, 2015: 1-10.

<sup>18</sup> Jennie A. Stevens and Henry S. Marsh, "Surprise and Deception in Soviet Military Thought," *Military Review*, July 1982: 25-35.

<sup>19</sup> Ion Mihai Pacepa and Ronald J. Rychlak. Disinformation: Former Spy Chief Reveals Secret Strategies for Undermining Freedom, Attacking Religion, and Promoting Terrorism, WND Books, 2013: 4-6, 34-39, 75.

<sup>20</sup> *Ibid.*

<sup>21</sup> James H. Hansen. "Soviet Deception in the Cuban Missile Crisis." *Studies in Intelligence* 46, no. 1 2002: 49-58.

of US missiles positioned in Turkey. This prompted Khrushchev to convince Cuban leader Fidel Castro to let the Soviets deliver and set up the missiles in Cuba. Castro believed the missiles to be a deterrent to the imminent threat of another US invasion in the wake of the Bay of Pigs.<sup>22</sup> Moscow's deployment of nuclear-capable SS-4 and SS-5 surface-to-surface missiles to Cuba in 1962 upended the strategic balance and threatened the continental United States and brought the world to close to nuclear war.

OPERATION ANADYR primarily focused on three components of maskirovka to move nuclear weapons into Cuba: disinformation, operational security, and concealment. The Russian disinformation campaign was focused on confusing American intelligence; operational security was employed to only allow a select few to have knowledge of the intent of the deployment; and elaborate concealment efforts were employed to hide military equipment and personnel entering Cuba.<sup>23</sup> First of all, disinformation was employed to mislead the United States as to Soviet intentions in Cuba, as was later discovered by the Central Intelligence Agency (CIA). This disinformation campaign began with Nikita Khrushchev informing American Ambassador Foy Kohler that the Soviet Union would be establishing a fishing port in Cuba with the purpose of assisting the Cuban government and would be only be defensive in nature. The disastrous Bay of Pigs incident in 1961 added plausibility to this defensive port and made it difficult for the United States to dispute the support by the Soviets to the Cuban government.<sup>24</sup>

The next step in the disinformation campaign involved the leaking of information, both true and false, to reliable and unreliable sources. While the Soviets denied the introduction of

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<sup>22</sup> Ibid.

<sup>23</sup> Morgan Maier. "A Little Masquerade: Russia's Evolving Employment of Maskirovka." School of Advanced Military Studies United States Army Command and General Staff College Fort Leavenworth, Kansas, 2016: 26-30.

<sup>24</sup> Stewart Alsop and Charles Bartlett, "Eyeball to Eyeball," in *The Cuban Missile Crisis*, ed. Robert A. Divine, New York, NY: Markus Weiner Publishing, 1988: 68-69.

any offensive weapons into Cuba to the media, they were also they simultaneously leaking partially true information to dissident Cuban groups not trusted by the CIA in order to create confusion.<sup>25</sup> The CIA was overwhelmed with reports claiming that Soviet weapons were flowing into Cuba, even before any weapons were actually located in the country. The Central Intelligence Agency discounted these reports by the dissidents as not credible and unreliable, helping the disinformation achieve its desired effect of desensitizing U.S. intelligence and introducing ambiguity to the question of whether the Soviet weapons were located in Cuba.<sup>26</sup>

The onslaught of Soviet truths, half-truths, and lies continued once weapons were deployed to Cuba. Initially the Soviets claimed they were not introducing soldiers or military equipment into Cuba but immediately following those statements, they claimed that they were introducing agricultural advisors and Soviet-made agricultural equipment into Cuba. The use of prominent government officials helped sell the maskirovka. In 1962, in talks with President Kennedy, Ambassador Dobrynin claimed that steps taken in Cuba were for Cuban self-defense and posed no threat to the United States. Georgi Bolshakov, Premier Khrushchev's personal courier, echoed the same strategic message to Robert Kennedy roughly a month later.<sup>27</sup> In June of 1962, the decision to place nuclear weapons in Cuba was approved by the Soviet government. Statements made over the next three months by Dobrynin and Bolshakov followed Moscow's agreement with Cuba continued to feed into the disinformation campaign.<sup>28</sup>

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<sup>25</sup> Morgan Maier. "A Little Masquerade: Russia's Evolving Employment of Maskirovka." School of Advanced Military Studies United States Army Command and General Staff College Fort Leavenworth, Kansas, 2016: 27.

<sup>26</sup> David T. Moore and William N. Reynolds, "So Many Ways to Lie: The Complexity of Denial and Deception," *Defense Intelligence Journal* 15, no. 2, 2006: 16.

<sup>27</sup> Morgan Maier. "A Little Masquerade: Russia's Evolving Employment of Maskirovka." School of Advanced Military Studies United States Army Command and General Staff College Fort Leavenworth, Kansas, 2016: 28.

<sup>28</sup> James H. Hansen. "Soviet Deception in the Cuban Missile Crisis." *Studies in Intelligence* 46, no. 1, 2002: 55.

After the Central Intelligence Agency discovered short and medium range ballistic missiles in Cuba, the Soviets attempted the final piece of their disinformation campaign. Soviet Foreign Minister Andrei Gromyko met with President Kennedy and reaffirmed that the Soviets were only providing defensive weapons to the Cubans. While not out-right lying to President Kennedy, this information was only half-true, and failed to mention the nuclear weapons or troop levels. The CIA, conducting aerial reconnaissance, had already briefed President Kennedy on the discovery of the ballistic missiles, resulting in the failure of this final step of the maskirovka.<sup>29</sup>

While the primary focus of the disinformation campaign was focused on U.S. intelligence and policy makers, it also targeted its own military. The deployment of Soviet soldiers occurred under the title of OPERATION ANADYR, a disinformation in the name itself, which was intended to misdirect attention away from the true intentions of the deployment. Anadyr is both a river in northern Siberia that flows into the Bering Sea and the capital of the Chukotsky Autonomous District in northeastern Russia. In addition, Anadyr is the name of a Soviet airbase in the same region.<sup>30</sup> The use of the word Anadyr was a deception that had two target audiences. The intent of Soviet leadership was to make both Soviet soldier and Western observers believe that mobilized forces were headed to northeastern Russia. The Soviets then reinforced this desired perception by issuing arctic equipment to soldiers headed to Cuba thereby furthering the narrative of a cold weather deployment.<sup>31</sup> Designating the operation “Anadyr” brought to mind the North. For confirmation of this legend, crews on several ships were given skis, stoves, and

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<sup>29</sup> Stewart Alsop and Charles Bartlett, “Eyeball to Eyeball,” in *The Cuban Missile Crisis*, ed. Robert A. Divine, New York, NY: Markus Weiner Publishing, 1988: 69.

<sup>30</sup> Official Website of Anadyr. <https://web.archive.org/web/20140203061459/http://www.adm.anadyr.ru/> - Official website of Anadyr

<sup>31</sup> Anatoli I. Gribkov and William Y. Smith. Operation Anadyr: U.S. and Soviet Generals Recount the Cuban Missile Crisis. Chicago: edition q, 1994: 15.

overcoats. No one knew where the ships were going. According to testimony from a Soviet General involved in Operation Anadyr:

“The Captains and Chiefs of the echelons were given three packets numbered 1, 2, and 3. On the first packet was printed: *Open after leaving USSR territorial waters*. On the other two there were no inscriptions. In Packet No. 1, it said that Packet No. 2 should be opened after passing through the Bosphorus and Dardanelles. Packet No. 2 instructed to open Packet No. 3 after passing through Gibraltar. In Packet No. 3 was contained the order: *Set course for Cuba*. During crossings of the seas and oceans, when airplanes approached, the men would hide in the holds of the ships. All military hardware was also repainted gray instead of standard green.”<sup>3233</sup>

The disinformation campaign was not the only facet of maskirovka utilized. All measures of denial and deception were employed, specifically concealment and misdirection. Military personnel wore civilian clothes. Soviet Generals later recounted: loading the vehicles and equipment into echelons on the ships was done under the cover of exercises for loading and offloading in coordination with railway and sea transport. Military echelons at railway junctions were not stopped – stops were done at sections of double track and at halt points. The entire system of command of forces was executed by verbal orders, and in extreme cases, through code. Secrecy of movement of forces was also secured in Cuba. All ships arriving to the island were met by staff groups already at roadstead and sometimes as they approached Cuba. Because of the complex operational environment, the ships had to change their appointed ports.<sup>34</sup>

A former Soviet General recounts:

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<sup>32</sup> Север А. История КГБ. Москва: Алгоритм. Щит и меч. К 90-летию ВЧК – translated by Mark Hackard, 2008.

<sup>33</sup> Anatoli I. Gribkov and William Y. Smith. Operation Anadyr: U.S. and Soviet Generals Recount the Cuban Missile Crisis. Chicago: edition q, 1994.

<sup>34</sup> James H. Hansen. “Soviet Deception in the Cuban Missile Crisis.” *Studies in Intelligence* 46, no. 1 (2002): 49-58.

“Weaponry arrived under the cover of industrial shipments, in as much as our specialists at the time were conducting searches for oil, iron, nickel, and phosphates. Agricultural hardware was imported, as well as mechanization specialists and much else. And the military was somehow wedged into these shipments. In those cases, when it was impossible to hide armaments because of their size and configuration, for example medium-range R-12 missiles, airplanes, and helicopters, by agreement with the Cuban side, Soviet soldiers dressed in Cuban uniforms. In the newspapers it was announced that in a given region exercises were underway.”<sup>35</sup>

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### *Key Takeaways*

Initially, the deception was successful both by obscuring U.S. intelligence assets and feeding half-truths through the disinformation campaign. Unfortunately, the continued massing of Soviet troops and ongoing weapons deployments resulted in a breakdown of OPSEC and concealment efforts that were difficult to maintain. Eventually the U.S. was able to piece together the deception but not before bringing both countries close to nuclear war. The cognitive analysis and perception management that the Soviets conducted on U.S. military and governmental decision-makers was both extensive and targeted to exploit preconceived biases about how these individuals consumed intelligence. DIA analysis preceding the missile crisis noted that the Soviet Army had probably employed large-scale battlefield deception "more frequently and with more consistent success than any other army."<sup>37</sup> Although this information was available to U.S. decision-makers, the conflicting stories told by the Soviets confused U.S.

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<sup>35</sup> Север А. История КГБ. Москва: Алгоритм. Щит и меч. К 90-летию ВЧК – translated by Mark Hackard, 2008.

<sup>36</sup> Anatoli I. Gribkov and William Y. Smith. Operation Anadyr: U.S. and Soviet Generals Recount the Cuban Missile Crisis. Chicago: edition q, 1994.

<sup>37</sup> Defense Intelligence Agency (DIA), Soviet/Warsaw Pact Ground Forces Camouflage and Concealment Techniques, DDI-1100-161-78, January 1979: vii.

officials long enough to allow extensive military equipment into Cuba. Since OPERATION ANADYR, the Soviets continued to employ extensive maskirovka before their move into Czechoslovakia in 1968 and they also trained foreign forces to apply deception, including North Vietnamese units before the Tet offensive in 1968 and Egyptian forces before crossing the Suez Canal in 1973.

Piecing together the deception activities from declassified U.S., Russian, and Cuban accounts yields insights that can help us anticipate and overcome the D&D efforts of a growing number of foreign adversaries today. So what can be learned by examining past Soviet/Russian tactics and can anything yield insights into how the U.S. can better counter these activities or use these same tactics to our advantage? Deception must address all audiences and these audiences must be analyzed both for biases and desired perceptions. This is not meant to imply that we deceive U.S. audiences, as that is illegal, but properly employed OPSEC to support deception operations allows better control of information and decreases the likelihood of discovery. Concealment goes a long way. While imagery and other intelligence collection capabilities have vastly improved since the 1960s, these assets are not perfect and usually take human analysis. Artificial Intelligence can also be deceived or return inconclusive results. Lastly, disinformation is key to any future use of deception. The trustworthiness of many sources is currently under debate and this can be used to the U.S.'s advantage. Our adversaries are constantly using our own platforms against us to sow discord and dissonance, our priority should be to turn the tables and use these platforms to support our operations.

### **Application and Integration of Military Functions:**

The information function is defined as encompassing “the management and application of information and its deliberate integration with other joint functions to change or maintain perceptions, attitudes, and other elements that drive desired behaviors and to support human and automated decision making.”<sup>38</sup> Open Source Intelligence (OSINT) and Publicly Available Information (PAI) are both categories of intelligence and information that support perception management through target audience analysis and provide the data for advanced machine learning and big data analytics for predictive analysis. The expansion and integration of these two categories into deception planning to create more robust target audience analysis will result in more realistic desired perceptions and conduit analysis.

**Necessary Capabilities:**

The concept of a Perception Management Working Group (PMWG) supporting deception in the contact layer is both adaptable and feasible based on the deception target in the operating environment. The PMWG is part of the training and education piece missing from the current concepts of OIE in that it links the target audience analysis of MISO, the structure of deception planning, the IPB of intelligence, and the social scientist approach to understanding behavior. The PMWG would not just serve to create perceptions and analyze conduits for deception but serve as a working group for MISO, Key Leader engagements, cyberspace operations and other information related capabilities (IRCs). In order to allow the PMWG to function, the group will need to necessary tools to determine desired perception, conduits, and biases. Predictive analytics, which will likely be the end result of perception management, are encompassed of a statistical methods from data mining, predictive modelling, artificial intelligence and machine learning, that analyze current and historical facts to make predictions

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<sup>38</sup> United States Department of Defense Joint Publication. Joint Operations 3-0. 2017: Chapter III-17.

about future or otherwise unknown events.<sup>39</sup> Commercial off the Shelf (COTS) applications that have been historically used for predictive analysis in the business and advertising worlds could be modified for select target audiences and key decision makers. Additionally, training in both psychology and social media analysis and social engineering will enable the capabilities of our intelligence analysts and deception planners.

## **CONCLUSION:**

OPERATION ANADYR highlights the importance of studying and understanding select target audiences and key decision makers for susceptible conduits, biases, and desired perceptions. The overarching goal both of that operation and future U.S. operations is to stay competitive in the Contact Layer in order to create a decisive time and place to transition to the Blunt and Surge Layers if necessary or to force the adversary to make decisions that are advantageous to friendly forces. This goal can effectively be achieved through carefully designed deception operations based on perception management and the exploitation of cognitive biases. The Marine Corps is not currently training or equipping intelligence analysts and deception planners to effectively create the desired perceptions through exploitation of cognitive biases or the conduit analysis framework to create effective military deception operations that will contribute to military forces competing in the contact layer. The creation of the MIGs is a step in the right direction to achieve parity with our peer adversaries' capabilities and the right structure for a Perception Management Working Group (PMWG). Investments in both COTS applications and equipment designed for predictive analysis and advanced training in psychology will enhance to effectiveness of the PMWG and deception operations.

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<sup>39</sup> Charles Nyce, "Predictive Analytics White Paper," American Institute for Chartered Property Casualty Underwriters/Insurance Institute of America, 2007: 1.

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