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**RISK AND DECISION MAKING IN
MILITARY OPERATIONS**

by

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June 2020

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RISK AND DECISION MAKING IN MILITARY OPERATIONS

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requirements for the degree of

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ABSTRACT

Given the requirement for leaders to accept risk to achieve their goals, how do decision-makers evaluate operational uncertainty and calculate the risk factors that affect operational effectiveness and the achievement of the desired outcome for future military operations? This thesis establishes a framework for making rational choices for military operations and from which to analyze, define, and evaluate risk and decision making in military operations. The framework developed for this thesis is the Rational Choice Model for Military Operations. The purpose of the model is to inform decision-makers of the key factors of operational risk and how to evaluate the risk of consequences accepted against the probability of the desired outcome. The model advises the decision-maker on identifying potential alternatives, the associated costs, and their own true preferences, and then being willing to sacrifice and select the best option available relative to the original goal. Leaders can implement the model as a tool to emphasize courses of action that represent the greatest expected value and highlights the tendency to default to pre-existing preferences. This research will widen the decision-maker's perspective for making decisions with uncertain outcomes and increase the reader's risk literacy.

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LIST OF ACRONYMS AND ABBREVIATIONS

BDL	bed down location
COA	course of action
DEFCON	defense readiness condition
DIA	Defense Intelligence Agency
ExComm	Executive Committee of the National Security Council
JCTG	Joint Contingency Task Group
JPP	joint planning process
MDMP	military decision-making process
MIA	missing in action
MRBM	medium range ballistic missiles
MRTA	Movimiento Revolucionario Túpac Amaru
PNP	Peruvian National Police
POW	prisoner of war
SACSA	Special Assistant for Counterinsurgency and Special Activities

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EXECUTIVE SUMMARY

Decision-makers cannot make a decision without some degree of risk. This is true because no one has complete information. If a decision-maker had complete information, the necessity for a decision-maker would cease to exist. With complete information, one could simply implement decision rules, which identify decisions with the greatest expected value. However, we live in a world of bounded rationality, meaning that we must make decisions based on what we know and what we do not know. Since no one can accurately foretell the future, uncertainty exists as a critical variable to rational decision making.

Given the requirement for leaders to accept risk to achieve their goals, how do decision-makers calculate risk through operational uncertainty and evaluate the risk factors that affect operational effectiveness and the achievement of the desired outcome? This thesis recommends a rational choice procedure, which serves as a tool to process military decisions and critically review a course of action before decision. Additionally, this study presents an alternative risk mitigation logic, which shows the relationship between risk, uncertainty and information. This risk mitigation logic appears somewhat antithetical to conventional risk management. I argue that risk and military decision-making is more about what we do not know than what we do know. It seems unwise to only ask the questions about what we know and wish away the things that we do not. Conventional military risk management focuses on a rudimentary view of risk management, which generally focuses on observed hazards and the potential for the dangers that we know about or have experienced.

This thesis establishes a framework for making rational choices in military operations and from which to analyze, define, and evaluate risk and decision making in military operations. The framework includes a model, rooted in risk and decision-making theory. The purpose of the model is to inform decision-makers of the key factors of operational risk and evaluate the risk of consequences accepted against the probability of the desired outcome. The model advises the decision-maker on identifying potential alternatives, the associated costs, and their own true preferences, and then being willing to satisfice and select the best option available relative to the original goal. The Rational

Choice Model in Military Operations is an adaption from James March's rational choice procedure.¹ March's rational choice procedure provides a satisfactory model for decision making in the simplest of settings. However, I add an additional aspect, which incorporates uncertainty and the implications of a thinking enemy. The framework also includes Herbert Simon's principle of satisficing, which describes the necessity to make a choice once the decision maker has met his "good enough" criteria for a choice.² Thus, March's rational choice model, modified to include uncertainty, provides a model for military decision-makers to practice but also to understand the pre-conditions of their decisions.

I illustrate the model by selecting four cases for analysis. Two cases represent a situation where the decision-maker committed errors in the rational choice procedure and two cases show how the decision-makers made reasoned decisions based on the original objective. The two cases that highlight reasoned decisions include Operation *Chavin De Huantar* and the Cuban Missile Crisis. The two decisions made in error are Operation *Eagle Claw* and the Son Tay Raid. The summarized trends observed throughout the study, which influenced errors in decision-making, include information discrepancies, the distortion of costs due to emotion, and the failure to establish satisficing or trigger criteria. Each of the cases selected offers a degree of nuance and highlights different errors in decision-making and differences in reasoned decisions. The cases progress consistently with the suggested rational choice procedure and allow the reader to advance through the model with the decision-maker in the case. This thesis helps leaders understand how they make decisions and to understand how they perceive risk themselves. This research will widen the decision-maker's perspective for making decisions with uncertain outcomes and increase the reader's risk literacy.

¹ James G. March, *A Primer on Decision Making: How Decisions Happen* (New York: Free Press, 1994), 1–2.

² Herbert A. Simon, *Reason in Human Affairs*, Harry Camp Lectures at Stanford University 1982 (Stanford, CA: Stanford University Press, 1983), 85.

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I. INTRODUCTION

Given the requirement for leaders to accept risk to achieve their goals, how do decision-makers calculate risk through operational uncertainty and evaluate the risk factors that affect operational effectiveness and the achievement of the desired outcome? To examine this problem, one must understand the implications of risk and decision theory. Peter Bernstein states, “The essence of risk management lies in maximizing the areas where we have some control over the outcome while minimizing the areas where we have absolutely no control over the outcome and the linkage between effect and cause is hidden from us.”¹ Leaders make decisions for future military operations based on unknown factors and potential consequences. If everyone knew the future, the idea of probability, risk and the need for decision-makers to weigh the possibility of failure based on their actions would be unnecessary. Wilson and Crouch assert, “the word risk implies uncertainty.”² Therefore, decision-makers operate between the possibility of failure and success while making decisions with indeterminate outcomes. Assuming that leaders are rational, decision-makers act based on the probability of potential outcomes and uncertain consequences.³ Rationality implies that a decision-maker attempts to mitigate undesirable operational hazards.

Acknowledging the truth that no one can provide absolute forecasts of the future, one must exhaust all means to ensure a high probability of a favorable outcome. The use of mathematical concepts in a qualitative model offers an opportunity to examine decisions through more precise means to produce the desired end state. Bernstein determined that “Without numbers, there are no odds and no probabilities; without odds and probabilities, the only way to deal with risk is to appeal to the gods and the fates. Without numbers, risk

¹ Peter L. Bernstein, *Against the Gods: The Remarkable Story of Risk* (New York, NY: Wiley, 1998), 197.

² Richard Wilson and Edmund A. C. Crouch, *Risk–Benefit Analysis*, 2nd ed (Cambridge, MA: Harvard Center for Risk Analysis, 2001), 2.

³ March, *A Primer on Decision Making*, 5.

is wholly a matter of gut.”⁴ Prudence in decision-making requires a deliberate assessment of all key factors in a decision to determine the likelihood of success and possible consequences. Although probability serves as a key component in risk assessments, another key aspect to analyze is the severity or magnitude of the decision at hand. Specifically for military operations, which involve life and death, the severity component amplifies the total risk assumed for the decision. Wilson and Crouch outline a simple risk equation: “(Risk = Probability x Severity).”⁵ Although this equation provides insight for basic decisions, it does not fully address the complexity of risk in military operations. A further explanation of risk is necessary to highlight the missing components for higher risk military operations. Failing to assess certain factors or components of risk decision may produce poor choices driven by a leader’s poor perception of risk, likely due to overconfidence or under-confidence coupled with some degree of ignorance.⁶

A. RISK DEFINED

For this study, I define risk in military operations as the willingness to accept a potential loss against the probability of achieving an expected value or objective with the potential for variable outcomes based on incomplete information. I consider this definition as complete, specifically when applying it to military operations. Some consider a complete definition of risk as “uncertainty that could affect one or more objectives.”⁷ However, this definition does not directly address consequences, a critical component of risk in military operations. Yet other definitions focus entirely on the consequences, “risk is the probability of a loss,”⁸ and do not address how the willingness to accept a possible loss may increase based on the potential value. The idea of risk does require an emphasis on negative

⁴ Bernstein, *Against the Gods*, 23.

⁵ Wilson and Crouch, *Risk-Benefit Analysis*, 9.

⁶ Baruch Fischhoff and John David Kadvany, *Risk: A Very Short Introduction*, Very Short Introductions 270 (Oxford ; New York: Oxford University Press, 2011), 111.

⁷ David Hillson and Ruth Murray-Webster, *Understanding and Managing Risk Attitude*, 2nd ed (Aldershot, England ; Burlington, VT: Gower, 2007), 5.

⁸ W. T. Singleton and Jan Hovden, eds., *Risk and Decisions* (Chichester [Sussex] ; New York: Wiley, 1987), 27.

consequences but should not negate the potential adjustments to risk acceptance when faced with the potential for achieving great value.

B. UNCERTAINTY DEFINED

Understanding uncertainty enhances the understanding of variability and ambiguity.⁹ I define uncertainty as the number of variables that may affect the outcome of a decision within the context of incomplete knowledge. Hilson et al., paraphrase Plato's description of uncertainty by stating, "the problem of the future is that more things might happen than will happen."¹⁰ With risk and uncertainty, both terms appear as a function of information. With complete information, one would never need to accept risk to make a decision; the decision-maker could decide with complete foresight without the fear of consequence. Likewise, with complete information, one could live out their lives with complete certainty. Therefore, with complete knowledge, risk and uncertainty do not exist for a rational decision-maker.

C. METHOD AND CASE SELECTION CRITERIA

This thesis establishes a framework for making rational choices for military operations and from which to analyze, define, and evaluate risk and decision making in military operations. The framework includes a model, rooted in risk and decision-making theory for military operations. The purpose of the model is to inform decision-makers of the key factors of operational risk and evaluate the risk of consequences accepted against the probability of the desired outcome. The model advises the decision-maker on identifying potential alternatives, the associated costs, and their own true preferences, and then being willing to satisfice and select the best option available relative to the original goal. I define satisficing, in this case, as selecting criteria that are "good enough" to make a rational choice.¹¹ However, "Risk and uncertainty, have different qualitative meanings

⁹ Hillson and Murray-Webster, *Understanding and Managing Risk Attitude*, 4.

¹⁰ Hillson and Murray-Webster, 3.

¹¹ Simon, *Reason in Human Affairs*, 85.

at different times,”¹² which implies that the model is not composed of a complete scientific process but serves as a qualitative model that illustrates how decision-makers process rational choice. I hypothesize that decision-makers who follow and understand the rational choice procedure outlined in this thesis and know that they must satisfice will achieve their desired outcome more often than those who do not follow the rational choice procedure.

I illustrate the model by selecting cases in which the decision-maker committed errors in the rational choice procedure and cases in which the decision-maker appeared to make good decisions based on the original objective. The purpose of selecting military operations involves the amplification of risk and the potential for loss of life, which increases the magnitude of decision-making. I chose to exclude all other vignettes outside of the range of military operations because they do not exhibit similar risk profiles and may serve as unnecessary outliers. All of the operations receive an analytical review based on a consistent rational choice model and the satisficing model to highlight the key components specific to each operation and how they affected the overall mission outcome. The review of each case includes the background of the operation followed by an assessment broken down by each component of the model. The conclusion of each case identifies the most critical components of risk influence. The cases selected for this thesis include Operation *Chavin de Huantar*, Operation *Eagle Claw*, the Sontay Raid, the Cuban Missile Crisis, and a brief discussion of Operation *Nimrod* in my conclusion. I conclude the thesis by offering a summary of the overall findings from all of the cases and explore additional themes identified throughout the entirety of my research. I also deliver an assessment of the utility of the study and model for assessing risk and decision making in future military operations.

D. SIGNIFICANCE

Exploring this problem is important because many leaders often overlook a more comprehensive assessment of risk while planning and conducting operations. Too often, leaders think of a risk assessment as no more than filling out an arbitrary risk mitigation

¹² Wilson and Crouch, *Risk-Benefit Analysis*, 85.

sheet that military leaders are required to complete before conducting an operation.¹³ However, risk and decision making comprise much more than simply identifying potential hazards and implementing controls to mitigate risk. This thesis helps leaders understand how they make decisions and what might drive them to understand how they perceive risk themselves. This research will widen the decision-maker's perspective for making decisions with uncertain outcomes and increase the reader's risk literacy.

¹³ The military uses forms like the Department of Defense Form 2977 (DD 2977), Deliberate Risk Assessment Worksheet, to conduct Risk Assessments for training and military operations. This form is procedural and highlights the task performed, the hazard, initial risk level, controls implemented, how to implement controls, and the resulting residual risk level. At the bottom of the form, a leader must sign to accept the risk identified for the operation.

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II. THE RATIONAL CHOICE MODEL IN MILITARY OPERATIONS

Decision-making always includes some level of risk and uncertainty when making a rational choice. Without any risk of consequence or the potential for uncertain outcomes, the decision-maker chooses based on complete information and achieves the desired outcome every time. However, within limited or bounded rationality and the truth that no person can ascertain complete information, one must always confront the potential consequences of a decision.¹⁴ To address this, James March developed a rational choice procedure, which “makes a choice conditional on the answers to four basic questions.”¹⁵ The components of his procedure concern alternatives, expectations, preferences, and the decision rule.¹⁶ Every decision made incorporates this rational choice procedure based on the decision maker’s desired outcome. These four components not only apply to everyday decision making but also apply directly to military commanders and decisions conducted before and during military operations. Over time, with experience, the rational decision-maker may establish rules of thumb with their decision-making, which allows the decision-maker to cycle through the decision-making procedure much more quickly.

March’s rational choice model provides a satisfactory model for decision making in the simplest of settings. In addition to March’s four components, I add a fifth aspect, which incorporates uncertainty and the implications of a thinking enemy. Thus, March’s rational choice model, modified to include uncertainty, provides a model for military decision-makers to practice but also to understand the pre-conditions of their decisions. The Rational Choice Model in Military Operations (Figure 1) outlines the procedure that every decision-maker goes through when making a rational choice. The decision-maker first starts with their goal, which appears as an indicator of their true preferences. Second, the decision-maker identifies the potential alternatives or courses of action. Third, the decision-maker evaluates the cost and benefit of each alternative. Fourth, the decision-

¹⁴ March, *A Primer on Decision Making*, 8–9.

¹⁵ March, 2.

¹⁶ March, 2–3.

maker identifies the course of action, which offers the highest expected value. Finally, the decision-maker establishes decision criteria or rules for COA selection and decision implementation based on all the aforementioned factors. If the results do not achieve the goal, the decision-maker circles back to the available courses of action to achieve the objective.

Figure 1 depicts the ideal situation for the rational choice model and a sub-optimal situation, which often leads to an error in decision-making. Both procedures pictured start with the goal and progress clockwise, starting with the alternatives available through the decision rule. Additionally, uncertainty may affect the decision-maker at any point while progressing through the rational choice procedure.

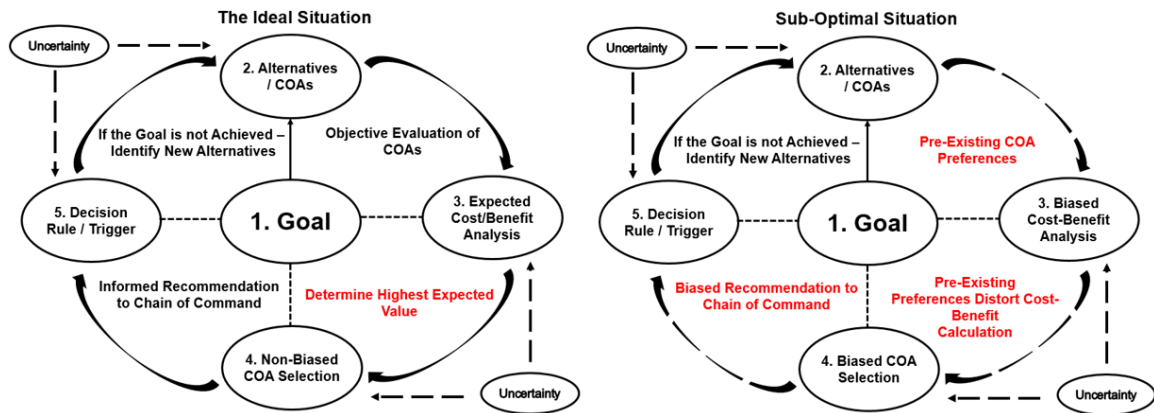


Figure 1. Rational Choice Model in Military Operations

In the ideal decision-making situation, the decision-maker seeks the most objective cost-benefit analysis available without asserting pre-existing COA preferences. Then the decision maker conducts a cost-benefit analysis to determine which course of action offers the greatest expected value (Highlighted in red text in “The Ideal Situation”). Once he associates the greatest expected value with a particular course of action, the decision maker should identify his decision criteria with the most objective analysis available. An error may occur if the decision maker allows his pre-existing COA preferences to distort the cost-benefit calculation and result in a biased COA selection (Highlighted in the red text in the “Sub-Optimal Situation”). By asserting pre-existing COA preferences after an

objective cost-benefit calculation occurs, his own bias may distort the true expected value and lead to the selection of an un-informed course of action. Preferences distorting cost-calculations also leads to un-informed decision criteria.

A. DEMONSTRATING THE MODEL

In conjunction with the basic rational choice model, operational leaders make decisions with various levels of complexity. Some decisions require minimal deliberation when uncertainty appears minimal and leaders have adequate information. Therefore, one could identify the simple decisions as lower risk. However, other decisions require more analysis when considering the acceptance of risk based on the likelihood of success, the potential for consequences, and goals that compete with the primary objective. In all cases, one must assume that the leader making a decision has identified a primary goal or objective to achieve. Once the decision-maker identifies the goal and progresses through the rational choice procedure, the courses of action for a decision will differ in complexity, which I demonstrate in the following four case models. Each of the following case models illustrates how a decision-maker progresses through the rational choice procedure and each case model progresses from simple to complex.

Additionally, each of these case models highlights different elements of the rational choice procedure where the decision-maker made good decisions but also poor decisions. The first and most simple case model includes multiple courses of action but only one achieves the goal. The second case offers multiple courses of action that meet the objective but offer different probabilities for success and consequences. The third case represents multiple courses of action, which all meet the objective with different likelihoods of success, but also identifies additional goals associated with each course of action. In the final and most complex case model, the decision-maker must achieve the primary goal to consider the mission successful; the leader prioritizes the associated goals but cannot abdicate the primary goal with the decision, even if he may achieve all the other associated goals and other benefits.

1. Case Model 1

The first case presents multiple courses of action in which only one potential choice achieves the primary goal. With only this information provided, the rational decision-maker must choose the course of action that achieves the objective. If the decision-maker selects an alternative that he knows may not fulfill the primary objective, that decision does not constitute a rational choice. One makes an irrational choice in this case by failing to follow the procedure in the rational choice model.

For example, a leader decides to conduct an airstrike instead of a raid when the primary objective is to gain additional information on the targeted individual's network. The leader makes this decision based on his personal operational preference and belief that the targeted individual will not surrender if raided by an assault force. Therefore, why assume additional risk to force by placing assaulters in danger when he maintains the capability to conduct an airstrike? Therefore, the leader rationalizes his decision based on an uncertain assumption that the targeted individual will die whether he conducts a raid or airstrike. The leader's rationality fails when he loses sight of the primary objective and diverts towards his preferences and modifies his expectations for success. Thus, the leader conducts the strike and fails to complete his primary objective of gaining information on the target's network.

2. Case Model 2

The second case model incorporates the idea of risk probabilities that differ from one course of action to the next. Each potential course of action achieves the primary goal but they carry different probabilities for success and negative consequences. In this case, leaders gain as much knowledge as possible about the situation to decrease uncertainty. Rationally, the leader assesses each course of action separately and identifies the likelihood of achieving the primary objective and the probability of consequences. Once the leader associates the probability of success and consequences, he subtracts the probability of consequences from the likelihood of success. The course of action that shows the highest likelihood of success with the least potential consequences is the rational choice.

For example, a leader determines that he must conduct a ground-based assault to capture a targeted individual to gain additional information. The decision-maker identifies two courses of action, which include a raid at the target's bed down location (BDL) or a vehicle interdiction along a route consistent with his pattern of life. The leader determines that the probability of success is higher to conduct a vehicle interdiction. In this situation, he receives intelligence that the target entered the vehicle unarmed and with only one associate. He also determines a higher probability for consequences if he conducts the raid at the target's BDL based on intelligence showing the increased security presence and the potential for a heavily armed resistance against the assault force. Therefore, vehicle interdiction appears as a rational choice. Both of the courses of action achieve the primary objective of capturing the targeted individual to gain information; however, one offers a higher likelihood of success with less probability of consequences.

3. Case Model 3

The third case incorporates an analysis of taking the risk necessary to achieve multiple sub-goals against the achievement of the primary objective. Separate courses of action may also represent different likelihoods of success and probabilities of consequence in this case. As in the second case model, leaders gain as much information as possible and balance the likelihood of success and potential consequences. However, in this case, the leader must account for the opportunity of balancing additional risk against the possibility of achieving additional goals proximate to the primary objective. The leader may determine additional risk appropriate for a particular course of action based on the potential for an increase in the expected value of the operation.

For example, the leader determines he must conduct a ground-based assault to attempt to capture the target. He identifies two courses of action to achieve his goal, which include a vehicle interdiction along a route to the target's BDL and a direct-action raid at the target's BDL. The leader conducts his analysis and identifies vehicle interdiction as the operation with the highest likelihood of success and the least probability for negative consequences. However, the leader also assesses that the target's BDL offers an opportunity to gather an extensive amount of intelligence through sensitive site exploitation

during post-assault activities. Therefore, the leader decides to accept the additional probability of consequences arising from increased risk to force to gain additional intelligence, which is in addition to the achievement of the primary objective.

4. Case Model 4

The fourth case offers the most complex choice for the military leader. This case incorporates the three aforementioned case models with an additional layer of complexity. Consistent with the other cases, the leader continues to gather extensive knowledge in support of the operation while conducting a thorough risk-benefit analysis for all the courses of action to include balancing proximate goals with the primary goal. However, in this case, the leader must completely achieve his primary goal even if the value of potential tradeoffs appears high.

For example: Continuing with the same scenario in which a leader determines he must conduct a ground-based assault to capture or kill a target to gain additional information, he identifies multiple courses of action to achieve his goal. However, in this case, the leader also determines that he must not only capture or kill the targeted individual; he must also capture a device that he believes necessary for future operations. In this case, the leader identifies multiple courses of action based on knowledge of the target and his pattern of life. The target frequents two separate BDLs and he travels along multiple routes. Therefore, the leader identifies three courses of action to include a vehicle interdiction (Course of Action 1), a raid at his primary BDL (Course of Action 2), and a raid at his alternate BDL (Course of Action 3).

In this scenario, sensitive intelligence indicates that the target used his device at his primary BDL before departing during daylight along a heavily trafficked route to a local market. The leader now must select one of the three courses of action based on his knowledge of the situation. The leader has not received any additional intelligence on the use of the target's device since he used it at his primary BDL. He also does not know whether the target will return to his primary BDL or travel to his alternate BDL. Based on intelligence, the route to the alternate BDL does not present an advantageous opportunity for a vehicle interdiction; therefore, if the target travels to the alternate BDL, the leader

determines that he must conduct a raid at the alternate BDL (COA 3). However, the route back to the target's primary BDL does facilitate a vehicle interdiction, which makes COA 1 and COA 2 feasible options if the target decides to return to his primary BDL.

While the leader conducts this analysis, he continues to assume that the target kept his device on his person but has simply not used it since departing his primary BDL. The leader then observes the target depart the market and travel towards his alternate BDL; therefore, based on his decision rules, the leader determines a raid to the target's alternate BDL as the best option and he launches the force. The target arrives at his alternate BDL, and the assault force forward stages and prepares for the order to infiltrate. The leader asks for a final intelligence update before infiltration and sensitive intelligence indicates that the target's device remained at the target's primary BDL as he traveled to the market and then his alternate BDL. Therefore, the leader must abort the operation because he cannot capture or kill the target and still take the device for exploitation. In this final case, uncertainty drives the desire for additional information but also the development of contingencies in support of an operation. This scenario presents a complex but common decision for military leaders in an operational environment.

B. UNCERTAINTY IN OPERATIONS: "THE ROGUE VARIABLE"

Uncertainty drives complexity in military operations. Combat operations are additionally ambiguous due to a thinking enemy and the possibility of lethal consequences. One can only assume the enemy's actions, even with the best intelligence. Perfect information does not exist. Intelligence is an estimate. Imperfect information requires decision-makers to identify an important point in time and ask themselves two critical questions before advancing to achieve a goal. They must ask, "Do I have adequate information and is this the right time?" Information and time both serve as key variables of decision making through uncertainty. A decision-maker must exhaust all avenues of information collection but only to the degree in which he does not miss the opportunity to achieve the primary goal. March states that "the cost of information is the expected return that could be realized by investing elsewhere the resources expended to find and comprehend the current information. There are times when information has no decision

value.”¹⁷ In the case of military decision-making, time is a valuable resource. Massive amounts of information add minimal value if the decision-maker cannot aptly accept the potential of uncertain outcomes and make a decision at the right time.

C. RISK TOLERANCE

At some point, the military decision-maker must accept risk. Wilson and Crouch state, “The very word risk implies uncertainty. Conversely, if there is an uncertainty whether a hazard exists, there remains a probability that it does, and therefore a risk.”¹⁸ Thus, every decision incorporates at least some measure of risk-benefit analysis because no one can perfectly predict the future. In dealing with uncertainty, the decision-maker seeks the optimal course of action to achieve their outcome. However, based on time constraints for a particular situation, a decision-maker may have to satisfice and choose the best option based on the resources available. Herbert Simon describes satisficing as choosing the point of view or course of action that appears good enough for a given situation.¹⁹ If a decision-maker exhibits excessive discomfort based on uncertain outcomes and demands perfection, he might miss fleeting opportunities due to the failure to satisfice and choose the best option available for a particular situation. Risk is about dealing with uncertainty, dependent on the decision maker’s risk tolerance level (see Figure 2).

¹⁷ March, *A Primer on Decision Making*, 25.

¹⁸ Wilson and Crouch, *Risk–Benefit Analysis*, 81.

¹⁹ Simon, *Reason in Human Affairs*, 85.

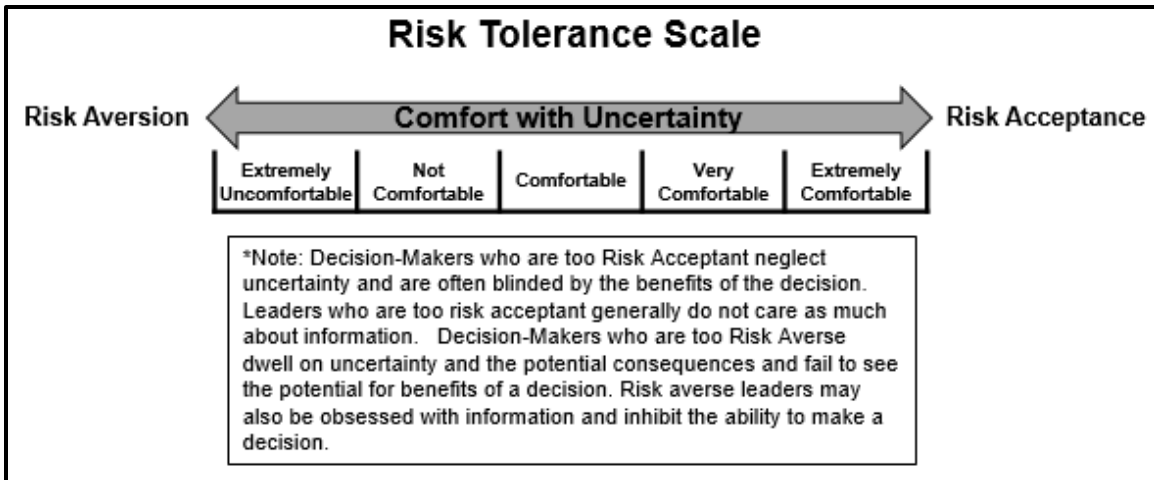


Figure 2. Risk Tolerance Scale

The key takeaway from Figure 2 is that uncertainty and risk appear relative to different people based on their comfort with uncertainty. Some decision-makers feel more comfortable with uncertainty, which means they feel more comfortable making decisions with less information.

D. RISK MITIGATION LOGIC

Determining potential outcomes while competing against a thinking enemy in combat makes military decisions more difficult than many other forms of competition. Competition through sport exhibits similar qualities but does not compare with possible consequences and the magnitude of decision-making in combat. A poor decision during a sporting event may result in the loss of a game or championship. However, a poor decision in combat may result in a loss of life. Therefore, military leaders must gather as much viable information as possible to the degree that they maintain the ability to achieve their objective. Since risk is a function of uncertainty and represents a more positive relationship, minimizing uncertainty will ultimately decrease the overall risk. Uncertainty is a function of information and represents an inverse relationship, in which the collection of information appears to minimize uncertainty. Therefore, gathering accurate information will decrease the perception of risk for the decision-maker. The aforementioned risk mitigation logic is pictured in Figure 3.

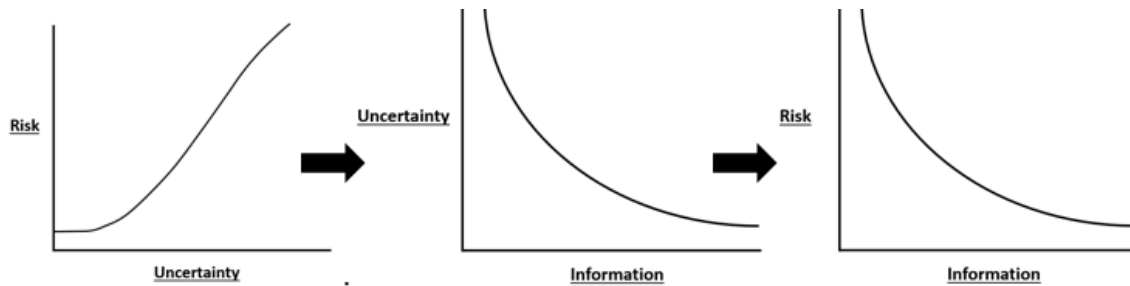


Figure 3. Risk Mitigation Logic (Information Based)

E. OBJECTIVE AND SUBJECTIVE FACTORS OF UNCERTAINTY

To combat uncertainty, one should separate uncertainty into two main factors: they include the objective factors and subjective factors. The objective factors of uncertainty exist and appear more deterministic. Objective factors include things like terrain, weather, the structure of buildings, and the illumination during a period of darkness. The objective factors remain uncertain until the decision-maker gathers information on these factors. Objective factors are easier to define and evaluate, to the degree that they have the time to collect the information.

However, one cannot determine the subjective factors to the same degree of certainty as the objective factors. The subjective factors refer to the truth that “the enemy has a vote.” The enemy might act in many ways, which the decision-maker does not know with certainty. Even with the most extensive intelligence collection apparatuses, the enemy still maintains the ability to change his mind and act outside of his pattern of life. Therefore, the decision-maker must develop his varied courses of action as contingencies for potential enemy actions. Once the decision-maker gathers what he deems as adequate information for the operation and has developed contingencies to counter possible enemy actions, the overall perception of uncertainty and risk will decrease to a degree.

F. SATISFICING MODEL FOR MILITARY OPERATIONS

General George Patton once said that “A good plan, violently executed now, is better than a perfect plan next week.” Information is costly and has a life expectancy. Information does not maintain the same value over time, especially when competing

against an enemy with unknown initiatives. So how do decision-makers escape the cognitive trap of infomania, in which they develop an obsessive relationship to information and could potentially miss an opportunity for fear of uncertain outcomes?²⁰ Herbert Simon's principle of satisficing provides valuable insight into the decision maker's dilemma. One must determine how much information is "good enough" before accepting some risk and conducting an operation.²¹ Good enough information might mean different things for particular decision-makers based on their risk tolerance and experience. However, failing to establish the criteria necessary to select and trigger the decision may cause the decision-maker to miss an opportunity. Therefore, decision-makers must establish their "good enough" criteria for information collection and establish that point in time as their decision rule or trigger. Thus, the best-known opportunity for the decision-maker to achieve his goal is the point in time where the value of information meets the decision-maker's predetermined trigger criteria. It is the best-known opportunity because the decision-maker does not know the life expectancy of his information. An uncertain event may change the value of the information, which in turn adds additional risk and decreases the likelihood of success, relative to the accepted costs.

The satisficing model for military operations in Figure 4 illustrates the idea that decision-makers must establish trigger criteria, depicted as the "good enough" or satisficing line. The trigger criteria are based on the decision-maker's information assessment. The information assessment for this case is defined as information about ourselves, the enemy, and the objective factors surrounding the operation. When the decision-maker meets his trigger criteria, his operational window starts. The operation window is defined as the period of time that his information assessment meets or exceeds his trigger criteria. If at any point the decision maker's information assessment decreases and drops below his satisficing line, his operational window closes.

²⁰ Zachary Shore, *Blunder: Why Smart People Make Bad Decisions* (New York: Bloomsbury USA, 2008), 128.

²¹ Simon, *Reason in Human Affairs*, 85.

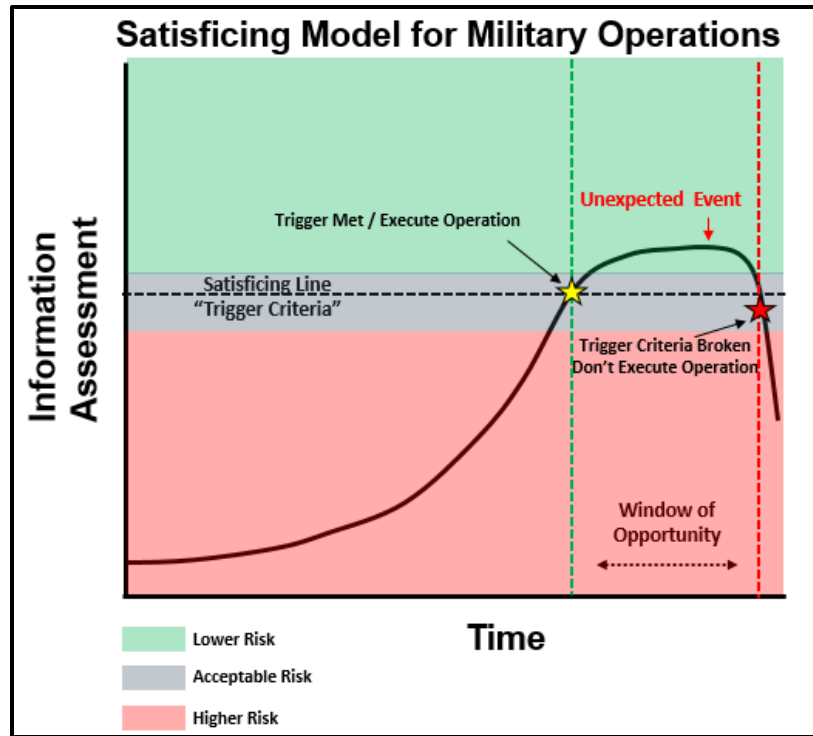


Figure 4. Satisficing Model for Military Operations

The key takeaway from this model is the inflection point between the information assessment line and the satisficing line. The yellow star represents the “best known” opportunity to execute the operation. The red star represents the point at which the information assessment value drops below the satisficing line and the operation becomes higher risk. Failing to make a decision when information is good enough, could result in missing a viable opportunity to conduct an operation.

III. OPERATION *CHAVIN DE HUANTAR*— A REASONED DECISION

Operation *Chavin de Huantar*, the Peruvian hostage rescue operation in Lima, Peru, represents a case in which the decision-maker exhibited rational decision-making and appropriately sacrificed. President Fujimori approved the operation when the information met his decision criteria. This case shows how a decision-maker can progress through the rational choice model and make a rational decision with minimal emotional influence.

A. BACKGROUND

On December 17, 1996, 14 individuals from the *Movimiento Revolucionario Túpac Amaru* (MRTA) seized the Japanese Ambassador's residence in Lima, Peru while the ambassador was hosting a party with over 700 guests, which included multiple foreign dignitaries.²² The Peruvian National Police (PNP) conducted an immediate counter-attack without any success. During the siege, the MRTA initially captured over 600 guests but quickly released many of the non-essential hostages, to include most of the women and workers at the party, which left 381 hostages still within the residence. The terrorist group's leader, Néstor Cerpa Cartolini, issued his initial demand to the Peruvian government to release over 450 imprisoned members of the MRTA.²³ Cartolini additionally established his first hostage execution ultimatum for 1200 the next day. However, the Peruvians did not acquiesce to the terrorist's demands and Cartolini decided not to execute any hostages.²⁴ Over the next few days, the MRTA re-issued their official demands and the Peruvians developed a strategy to negotiate and rescue the hostages. Foreign partners reached out to Peruvian President Fujimori, and he determined that the recovery operation should remain as pure of a Peruvian operation as possible. The United States established a

²² Carlos Perez, "Anatomy of a Hostage Rescue: What Makes Hostage Rescue Operations Successful?" (master's thesis, Naval Postgraduate School, 2004), 41, <http://hdl.handle.net/10945/1367>.

²³ Perez, "Anatomy of a Hostage Rescue," 44.

²⁴ Perez, 45.

forward presence and assumed an advisory role once the MRTA released the seven U.S. citizens in captivity on December 22, 1996.²⁵

The Peruvians developed a plan to create an elaborate tunnel system to infiltrate the residence along with smuggling in multiple communications devices to the hostages for intelligence collection. Peru contracted over 60 miners by the end of December and initiated tunnel construction while their intelligence professionals successfully trafficked communication devices to the hostages within the residence. Over the next three-and-a-half months, the Peruvians continued to negotiate and collect intelligence on the terrorists through direct and passive intelligence techniques. The Peruvians successfully negotiated the release of hundreds of hostages until January 26, 1997, when the MRTA released the last hostage until the rescue operation occurred. At this point, 72 hostages remained within the Ambassador's residence.

One hostage, in particular, Vice Admiral Giampietri, used his smuggled communication device inside of his guitar to report approximately 80 times per day on the terrorists' activities. On April 22, 1997, Vice Admiral Giampietri reported that conditions were set for the hostage rescue operation. While the terrorists participated in a daily soccer game on the ground floor, unbeknownst to them, 140 Peruvian commandos moved to assault positions within the tunnels around the residence. The commandos conducted a simultaneous explosive breach at multiple points around the residence, instantly killing four of the terrorists and stunning the rest. The assaulters continued through the residence, killing the remaining 10 terrorists and rescuing 71 of the remaining 72 hostages. Additionally, two Peruvian commandos lost their lives during the assault.²⁶ Figure 5 is a depiction of the critical events throughout the siege.

²⁵ Perez, 48.

²⁶ Perez, 60.

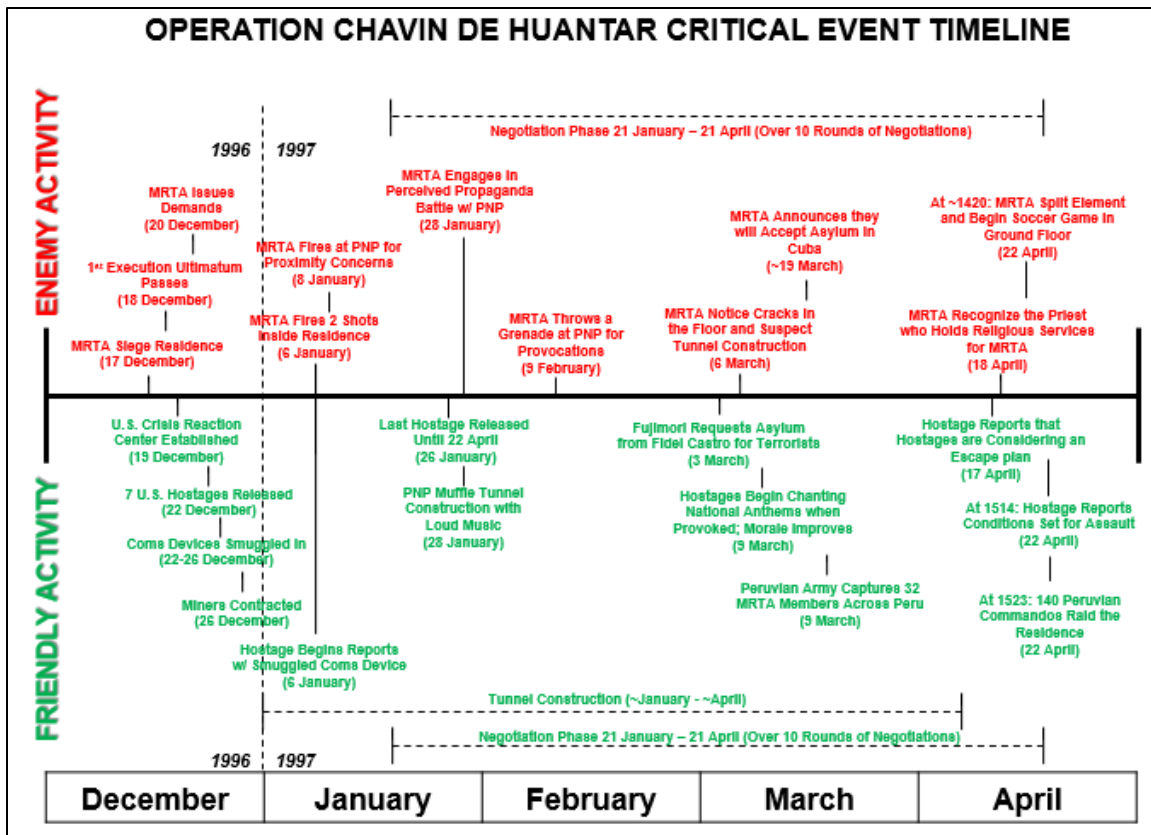


Figure 5. Operation *Chavin De Huantar* Critical Event Timeline²⁷

The key takeaway from the timeline is how the Peruvians deliberately collected information and negotiated with the terrorists. Additionally, the timeline shows actions and reactions temporally between the Peruvians and the MRTA.

B. GOAL / MILITARY OBJECTIVE

The military objective, as described by the rational choice model from Chapter II, for Operation *Chavin De Huantar* was to maximize the number of hostages rescued and minimize friendly casualties. The operation resulted in 71 of the 72 hostages rescued, 14 enemy killed in action, and two friendly commandos killed in action.²⁸ The determination of success versus failure remains subjective; however, most consider Operation *Chavin De*

²⁷ Adapted from Perez, 71.

²⁸ Perez, 41.

Huantar as one of the most successful hostage rescue operations in history. Overall, an assault on a heavily fortified structure with 14 armed combatants and 72 unarmed hostages could have resulted in an absolute disaster. Therefore, the Peruvian Commandos achieved their objective by maximizing the number of hostages rescued and minimizing the total consequences. In sum, 100% of the MRTA terrorists were killed in the residence, 98.6% of the hostages were rescued, and 98.5% of the Peruvian Commandos survived. Although it is difficult to place a cost on life, the numbers indicate success, based on the military objective.

C. ALTERNATIVES / COURSES OF ACTION

The Peruvians had three main courses of action to analyze following the initial failed reaction by the PNP on the night of the siege. Course of action one was to respond to Cartonlini's initial hostage execution ultimatum, which included the release of approximately 450 imprisoned members of the MRTA. Course of action two included a quick offensive response to eliminate the terrorists and rescue the hostages. Course of action three involved a strategy of negotiation and intelligence preparation of the battlefield. All three of these courses of action, with different degrees of opinion, appear as feasible, suitable, acceptable, and distinguishable to achieve the objective. After identifying each alternative, President Fujimori and the Peruvian Military established their preferences based on the available courses of action.

D. PREFERENCES

Fujimori exhibited clear preferences throughout the hostage situation and he adequately suppressed some of his own emotions throughout the process. Fujimori not only desired safety for all the hostages, but he also had a personal stake in this crisis. His mother and sister were both initially taken hostage in the siege but the MRTA released both of them in the first wave of hostages. However, President Fujimori's son remained a hostage for the entire 126 days in the Ambassador's residence.²⁹ Any sort of rash decision could not only harm his citizens but also his son and some close friends. Therefore, in assessing

²⁹ Perez, 44.

the potential courses of action, Fujimori seemed to prefer a less aggressive and more methodical approach to the situation, but he still accepted risk by not conceding to the terrorists on their first ultimatum. He did not want to anger the terrorists to the degree that they would decide to kill hostages, but he also did not want to provide immediate concessions and lose ground through potential negotiations. He also expressed his preference to complete the operation with as pure of a Peruvian response as possible. Fujimori's Japanese heritage appeared to pre-condition his belief that Peru had a duty to rectify this issue without the assistance of foreign aid.³⁰ In sum, President Fujimori preferred a measured response from a purely Peruvian force. President Fujimori has now identified his potential courses of action along with his preferences; he must now objectively evaluate the cost and benefit for each course of action without defaulting to his emotion or personal preferences.

E. EXPECTED COST / BENEFIT

Course of action one, the immediate offensive response, was as an option with a high expected cost but low expected return. The Peruvians could immediately respond but potentially cause additional friendly casualties. However, a quick response could alleviate the potential for a protracted hostage rescue situation. Course of action two, conceding to the MRTA's demands, provides a great potential benefit through a quick resolution and the prevention of a hostage execution but offers a dangerous precedent for future hostage situations and also results in the release of 450 dangerous members of the MRTA. Course of action three, negotiation and intelligence preparation of the battlefield, offers the potential cost of a pending hostage execution but provides the opportunity to negotiate terms and prepare for potential future operations.

One can now determine that course of action one appears as a high risk but also high reward option. Course of action two appears as a lower-risk option in the near term but increasingly high-risk repercussions in the future. Course of action three requires the acceptance of moderate risk with the potential for a hostage execution but provides the

³⁰ Perez, 61.

opportunity for benefits through negotiation and a more informative response. It remains important, especially at this point in the rational choice procedure, to return to the primary goal of the decision at hand to ensure the decision-maker continues with as much of a rational perspective as possible. The primary goal remains to maximize the number of hostages rescued and minimize friendly casualties.

F. DECISION RULE / TRIGGER

President Fujimori selected course of action three, to negotiate and develop the situation for a future rescue opportunity. The Peruvians needed to develop the situation to the degree that they could achieve their goal by maximizing the rescue of hostages and minimizing friendly casualties. Throughout the intelligence and preparation phase of the operation, the Peruvians appeared to establish several conditions or triggers to activate the decision to conduct an offensive hostage rescue operation. We can imply the trigger criteria based on the actions the Peruvians took throughout the entirety of the 126-day event. For the Peruvians to consider the operation as trigger met or conditions set, the terrorists needed to have a split element within the residence. Additionally, they required a verbal cue from Vice Admiral Giampietri confirming the locations of the enemy and friendly elements. Finally, the assault force needed to successfully conduct its subterranean infiltration without detection. Once the Peruvians met all the conditions, they initiated the assault as planned. Figure 6 shows how the Peruvians continued to gain information until they reached their satisficing line and trigger criteria.

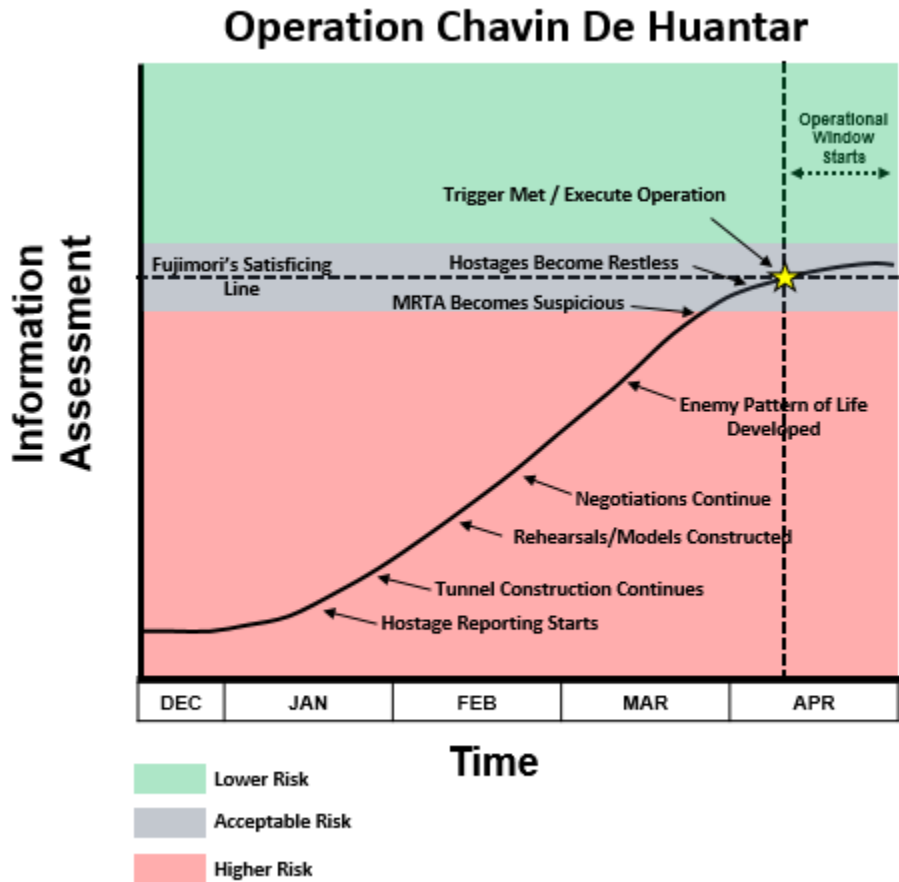


Figure 6. Operation *Chavin De Huantar* Satisficing Model

The key takeaways from Figure 6 include the point in which the information value intersects with President Fujimori’s satisficing line. The yellow star represents Fujimori’s best-known opportunity to conduct the operation because he does not know with certainty the length of his operational window.

G. ROGUE VARIABLE

Throughout the entire four-month siege, the Peruvians continued to decrease uncertainty through information collection. To eliminate the objective factors of uncertainty, as described in Chapter II, the Peruvians studied and rehearsed on models of the Ambassador’s residence to the extent that each commando knew the exact layout of the residence. They also modified the landscape through the construction of their tunnels and

tested all of their explosive charges extensively on structures that replicated the residence. They successfully countered almost every objective factor, which could have caused problems if they decided not to study the information available. In terms of the subjective factors, the Peruvians gained the advantage by collecting extensive information on the enemy and developing an ironclad pattern of life. Vice Admiral Giampietri provided consistent information about enemy action and hostage conditions. This allowed the assault force to develop a precise plan, which they rehearsed numerous times. The overall investment in the information collected over time decreased the aggregate amount of uncertainty, which decreased the potential risk for a seemingly high-risk hostage rescue operation.

H. CONCLUSION

President Fujimori made a rational decision by rejecting the terrorist's ultimatum and committing to the strategy of negotiation and intelligence preparation of the battlefield. Even more, Fujimori appeared able to separate himself from his emotion, based on his methodical actions even though his son remained in captivity throughout the entirety of the siege. He did not allow emotion to distort his understanding of cost and make a decision that was too risk acceptant or averse. Once he met his intelligence and planning requirements for the rescue operation, Fujimori satisfied and decided to conduct the operation. Although he had almost four months of preparation, he did not know how long his opportunity window would last without the potential for a change in potential cost. He did accept the risk of possible mission failure and the ultimate consequence of the death of all hostages, but he deliberately removed layer upon layer of uncertainty through measured information collection, which allowed the Peruvians to operate within acceptable risk.

IV. OPERATION EAGLE CLAW—A DECISION MADE IN ERROR

Operation *Eagle Claw*, the attempt to rescue hostages during the Iran Hostage Crisis, represents a case in which the decision-maker committed an error in decision-making. In this case, President Carter approved an operation for which his administration failed to gather enough information to minimize uncertainty and ultimately mitigate risk. This case also shows how the environment surrounding the decision-maker and the rogue variable influences the rational choice model for military operations.

A. BACKGROUND

On November 4, 1979, a group of Iranians seized the U.S. Embassy in Tehran, taking Americans captive. The Iranians conducted the siege largely in response to the United States' support of the recently exiled Shah Pahlavi to America during the Iranian Revolution. The Iranians wanted the Shah extradited to put him on trial and provide justice for the Iranian people. The United States responded initially by freezing Iranian assets and developing a negotiation scheme to get the hostages returned. Throughout the crisis, the Iranians did release 13 hostages and the United States moved the Shah to Panama in a failed attempt to negotiate the release of the rest of the hostages.

However, President Carter continued to grow unsettled with the situation and his popular support in the United States continued to drop during his re-election campaign.³¹ The president directed the Chiefs of Staff to develop a military plan to resolve the situation. The U.S. military built a secretive task force to create plans for an offensive hostage rescue. The newly commissioned hostage rescue force, Special Forces Operational Detachment—Delta, received the task of developing the plan for “actions on” with their commander, COL Charlie Beckwith, as the ground force commander.³² The military incorporated the other branches of the military to include Air Force fixed-wing aircraft and Navy rotary-

³¹ Lucien S. Vandenbroucke, *Perilous Options: Special Operations as an Instrument of U.S. Foreign Policy* (New York: Oxford University Press, 1993), 142.

³² Mark Bowden, *Guests of the Ayatollah: The First Battle in America's War with Militant Islam*, 1st ed. (New York: Atlantic Monthly Press, 2006), 223–24.

wing aircraft with Marine Corps pilots to participate in the rescue.³³ Negotiations continued to fail and President Carter felt pressure as Ted Kennedy gained some traction in the Democratic primary race for the presidency. Then, on April 11, 1980, President Carter approved the task force to move forward with the military operation.³⁴

On April 25, 1980, the Task Force launched Operation *Eagle Claw*. Based on the re-fueling limitations of Marine RH-53 rotary-wing aircraft, the task force had to establish a mission support site on a desert landing strip, which they called Desert One.³⁵ While in transit to Desert one, only six of the eight helicopters made it to Desert One. One of the helicopters had to land due to a maintenance issue and the other turned back while flying through a sandstorm. The rest of the ground assault force arrived on Air Force C-130s without issue. While making final preparations for the infiltration, one of the remaining helicopters reported another issue, which would prevent them from conducting the operation. This would cause COL Beckwith, the ground force commander, to scratch several members of the assault force in order to return with all the hostages. This did not meet COL Beckwith's minimum force criteria and he ordered to abort the mission. While preparing to depart, one of the helicopters collided with a C-130, destroying both aircraft and killing eight U.S. service members.³⁶ Figure 7 provides a graphic depiction of the critical events that influenced the approval of the operation over time.

³³ Bowden, *Guests of the Ayatollah*, 228.

³⁴ Vandenbroucke, *Perilous Options*, 138.

³⁵ Bowden, *Guests of the Ayatollah*, 226–27.

³⁶ Vandenbroucke, *Perilous Options*, 148–49.

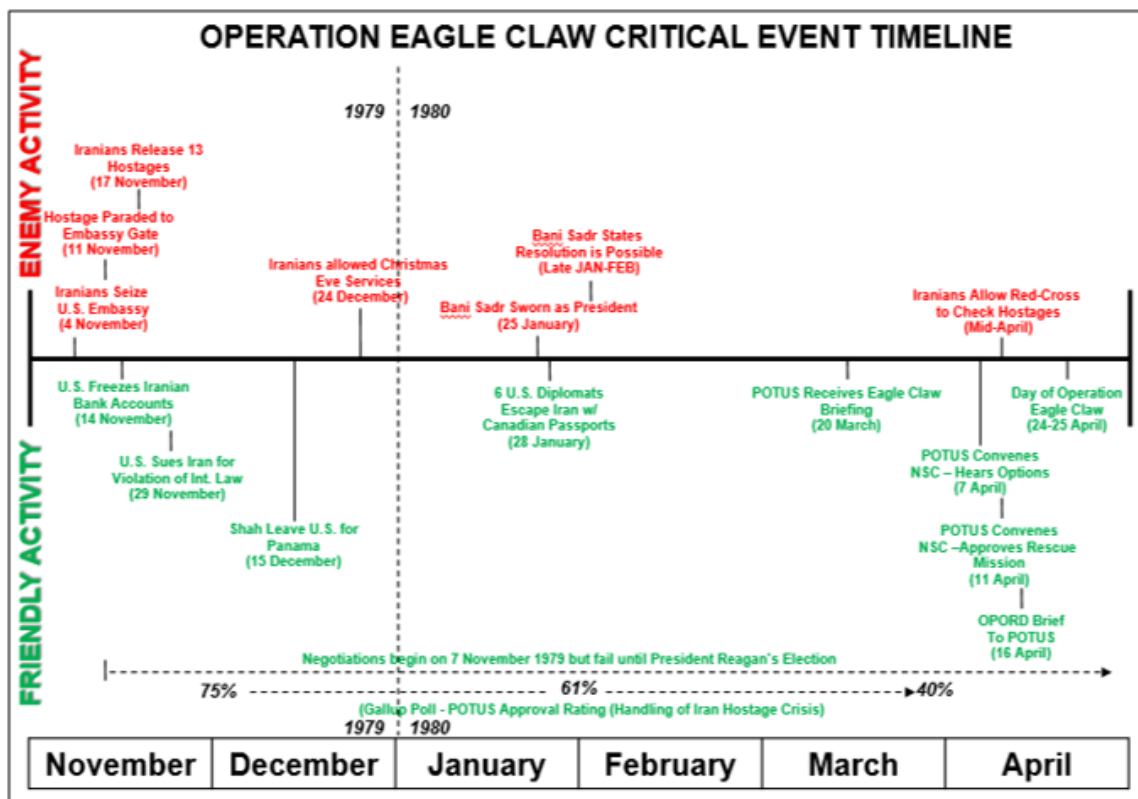


Figure 7. Operation *Eagle Claw* Critical Event Timeline³⁷

The key takeaways from this timeline include the duration of the crisis until the operation occurred, about five months, and also the correlation between events and the reduction of the president’s approval rating leading up to the operation.

B. GOAL / MILITARY OBJECTIVE

In keeping with the first step of the rational choice model from Chapter II, the military objective for Operation *Eagle Claw* was to maximize the rescue of 52 hostages from the U.S. Embassy in Tehran with minimal friendly casualties. The operation resulted in 1 x civilian fuel truck destroyed, 8 x U.S. service members killed in action, 1 x C-130 destroyed, 1 x RH-53 Helicopter destroyed, and the surrender 2 x U.S. RH-53 Helicopters to Iran.³⁸ The aforementioned battle damage assessment only encompasses the material

³⁷ Adapted from Vandenbrouke, *Perilous Options*, and Bowden, *Guests of the Ayatollah*.

³⁸ Bowden, *Guests of the Ayatollah*, 467.

battle damage assessment and does not include the national and global response to the failed operation. Based on the stated military objective, the operation failed. The results indicate that the near opposite of the desired outcome occurred. The operation did not result in the rescue of any U.S. hostages and the only casualties were either friendly or civilian casualties. Also, the Iranians acquired two operational U.S. military rotary-wing aircraft left in Iranian territory.

C. ALTERNATIVES / COURSES OF ACTION

The United States developed three courses of action to solve the problem as the Iranian hostage crisis reached the fourth month. Course of action one was an offensive hostage rescue operation to the U.S. Embassy in Tehran. Course of action two involved a Naval blockade of Iranian ports. Course of action three was to continue diplomatic pressure against the Iranian regime to negotiate the release.³⁹ In this case, all three of the courses of action could result in the rescue or release of all the hostages. However, the National Security Council did not agree that each course of action met the criteria for suitability and acceptability.

D. PREFERENCES

President Carter, Secretary of Defense Brown, National Security Advisor Brzezinski, and JCS Chairman Jones, all favored a quick and aggressive resolution to the crisis. President Carter continued to see his favorability numbers decrease in the polls and the Iranian hostage crisis continued to be a thorn in his side for the upcoming election.⁴⁰ However, one member of the National Security Council wholeheartedly disagreed with the acceptability and suitability of aggressive action towards the Iranians. The Secretary of State, Cyrus Vance, feared that even a successful hostage rescue into the heart of Tehran could embolden the Iranians to react negatively and make the situation worse. Vance felt that the United States should not rush into something when diplomatic options remained. The president countered Secretary Vance by challenging his motives and questioning

³⁹ Vandenbroucke, *Perilous Options*, 137–38.

⁴⁰ Bowden, *Guests of the Ayatollah*, 411.

whether or not he was prepared to allow the hostages to waste away in captivity until the end of the year.⁴¹ President Carter's main preference remained clear: he wanted the crisis resolved as soon as possible to not only free the hostages but to alleviate the constant negative pressure from his constituents in the upcoming election.

E. EXPECTED COST / BENEFIT

Course of action one, an offensive hostage rescue operation in Tehran, appeared as the alternative with the highest expected cost but with the potential for greatest benefit. If the United States could effectively extract all the hostages with minimal collateral damage or friendly casualties, this could provide a quick win and provide the president with some elbowroom for diplomatic engagements. However, course of action one needed to be a flawless operation, as any failures along the way could result in a catastrophe. Additionally, Secretary Vance felt that even a successful hostage rescue operation would most likely lead to the Iranians capturing more Americans or any other foreigners on the street in Tehran, creating an even larger mess with global partners.⁴²

Course of action two, the Naval Blockade, presented an option for more moderate consequences but with uncertain benefits. The blockade would provide some pressure on the Iranian economy but also the rest of the world dependent on Iranian oil, which makes the cost appear higher from a global perspective. Additionally, the United States felt unsure as to whether the blockade would result in positive action from the Iranians and could push the Iranians towards the Russians.⁴³

Course of action three, continue diplomatic pressure, appears as the lowest cost option but with the potential for either great gain or tragic loss. Up until this point in the Crisis, the Iranians did little to harm or endanger those captured. Newly inaugurated Iranian President Bani Sadr considered the crisis as a "minor affair" and that the United States could resolve the issue if they stopped meddling in Iranian affairs.⁴⁴ However, course of

⁴¹ Vandenbroucke, *Perilous Options*, 137.

⁴² Bowden, *Guests of the Ayatollah*, 412.

⁴³ Vandenbroucke, *Perilous Options*, 138.

⁴⁴ Bowden, *Guests of the Ayatollah*, 340.

action three did not appear to offer a quick resolution and Iranians could change their disposition and harm the hostages. The other major political consequence involved the potential for a political defeat if it appeared as if Carter did nothing.

F. DECISION RULE / TRIGGER

President Carter chose course of action one, an offensive hostage rescue operation in Tehran. On April 16, 1980, the ground force commander and the rest of the task force briefed the president on their plan.⁴⁵ One of the key components involved the operational window available to conduct the operation in just two nights. If the president were to wait too late into the summer, the period of darkness required for the operation would eventually expand to three nights, which increased the exposure of friendly forces in Iran.⁴⁶ The ground force commander also presented the maneuver plan in detail, expressing their familiarity with the Embassy. The air plan appeared feasible and could infiltrate the force and exfiltrate the force from the target area. Therefore, satisfied that a ground assault plan and air plan existed along with the understanding that he must act before the period of darkness waned, he approved the operation. However, the actual trigger criteria remain unclear, even after the event occurred.

The presence of a plan does not constitute adequate decision criteria. Additionally, the president did not have a clear understanding of the information presented. Members of the assault force admitted later that they did not feel as if the operation had a great opportunity for success. Wade Ishimoto, the assault force's intelligence officer, stated, "if it was going to succeed it would be the will of God."⁴⁷ Even the ground force commander, COL Beckwith, felt that the operation had about a 50% chance of success. NSA Brzezinski later said that he and the president both thought that the operation had around a 60–70% chance of success and that they would not have considered the operation if they knew the

⁴⁵ Vandenbroucke, *Perilous Options*, 139.

⁴⁶ Vandenbroucke, 137.

⁴⁷ "Best Laid Plans: Great Military Blunders Documentary," Documentary, Timeline – World History Documentaries (United Kingdom, April 15, 2017), n. 38:38, <https://www.youtube.com/watch?v=4CAjSAefkVA>.

operation’s likelihood of success.⁴⁸ Therefore, the president satisfied with faulty information and before meeting a defined set of trigger criteria. He perceived a false expected value for the operation. Figure 8 represents the disparity between President Carter’s perceived information value (in red) and the actual information value (in black).

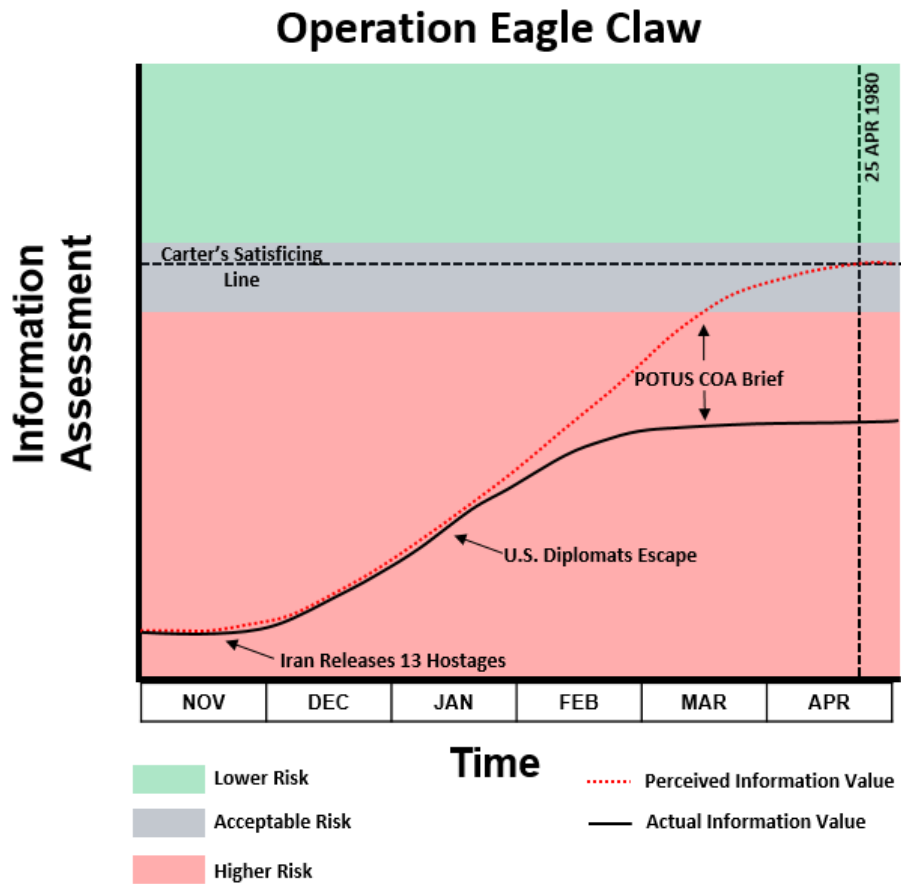


Figure 8. Operation *Eagle Claw* Satisficing Model

The key takeaway from Figure 8 is the difference between what the president actually knew, the solid black line, and what he perceived to know about the situation, the dashed red line. Over time, the president continued to gather information, some of which appeared misleading, and he reached a false sense of certainty, which drove his decision to approve the operation without truly meeting a defined set of trigger criteria.

⁴⁸ Vandenbroucke, *Perilous Options*, 139–40.

G. ROGUE VARIABLE

The United States failed at decreasing the uncertainty surrounding the Iranian hostage crisis. In reference to the objective factors of uncertainty outlined in Chapter II, the planners failed to understand the weather considerations in the desert. The helicopter pilots were un-prepared for the sandstorm they encountered, which ultimately led to a decrease in two aircraft before reaching Desert One. Additionally, the Navy RH-53 helicopters and Air Force C-130 teams failed to communicate basic information. The C-130s knew that they could increase their altitude after crossing the Iranian border because Iran's air defense capability was limited, while the Marine Corps pilots continued to fly low, not knowing about the change in radar capability. Thus, the Marine pilots could have flown over the sandstorm, which caused many of their problems.⁴⁹ Continuing with communication issues, the inability to communicate between airframes influenced the eventual collision between the C-130 and RH-53.

The subjective factors appear even more ominous. Although the assault force knew the complex well, they had no idea where the hostages resided. Logan Fitch, the Assault Force Commander, determined that their inability to locate the hostages was the weakest part of their plan.⁵⁰ Presumably, the assault force might arrive at the target location and the Iranians might have barricaded or moved the hostages to another location. Additionally, an Embassy complex in the heart of Tehran is incredibly difficult to isolate and contain. Upon the initiation of the operation, the Iranians could respond in a myriad of ways, which made this situation incredibly complex.

H. CONCLUSION

How does a blunder of this magnitude occur when so many people allowed some of the most basic questions of the rational choice procedure to go unasked? President Carter felt that his administration needed to act decisively and attempt the rescue operation. The United States' negotiation approach with the Iranians continued to fail and the president

⁴⁹ Vandenbroucke, 143–44.

⁵⁰ "Best Laid Plans: Great Military Blunders Documentary," n. 36:49.

grew more concerned about the hostages' well-being in the hands of their captors. He also felt incredible political pressure as he observed his approval ratings decline rapidly. The president appeared at odds with the Secretary of State who provided grave consequences whether the operation failed or succeeded. Secretary Vance and his team offered the only dissenting opinion for the operation. President Carter appeared to allow his personal preferences to cloud the actual expected costs and benefits of the operation. The president seemingly made an emotional decision in which his emotions distorted the truth about what he believed. Also, they failed to collect correct and available information required to decrease uncertainty for the operation. Most of the mishaps were induced by friendly forces and almost completely preventable.

Operation *Eagle Claw* serves as a major military blunder in U.S. military history. Those involved committed multiple errors throughout the planning process and made an apparent irrational decision, which resulted in the death of eight U.S. service members and grave embarrassment to the United States. Operation *Eagle Claw* offers an opportunity to illustrate how senior leaders failed to follow the rational choice model for military operations and approved an operation with unacceptable risk.

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V. THE SON TAY RAID—A DECISION MADE IN ERROR

The Son Tay Raid, an attempt to rescue prisoners of war during the Vietnam War, offers another case in which the decision-maker and his team committed multiple errors in decision-making. President Nixon approved an operation in which the window of opportunity to achieve the goal had already passed. The United States conducted the operation based on fundamental information that changed before conducting the operation. This case shows how information has a life expectancy and the enemy has the opportunity to change the playing field.

A. BACKGROUND

In May of 1970, Air Force intelligence analysts identified a North Vietnamese prisoner of war (POW) camp in Son Tay, North Vietnam. The analysts discovered the POW camp from aerial reconnaissance photographs.⁵¹ At this point in the Vietnam War, the North Vietnamese held more than 1400 American POWs in captivity.⁵² President Nixon grew increasingly unsettled over the number of POWs held in captivity, and the knowledge of poor treatment towards Americans in captivity made this fact more painful for the president. Additionally, the American public mounted multiple efforts to protest the North Vietnamese on their treatment of U.S. POWs.⁵³

Upon the discovery of the Son Tay POW camp, members from within the Department of Defense quickly promoted the potential for a hostage rescue operation. The special assistant for counterinsurgency and special activities (SACSA) to the joint chief of staff, Brigadier General Donald Blackburn, took the lead on the concept. In early June, Blackburn built a team and conducted a feasibility study to determine the potential for a successful hostage rescue operation. After a month-long study, Blackburn's team reported

⁵¹ John Gargus, *The Son Tay Raid American POWs in Vietnam Were Not Forgotten*, Rev. ed., Williams-Ford Texas A&M University Military History Series; No. 112 (College Station: Texas A&M University Press, 2010), 7.

⁵² Vandenbroucke, *Perilous Options*, 53.

⁵³ Vandenbroucke, 53.

the results of the study to a receptive Chairman of the Joint Chiefs of Staff, Admiral Thomas Moorer. The senior leaders within the Defense Department liked the idea of a rescue mission and approved the building of a Joint Contingency Task Group (JCTG).⁵⁴

Blackburn selected Air Force Brigadier General Leroy Manor as the commander of the JCTG. Colonel Arthur D. (Bull) Simons served as the ground maneuver commander, and he hand-selected his entire force from a group of volunteers, mostly from the Special Forces community. The air component also selected their best pilots to support the unprecedented long-range infiltration into North Vietnam.⁵⁵ Manor and Simons organized and conducted hundreds of full mission rehearsals with the task group. After several months of rigorous training and rehearsals, Manor reported that the task force could deploy to Southeast Asia in early October.⁵⁶

The JCTG selected October 21, 1970, as the optimal mission execution date based on historically favorable weather considerations. However, at the request of the president, they postponed the mission until November. President Nixon planned to deliver a message to the Chinese through Pakistani President Yahya Khan in late October. Nixon did not want the rescue mission to affect potential progress in secret negotiations with the Chinese.⁵⁷ Leading up to the president's final decision, multiple intelligence reports suggested that POW activity at Son Tay had decreased and the North Vietnamese transferred the POWs to another unknown location. However, the president also received intelligence reports indicating that the POWs were still at Son Tay.⁵⁸ Ultimately, the president authorized the rescue mission on November 18, 1970, for an execution date of November 21, 1970. Due to weather conditions, Manor shifted the execution date one day earlier to start on November 20, 1970.⁵⁹ The task force launched on November 20, 1970, and conducted the long-range aerial infiltration without detection in conjunction with a synchronous

⁵⁴ Gargus, *The Son Tay Raid American POWs*, 8.

⁵⁵ Gargus, 11.

⁵⁶ Vandenbroucke, *Perilous Options*, 60–61.

⁵⁷ Vandenbroucke, 62.

⁵⁸ Vandenbroucke, 65.

⁵⁹ Vandenbroucke, 67.

deception bombing operation to the North of Son Tay. The task force reached the camp as planned and initiated the assault.⁶⁰

One element of the assault force landed in the incorrect landing zone just outside of the POW camp but it turned out to be an advantageous mistake. They landed next to what they thought was a school but actually served as barracks for the enemy. The element quickly eliminated the threat and then re-joined the rest of the force at the camp. The extensive rehearsals and contingencies the task group established in training made this transition appear seamless. Once the entire force consolidated at the POW camp, the task force searched the camp and did not find any American POWs. They realized that the only people at the camp were enemy combatants. The task force re-grouped and departed the camp without any friendly forces killed in action.⁶¹

Unknown to the JCTG and the planners at the Pentagon, the North Vietnamese had moved all of the POWs out of Son Tay on July 14, 1970.⁶² Figure 9 depicts a critical event timeline for the operation.

⁶⁰ Vandenbroucke, 68.

⁶¹ Vandenbroucke, 68–69.

⁶² Vandenbroucke, 56.

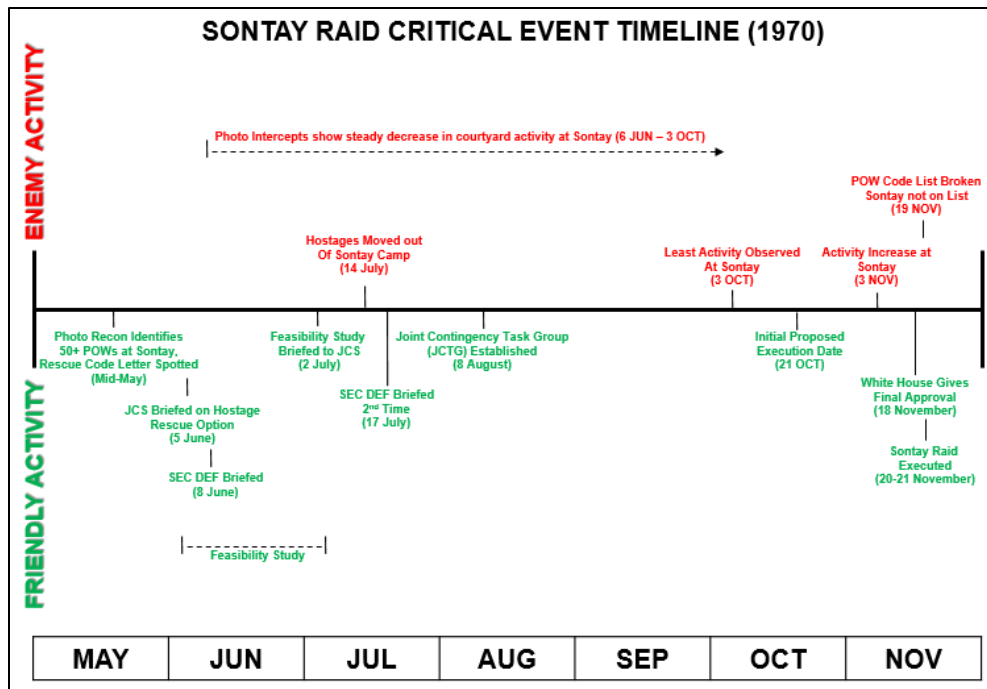


Figure 9. Son Tay Raid Critical Event Timeline (1970)⁶³

The key takeaway from the timeline is the amount of time between the movement of the POWs out of Son Tay and the execution of the operation. The POWs were moved on July 14, 1970, and the rescue mission occurred on November 20, 1970. Additionally, the Department of Defense established the JCTG on August 8, 1970, after the POWs had already departed the camp.

B. GOAL / MILITARY OBJECTIVE

Following the rational choice model discussed in the second chapter, the primary military objective for the Son Tay Raid was to rescue the POWs from the camp. As a proximate goal, the United States wanted to demonstrate its offensive and infiltration capability to the North Vietnamese. The JCTG did successfully conduct an infiltration into North Vietnamese territory and killed multiple enemy combatants without any friendly killed in action. However, they were unable to rescue any of the POWs. Therefore, the JCTG achieved a secondary goal but failed to achieve its primary goal.

⁶³ Adapted from Gargus, *The Son Tay Raid American POWs*; Vandenbrouke, *Perilous Options*.

C. ALTERNATIVES / COURSES OF ACTION

President Nixon appeared to have three courses of action when faced with the decision to conduct the rescue mission. Course of action one was to conduct the planned offensive operation in November. Course of action two was to postpone the operation until corroborated intelligence could prove the presence of POWs at Son Tay. The third course of action was to abort the planned operation and look for other rescue opportunities in other potential locations.

D. PREFERENCES

The number of POWs in North Vietnam weighed heavily on President Nixon. The president ardently supported the U.S. military and felt a personal connection to military servicemen. President Nixon also felt pressure from the POW/MIA movement in the United States, protesting the North Vietnamese for harsh treatment of U.S. POWs.⁶⁴ In addition to these feelings, President Nixon and his team also desired an opportunity to engage the North Vietnamese in their territory. The United States had stopped conducting bombing operations in North Vietnam two years earlier in 1968 under the order of former President Lyndon Johnson. Conducting an infiltration into North Vietnamese territory could demonstrate American military power to the North Vietnamese. In summary, President Nixon wanted the POWs back and also wanted to show the North Vietnamese that he was bold enough to infiltrate denied territory.

E. EXPECTED COST / BENEFIT

Course of action one, conducting the planned operation on November 20, appeared as the alternative with the greatest benefit based on the information provided but also the highest potential negative consequences. Successfully rescuing POWs from North Vietnam would benefit the prisoners themselves and also send a message to the United States public that America had not forgotten those service members who were missing in action. A raid would also demonstrate to the North Vietnamese that the United States could penetrate their territory and operate in a denied environment. However, this operation did exhibit

⁶⁴ Vandenbroucke, 53.

extreme potential negative consequences. Pilots needed to navigate using difficult techniques and fly through contested airspace. Any mistake while flying could result in detection and the potential for the entire element getting shot down. Additionally, recent reports indicated skepticism about the POW's location.

Course of action two, postponing the operation, represents minimal benefit but also does not exhibit many negative consequences. The benefit of essentially doing nothing, in this case, includes the opportunity to gather more intelligence and corroborate recent reports that the POWs may no longer reside at Son Tay. Leading up to the operation, multiple intelligence reports indicated that movement around the Son Tay POW camp had decreased in the courtyard. The negative consequences for postponing the operation would include an increase in tension in the United States and continued suffering for those imprisoned. Also, finding another feasible operational window with favorable weather conditions could prove difficult.

Course of action three, abort the planned operation and transition to other rescue opportunities, presents an alternative with moderate benefits and minimal negative consequences. The observed benefits for aborting the planned mission would have a time delay, meaning that the benefits would not emerge immediately. Based on the recently reported intelligence gaps, which seemed to indicate that the POWs had moved, the JCTG could archive the Son Tay plans and look for new potential rescue opportunities. Archiving the plans would allow them to re-visit the Son Tay mission if intelligence reporting indicated proof of the POWs at Son Tay. The negative consequences for this alternative are consistent with course of action two.

F. DECISION RULE / TRIGGER

President Nixon selected course of action one, conduct the rescue mission on the planned execution date in November. President Nixon authorized the mission on November 18, 1970.⁶⁵ His key decision criteria involved the weather conditions, a ready and willing task group, the ability to infiltrate without detection, and the presence of POWs

⁶⁵ Vandenbroucke, 63.

at the camp. The JCTG Commander, Gen. Manor, and his weather analysts provided adequate detail for the weather considerations and they appeared favorable. Both Manor and Simons also built an exceptionally skilled and willing task group. The team also believed that they could infiltrate undetected.

However, the critical component of this decision involves the presence of the POWs. Throughout the summer and fall, intelligence reporting indicated a decrease in activity at Son Tay. Additionally, the Defense Intelligence Agency (DIA) assessed only a 10–15% likelihood that the POWs were still at the camp. The few indications of a presence at the camp included a small vegetable garden and some smoke rising from the buildings.⁶⁶ Therefore, President Nixon did not conclude with certainty about the presence of the POWs. Even with this degree of uncertainty, President Nixon exhibited risk-acceptant behavior, as described in Chapter II (Figure 2), based on his comfort with uncertainty. Participants during the final decision brief recall the president's enthusiasm for the mission.⁶⁷ The satisficing model in Figure 10 depicts the disparity between President Nixon's perceived information and the correct information.

⁶⁶ Vandenbroucke, 65.

⁶⁷ Vandenbroucke, 63.

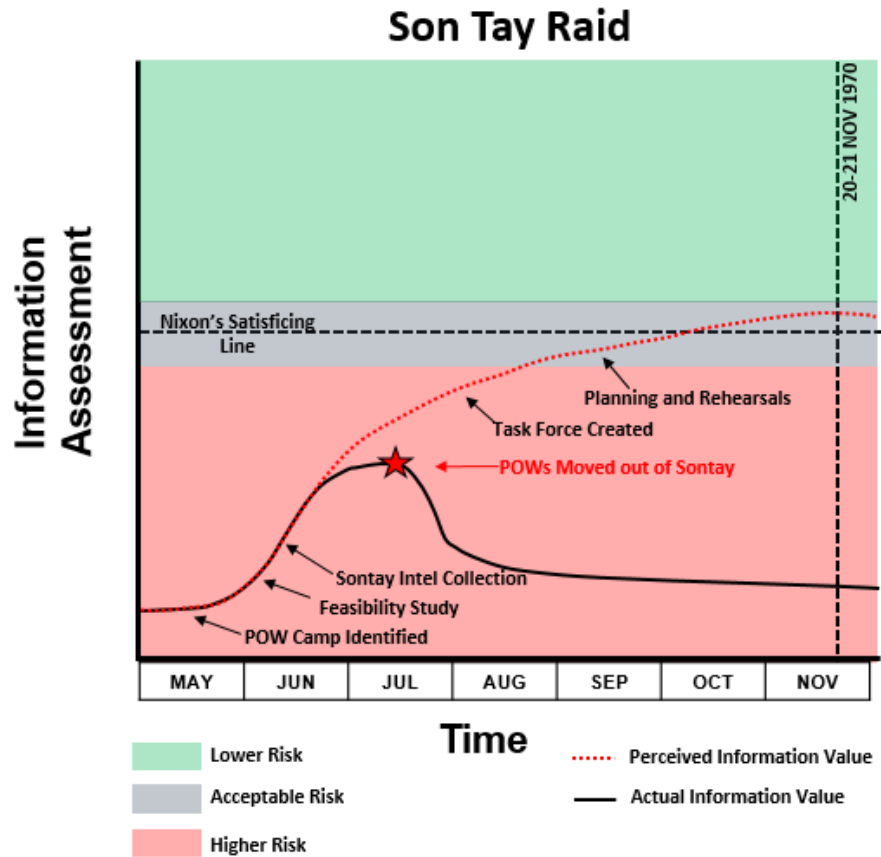


Figure 10. Son Tay Raid Satisficing Model

The key takeaway from the model in Figure 10 is the change in the actual information value when the North Vietnamese moved the POWs in July. At that point, any efforts in support of the operation at Son Tay appear futile. In this case, the JCTG established, planned and trained for an operation that had a true 0% chance at achieving its primary objective. President Nixon satisfied without truly meeting his trigger criteria.

G. ROGUE VARIABLE

The JCTG and the planning team decreased multiple elements of uncertainty but failed in one major aspect. The JCTG researched and understood many of the objective factors of uncertainty for the Son Tay operation. The team understood every aspect of the weather and the layout of the compound and its surroundings. The JCTG also trained and

prepared to an unprecedented degree, which allowed the task group to infiltrate hostile denied territory and execute contingencies without any friendly forces killed in action.

However, the subjective factors of uncertainty led to the failure of achieving the primary objective. The North Vietnamese moved the POWs out of Son Tay four months before the operation. Multiple North Vietnamese accounts documented in John Gargus' book, *Son Tay Raid*, offer mixed conclusions as to why they transferred the POWs. Accounts include potential tips on the rescue mission but also suggestions that the hostages were moved due to excessive flooding in the area.⁶⁸ For the present discussion, the reason why the enemy moved the POWs is irrelevant. The key point is that the enemy always has a vote and can quickly change the balance of information between yourself and the adversary with a simple strategic move.

H. CONCLUSION

President Nixon made a decision in error based on the desire to rescue POWs at Son Tay. The motivation driving his decision remains cloudy, but one can derive that he expressed enthusiasm and a strong desire to conduct an operation in North Vietnam. His strong support for the military and aspiration to alleviate the pain of so many POWs may have distorted his understanding of the costs and benefits of the operation. During the final brief to the president, the Chairman of the Joint Chiefs of Staff, Admiral Thomas Moorer, told the president about the short weather window and how they would have to postpone the operation if the weather turned sour. One participant from the final decision brief recalled that Nixon reacted to the Chairman saying, "Damn, Tom, let's not let that happen, I want this to go."⁶⁹ President Nixon was determined to conduct an operation, which essentially eliminated course of action two and three.

Although the operation failed to deliver the primary objective, it did succeed in achieving associated goals. The JCTG successfully infiltrated denied territory in North Vietnam and proved a concept for future operations. The JCTG effectively decreased much

⁶⁸ Gargus, *The Son Tay Raid American POWs*, 257.

⁶⁹ Vandenbroucke, *Perilous Options*, 63.

of the risk by eliminating many of the objective factors of uncertainty. In some communities, this operation is viewed as successful based on the task group's ability to reach the camp, kill enemy combatants, and depart the camp with only a few minor wounds and no friendly killed in action. However, staying true to the primary objective and the rational choice model, the operation was a failure. In retrospect, it did appear to have positive collateral benefits and incentivized the Vietnamese to treat POWs better. However, this was not a critical component to the decision-making process that occurred.

VI. THE CUBAN MISSILE CRISIS—A DECISION MADE IN REASON

The 13-day Cuban Missile Crisis in 1962 represents a case in which President Kennedy made a reasoned decision consistent with the procedure in the rational choice model. President Kennedy rationally evaluated his options and selected the option with the greatest expected value. In this case, the president's decision not to conduct an airstrike in Cuba appears as the critical decision to evaluate. The president did not succumb to his own inclination nor the recommendations from those in his council to execute offensive operations against Cuba, thwarting the possibility of an imminent nuclear strike against the United States by the Soviet Union.

A. BACKGROUND

On October 14, 1962, an American U2 spy plane took photographs of what appeared as medium-range ballistic missiles (MRBM) on the island of Cuba. McGeorge Bundy, the National Security Advisor, informed President Kennedy two days later on October 16, 1962. That same morning at 11:45 AM, President Kennedy convened a council of twelve men, known as the Executive Committee of the National Security Council (ExComm).⁷⁰ ExComm deliberated on the situation to determine the best course of action in response to the imminent reports of Soviet nuclear capability within the range of the United States.

Leading up to the Cuban Missile Crisis, President Kennedy corresponded with Nikita Khrushchev, the Premier of the Soviet Union, multiple times about the military buildup in Cuba. The Soviet Premier asserted that the buildup only contained defensive weapons and that the Soviets would refrain from placing any offensive weapons in Cuba. Additionally, President Kennedy received a telegram from the U.S. Ambassador to the Soviet Union on October 16, which detailed a conversation between the U.S. ambassador and Khrushchev. The telegram said that Khrushchev affirmed that the Soviet buildup in

⁷⁰ Mark White, *Cuban Missile Crisis* (London: PALGRAVE MACMILLAN, 1996), 115–16.

Cuba only included defensive weapons. This message, on a day in which the president received intelligence to counter the Premier's claim, appeared as an act of betrayal and stained Khrushchev's credibility.⁷¹

During the initial ExComm meeting on October 16, the president directed the military to begin initial planning for operations to include an air attack on Cuba, a blockade of Cuba or a military invasion of Cuba.⁷² As the military postured for a potential strike, the president attempted to maintain an appearance of normalcy by continuing with campaign events and other regularly scheduled engagements. The president continued to deliberate with his team and stressed his desire for the entire team to agree on a single course of action.⁷³ President Kennedy finally came to a feasible solution and delivered a television broadcast to the United States on October 22, 1962.

President Kennedy addressed the nation on October 22, 1962, and announced that the United States would implement a naval quarantine of Soviet ships from entering Cuba. The president, with advice from ExComm, changed the name from a blockade to a quarantine because a naval blockade constitutes an act of war. The quarantine sent a clear message of President Kennedy's intent to Khrushchev. Khrushchev exhibited frustration with the quarantine and continued to buildup and prepare Soviet forces for potential conflict. Additionally, Fidel Castro, the Cuban dictator, prepared his country for a U.S. invasion.⁷⁴

The United States lived under extreme tension following the president's address on October 22, as the U.S. military increased its state of readiness to Defense Readiness Condition 2 (DEFCON 2), the highest state of readiness before implementing nuclear war. President Kennedy and Khrushchev engaged in a diplomatic chess match, communicating

⁷¹ White, *Cuban Missile Crisis*, 117.

⁷² White, 118–19.

⁷³ Sherry Jones, "Peter Jennings – The Missiles of October: What the World Didn't Know," Documentary (ABC, 1992).

⁷⁴ Jones, n. The documentary provides footage of President Kennedy's October 22, 1962 address to the nation along with Fidel Castro's mobilization of Cuba.

through respective senior officials with painful time delays in communication.⁷⁵ During this time, troops in Cuba shot down a United States U2 Spy Plane with Soviet-supplied surface to air missiles on October 27, which increased the tension between the U.S. and the Soviet Union.⁷⁶ Soon after, President Kennedy and Khrushchev negotiated and came to a compromise. The Soviet Union would remove their offensive weapons from Cuba if the United States would remove its Jupiter missiles from Turkey and promise not to invade Cuba. Both sides agreed and the crisis concluded on October 28, 1962.⁷⁷

Although President Kennedy's decision to conduct the naval quarantine over the airstrike or ground invasion in Cuba did not immediately resolve the issue, it did almost certainly prevent nuclear war. Figure 11 displays the critical event timeline for the Cuban Missile Crisis.

⁷⁵ Jones, n. After the President delivered his speech to the nation, the documentary shows footage of the panic that spread throughout the United States in fear of potential nuclear war.

⁷⁶ "The World on the Brink: John F. Kennedy and the Cuban Missile Crisis," John F. Kennedy Presidential Library and Museum, n.d., n. Found on the October 27, 1962 Page, <https://microsites.jfklibrary.org/cm/>.

⁷⁷ "The World on the Brink: John F. Kennedy and the Cuban Missile Crisis," n. Found in the section titled "October 28."

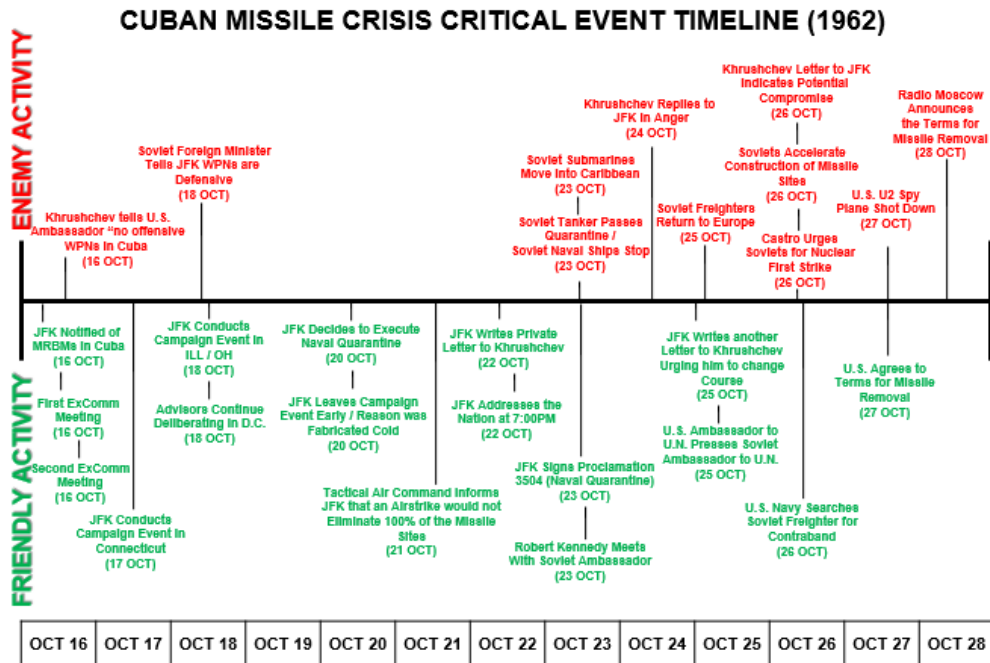


Figure 11. Cuban Missile Crisis Critical Event Timeline (1962)⁷⁸

The most pertinent observations from the timeline include the time frame between President Kennedy’s first knowledge of the missiles on October 16, 1962, and his decision to implement the quarantine on October 20, 1962. The President took action after six days of deliberation with ExComm. The president acted quickly but with a measured response, which implies that he deemed the Soviet nuclear threat as imminent.

B. GOAL / MILITARY OBJECTIVE

The military objective for the United States during the Cuban Missile Crisis was to prevent nuclear war and protect the United States. Additionally, the United States wanted to halt the Soviet Union from establishing functional missile sites and remove the Soviet missiles from Cuba. In this case, much like case model 4 from Chapter II, the United States needed to complete every aspect of its objective to prevent war and succeed in achieving its military objective. President Kennedy must completely achieve his primary goal even

⁷⁸ Adapted from White, *Cuban Missile Crisis*; The John F. Kennedy Presidential Library and Museum, “The World on the Brink.”

if the value of potential tradeoffs appears high. Therefore, the United States achieved its goal when the Soviet Union stopped the building of their missile sites, removed their missiles, and the U.S. and Soviet Union did not engage in a nuclear war, ultimately protecting the citizens of the United States.

C. ALTERNATIVES / COURSES OF ACTION

President Kennedy and ExComm deliberated over five initial courses of action on October 16 but narrowed them down to three military courses of action to deal with the Cuban Missile Crisis.⁷⁹ Declassified documents provide in detail the plans for each of the courses of action. Course of action one was an offensive air attack on the identified Soviet missile sites.⁸⁰ Course of action two was a naval blockade of Soviet ships,⁸¹ which they later coined as a naval quarantine. Course of action three was a military invasion of Cuba.⁸²

D. PREFERENCES

In the first two ExComm meetings on October 16, the president made it clear that he wanted to respond militarily.⁸³ Additionally, from the president's comments and inquiries during the meetings, it appeared that the president favored an offensive military strike over other less aggressive options.⁸⁴ Mark White assessed that "Kennedy showed no interest in avoiding an immediate military confrontation by establishing a blockade around the island to intercept further deliveries of missiles from the Soviet Union."⁸⁵ The blockade option seemed like a potential component of a broader military plan to the

⁷⁹ White, *Cuban Missile Crisis*, 118–19.

⁸⁰ "Plan 1: Limited One Time Strike (50 Sorties) against MRBM Sites in Cuba – Declassified from Top Secret September 2012," September 2012, <https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.

⁸¹ "Plan 2: Blockade – Declassified from Top Secret September 2012," September 2012, <https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.

⁸² "Plan 3: Invasion – Declassified from Top Secret September 2012," September 2012, <https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.

⁸³ White, *Cuban Missile Crisis*, 118.

⁸⁴ White, 119.

⁸⁵ White, 120.

president but did not initially appear as a complete course of action, which the president preferred.⁸⁶

President Kennedy also wanted to act swiftly in his response to the Soviet buildup in Cuba. In one of the initial ExComm meetings, President Kennedy said, “It may be that we just have to, we can’t wait two weeks while we’re getting ready to roll. Maybe we just have to take them out.”⁸⁷ The president felt the threat was imminent. This clearly influenced the president to resolve the crisis quickly. In summary, President Kennedy preferred a quick, offensive military response, with some degree of influence emanating from his disgust over Khrushchev’s apparent deceitfulness.

E. EXPECTED COST / BENEFIT

Course of action one, an offensive military airstrike, represents an alternative that provides the perception of immediate benefits in eliminating the Soviet missiles from Cuba. However, this course of action also offers the greatest potential negative consequences. An offensive strike against the missile sites may destroy all of the MRBMs in Cuba; however, failing to destroy all of the sites could initiate an immediate retaliatory response against the United States. Additionally, General Walter Sweeny from Tactical Air Command informed the president that a single airstrike would not guarantee the elimination of all of the sites in Cuba.⁸⁸

Course of action two, a naval blockade of Soviet ships to Cuba, represented the option with the least immediately observed benefits but also presented the least possibility for negative consequences. The blockade, later named a naval quarantine, would only prevent additional missiles and other offensive weapons from arriving in Cuba. Therefore, it would not immediately achieve the president’s goal to remove the missiles from Cuba without some additional concession from Khrushchev. However, as the least aggressive

⁸⁶ White, 121.

⁸⁷ “Off the Record Meeting on Cuba (11:50AM - 12:57PM)” (Papers of John F. Kennedy: President’s Office Files, October 16, 1962), 27.

⁸⁸ “The World on the Brink: John F. Kennedy and the Cuban Missile Crisis,” n. Found on the page titled “October 21, 1962”.

action towards the Soviet Union, the blockade seemed the least likely to incite a military conflict. Even more so, tactfully changing the name to a quarantine would not constitute an official act of war, which might decrease the possibility of an aggressive response from the Soviet Union.

Course of action three, a military invasion of Cuba, offered an alternative, which could provide immediate benefits but also incurred almost certain negative consequences. A military invasion would potentially overthrow Fidel Castro and eliminate the missile sites. However, the cost would certainly include many American casualties on the battlefield and the potential for an aggressive retaliatory response from the Soviet Union. The Soviet Union could respond in the same manner as it would if the United States conducted the airstrike. Therefore, the costs appear the highest with course of action three.

F. DECISION RULE / TRIGGER

President Kennedy selected course of action two by implementing a naval quarantine. Although the president did not completely rule out the potential for an offensive strike after his decision, the costs appeared too high and the probability of achieving the benefits seemed too low to initiate with the offensive strike. President Kennedy viewed the quarantine as an initial phase of a potentially larger military operation, and he expressed his willingness to escalate with force if the Soviet Union did not meet his demands. President Kennedy spoke to the nation on October 22, 1962, on a national broadcast and he stated, “to halt this offensive buildup, a strict quarantine on all offensive military equipment, under shipment to Cuba, is being initiated. I have directed the continued and increased close surveillance of Cuba and its military buildup.”⁸⁹ The president continues and informs the world that he is ready to escalate if the buildup in Cuba does not end.

In this case, we should analyze the reasons why the president selected a course of action, which he and his advisors initially ruled as not sufficient. It appears that through deliberation, the president and his team must have established a set of trigger or decision criteria to initiate the airstrike or the invasion and they never met their trigger criteria

⁸⁹ Jones, “Peter Jennings – The Missiles of October: What the World Didn’t Know,” n. 41:00.

throughout the entirety of the crisis. The president seriously considered the airstrike to the degree that he directed his team to write an address to the nation, which started “With a heavy heart, and in necessary fulfillment of my oath of office, I have ordered and the United States Air Force has now carried out military operations, with conventional weapons only, to remove a major nuclear weapons buildup from the soil of Cuba.”⁹⁰ The president never delivered this speech but it appears evident that he had prepared for it.

Based on the courses of action presented, the president’s known preferences, the cost-benefit analysis conducted, and the decision he made, one can determine what constituted the president’s trigger criteria to execute an offensive strike. First, the president needed proof that the missile sites were present and becoming operationalized. Second, the president needed a guarantee that a strike would eliminate all of the missile sites with a single operation. Third, the Soviet Union needed to refuse to pull out the offensive weapons from Cuba. Lastly, if the quarantine failed as an initial step, the president would escalate. If the president met all four of these criteria, we can suggest that he may have conducted the strike. However, the president could only confirm the presence of the missiles and could not determine with certainty the other criteria with the exception of a potential failure with the quarantine. Therefore, the president continued with an alternative in which the expected benefits appeared to outweigh the negative consequences. The satisficing model in Figure 12 displays how the president did not meet his trigger criteria for an offensive strike.

⁹⁰ “President John Kennedy’s Speech – Air Attack – Declassified from Top Secret September 2012,” September 2012, 1, <https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.

Cuban Missile Crisis – Airstrike (1962)

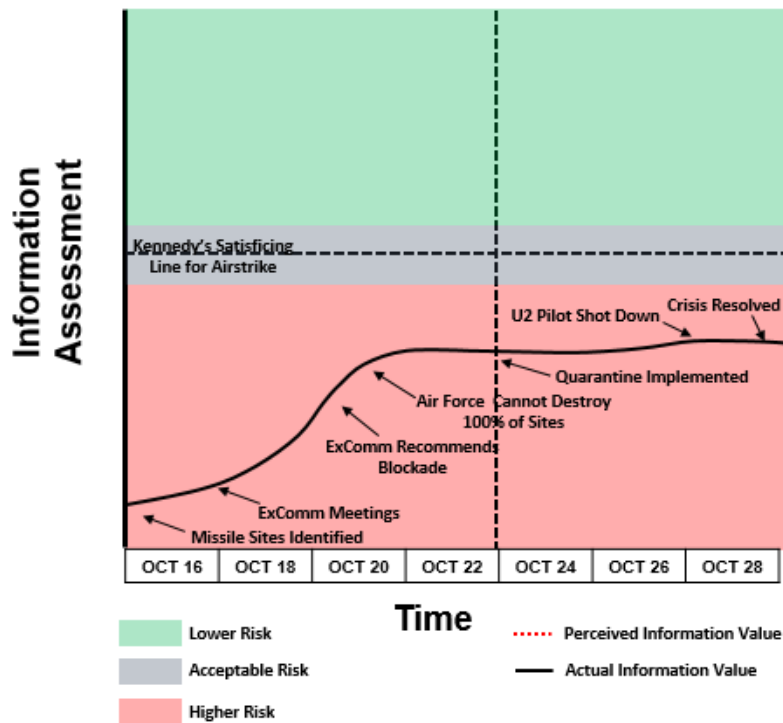


Figure 12. Cuban Missile Crisis Satisficing Model (1962)

The key takeaway from this model is President Kennedy’s ability to see through some of his personal preferences and select the most reasoned decision. The vertical dashed line shows the point at which the president implemented the quarantine and the information assessment value did not meet or exceed his satisficing criteria to conduct an offensive airstrike. President Kennedy never met his satisficing criteria for an offensive strike, which drove him to other alternatives.

G. ROGUE VARIABLE

Uncertainty in the Cuban Missile Crisis influenced President Kennedy’s decision not to conduct an offensive strike against Cuba. In reference to the objective factors of uncertainty, as described in Chapter II, the United States intelligence and surveillance professionals succeeded in identifying critical missile sites and generally understood the disposition of the enemy. The president and his team also understood the abilities and constraints of U.S. military forces. For example, the president feared that failing to destroy

every missile site in one operation could result in a retaliatory strike on the U.S. Therefore, one of the aspects that he struggled with involved the level of certainty that the Air Force could eliminate 100% of the missile sites which he inquired about multiple times in the ExComm meetings.⁹¹ This concern alone seemed enough to make him question his disposition towards the offensive engagement.

In reference to the subjective factors of uncertainty and the enemy's disposition, multiple factors existed that only the Soviet Union knew about. In Peter Jennings' ABC documentary in 1992, he collects interviews from multiple Soviet military officials stationed in Cuba during the crisis.⁹² What the president did not know, was that the Soviet Union had delivered not only large one-megaton nuclear warheads but also tactical nuclear warheads for employment in ground combat operations. The release authority for the Soviet tactical nuclear weapons resided with the Soviet military commander on the ground in Cuba due to the long delay in communications to the Soviet Union from Cuba. Additionally, Soviet submarine commanders also had the authority to engage ships with nuclear torpedoes if they deemed necessary. This was not only unknown to President Kennedy but it also worried Khrushchev.⁹³ A simple mistake at the tactical level could ultimately result in a nuclear warhead exchange and Khrushchev appeared uncomfortable about his span of control. Additionally, a ground invasion by the United States would have almost certainly resulted in a tactical nuclear attack against U.S. troops.

H. CONCLUSION

President Kennedy made a rational decision in the first six days of the Cuban Missile Crisis by selecting the naval quarantine over other offensive alternatives. The president critically analyzed every component of the rational choice model for military

⁹¹ White, *Cuban Missile Crisis*, 120.

⁹² Jones, "Peter Jennings – The Missiles of October: What the World Didn't Know," n. This documentary includes interviews with first person accounts and knowledge of the Soviet Union's offensive nuclear capabilities in Cuba but also on submarines in international waters.

⁹³ Jones, n. The documentary includes several high-ranking former Soviet military officials stationed in Cuba during the crisis. The Soviet military officials describe the quantity and capabilities of the nuclear warheads in Cuba during the Crisis. They also explain how Soviet military commanders maintained the release authority for tactical nuclear weapons if they did not have time to notify the Soviet Union.

operations and selected the option with the greatest expected value, in which the benefits exceeded the potential negative consequences. In this case, the president selected a course of action that fell outside of his particular preferences for an offensive military response. It appears evident that President Kennedy wanted to strike Cuba, but he understood that his particular preference could result in extreme costs, the death of millions of Americans and the destruction of U.S. territory. President Kennedy's ability to reason with his particular biases allowed him to think rationally in this situation.

President Kennedy needed to act quickly and without emotion. The president put his frustration with Khrushchev's dishonesty aside and evaluated each course of action with a sense of objectivity and the primary objective in mind. The magnitude of this decision left the lives of millions of Americans in the balance. President Kennedy wanted to keep Americans safe and remove Soviet offensive weapons from Cuba. He knew that an offensive strike might potentially eliminate the missile sites, but he also knew that he would put the United States in grave danger. Therefore, President Kennedy made a rational choice in his implementation of the quarantine over an offensive strike.

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VII. CONCLUSION

To answer the question of how leaders weigh risk against the value of the target and the achievement of the objective, the Rational Choice Model for Military Operations serves as a tool to process military decisions and critically review a COA before decision. This study illustrates how each case progressed through the rational choice procedure and how the decisions made in error failed to critically assess each component of the model. The study also presents two cases in which the decision-makers critically assessed each component of the rational choice model and made reasoned decisions. In review, the errors committed appeared to involve a lack of understanding at varying degrees in each respective situation. The summarized trends observed throughout the study, which influenced errors in decision-making, include information discrepancies, the distortion of costs due to emotion, and the failure to establish satisficing or trigger criteria.

A. SUMMARIZED TRENDS

The three main trends from this study all appear interconnected and one can influence another. Throughout the study, multiple observations from the cases indicate how information discrepancies can influence a decision-maker's emotions and preferences, which can eventually lead to insufficient satisficing criteria. With insufficient satisficing criteria, the decision maker may approve a COA with a falsely perceived expected value with respect to the primary objective. These trends do not always progress in the aforementioned order, but they do appear to be interdependent. The proceeding sections highlight the critical aspects of each trend.

1. Information Discrepancies

As noted in the introduction, no person has complete information. In a world of incomplete information, we must understand that we operate with bounded rationality, meaning that our ability to act rationally depends on what we know and what we do not know. A decision-maker could make a rational decision; but, as new information emerges, a previously rejected course of action could now appear as the best of the alternatives.

Therefore, to make the most rational or reasoned decision, the decision-maker must attempt to gain as much accurate information as possible before selecting a course of action.

Accurate and complete information appears as a discriminator in this study. When a decision-maker receives information, he must choose whether to believe the information. In the Son Tay case, President Nixon chose not to accept the corroborated intelligence reports that the POWs had departed the Son Tay camp, which appeared as a determining factor in the failure of the operation. Additionally, an abundance of information does not necessarily mean that it serves a valuable purpose. Erroneous and excessive information can serve as a distracting factor in the decision process. In *Eagle Claw*, one can observe that President Carter seemingly had an abundance of information, much of which later appeared to be incorrect or miscommunicated. However, contrasted with the Peruvian hostage rescue, the Peruvians collected valuable and corroborated information, which allowed them to develop a measured offensive response and achieve their objective.

Chapter II outlines the information-based risk mitigation logic, which illustrates how gathering more information can reduce the overall perception of risk. This is true to the degree that the information is correct and with the understanding that the perception of risk resides in the decision-maker's mind. Even if the decision-maker's perception of risk seems adequate, uncertainty still remains, and belief may not correspond to reality. The possibility that something may happen which no person can foresee always exists as a risk, which one cannot mitigate. Nassim Nicholas Taleb writes about these phenomena in his book, *The Black Swan*.⁹⁴ Taleb describes black swan events as occurrences that changed the course of history, but no one expected them. Similarly, micro black swan events can occur in military operations and decision-makers should not assume that an abundance of information mitigates all risk. For example, during Operation *Eagle Claw*, no one expected one of the RH-53 helicopters to collide with the C-130 airplane and take the lives of eight service members.

⁹⁴ Nassim Nicholas Taleb, *The Black Swan: Second Edition: The Impact of the Highly Improbable: With a New Section: "On Robustness and Fragility,"* 2nd edition (New York: Random House Trade Paperbacks, 2010).

2. Emotion and the Distortion of Costs

Emotion can distort the true cost of the negative consequences for a military operation. Emotion may influence a decision-maker to perform in a manner inconsistent with their natural or learned risk tolerance. For example, when a decision-maker experiences a loss during a combat operation, leaders may often exhibit a redemptive and sometimes vengeful emotion. Both of these emotions inspire action; however, sometimes they inspire irrational action. In this scenario, a leader may want to redeem a failed operation or avenge a lost life. In these emotional situations, the desire to feel the benefits of redemption or avenge a death distorts the potential costs of negative consequences.⁹⁵

In both the Peruvian hostage rescue mission and the Cuban Missile Crisis, it is logical to conclude that President Fujimori and President Kennedy separated their emotion from their decisions. By suppressing the influence of emotion, they were able to think rationally about the cost and benefit for each of their courses of action. This does not suggest that they presented a completely stoic mentality; one could observe through their preferences that emotion was present; however, they did not allow emotion to direct their pathway for their decisions. In contrast with *Eagle Claw* and the Son Tay Raid, both presidents Carter and Nixon exhibited emotions, which seemed to guide much of their decision to act. Their desire for action inspired operations that had a less than 50% chance of success or in the Son Tay case, a 0% chance of success.

3. Rogue Variable and Satisficing Criteria

Both decisions made in error failed to mitigate the effects of the rogue variable and establish recognized satisficing criteria for their respective operations. However, in both cases, the decision-makers and their teams had opportunities to reduce the effects of the rogue variable. In Operation *Eagle Claw*, the task force could have prevented the effects of some of the unexpected occurrences that emerged during the operation to include the helicopters flying above the sand storm and communication failures that influenced the aircraft collision. In this case, the rogue variable appears self-induced rather than imposed

⁹⁵ Author experienced this truth over multiple deployments as a leader to a combat zone.

by the enemy, whereas, in the Son Tay raid, the enemy chose to move the POWs. In the Son Tay case, the rogue variable inserted itself at the very beginning of the rational choice procedure.

Decision-makers must also establish achievable satisficing or “good enough” criteria as a decision rule to execute the operation. In both decisions made in error, neither team established achievable satisficing criteria to trigger their operations. They did, in essence, satisfice and make a decision; however, they satisficed with insufficient or uninformed criteria. In both cases that leaders achieved their objectives, the decision-maker and their teams established clear criteria, which either triggered the operation or drove them to seek other feasible alternatives. Determining these criteria represents an important truth that over time, the value of information may change. Therefore, in an uncertain environment, a decision-maker can control what he knows and must accept risk against the things he does not know.

However, if necessary, a decision-maker may have to modify his satisficing criteria if the cost to gain additional information changes. Perhaps the best example of this occurred in 1980, when Iranian terrorists seized the Iranian embassy in the United Kingdom and took multiple hostages. The Special Air Service (SAS) developed a plan for a hostage rescue while negotiators attempted to settle the situation without conflict. However, on the sixth day of the siege, the terrorists executed a hostage, which changed the cost of negotiating and collecting information.⁹⁶ The SAS implemented an immediate action plan, in which the trigger criteria changed due to the unexpected execution of a hostage, and they successfully conducted a rescue operation, maximizing those rescued while minimizing friendly casualties.⁹⁷ This vignette shows how the rescue team established a set of criteria but had to accept additional risks once their original cost calculations changed. The more time it took to develop the best possible plan and negotiate would almost certainly cost more human life. Therefore, they lowered their satisficing line when the costs changed.

⁹⁶ Gregory Barnes, *Who Dares Wins – The SAS and the Iranian Embassy Siege 1980* (London: Osprey Pub., 2014), sec. 672, <http://rbdigital.oneclickdigital.com>.

⁹⁷ Barnes, sec. 715.

This short vignette represents another example of how the rogue variable influences the rational choice model and our satisficing criteria.

B. DIFFERENCE IN ERRORS (*EAGLE CLAW AND THE SON TAY RAID*)

Both Operation *Eagle Claw* and the Son Tay Raid exhibit similar errors in decision-making. However, the critical difference to analyze involves the relationship between information, time, and the potential operational window. In Operation *Eagle Claw*, President Carter assumed too much risk and did not gather enough accurate information to reach reasonable satisficing criteria. Influenced by uninformed and emotional recommendations, he perceived that his chances for success were higher than they actually were. Therefore, President Carter approved an operation that had not reached its true operational window.

In the Son Tay Case, President Nixon and the JCTG continued to gather information and train extensively for an operation in which the operational window had already passed. Once the North Vietnamese moved the POWs out of Son Tay, the JCTG had a 0% chance of success to rescue the hostages. However, the JCTG continued to plan for a mission at Son Tay for months, rejecting reliable intelligence indicating that the North Vietnamese had moved the POWs out of Son Tay. Therefore, if the JCTG wanted to rescue the hostages, the mission had to occur before the enemy moved the POWs.

C. DIFFERENCE IN REASONED DECISIONS (*CHAVIN DE HUANTAR AND THE CUBAN MISSILE CRISIS*)

Both of these operations represent rational decision making but for different reasons. President Fujimori, the Peruvian president, approved an operation in which his team deliberately gathered information and prepared for the operation. The Peruvians continued to develop the situation and established an achievable set of satisficing criteria. Once they met all of their satisficing criteria, it triggered the operation and they conducted one of the most successful hostage rescue missions in history.

During the Cuban Missile Crisis, President Kennedy and ExComm also established satisficing criteria to conduct an offensive operation in Cuba. However, in this case, the president and his team determined that the criteria for an offensive strike had not yet been

met. Therefore, the president decided not to strike and implemented an alternative with different criteria. Ultimately, the naval quarantine served as the catalyst to accelerate negotiations and lead to a resolution.

D. RELATIVE SUCCESS AND FAILURE

The criteria used in this study to determine reasoned decisions against decisions made in error depend on the achievement of the stated primary goal. If the goal was not achieved, by definition the operation failed. If the goal was achieved, then the operation succeeded. Therefore, the study represents failed operations as decisions made in error and presents the successful operations as reasoned decisions. However, this logic is not always true. In some cases, a decision-maker could make a reasoned decision and the operation might fail. Likewise, the decision-maker can make a choice in error and the operation can succeed. Both of these situations depend on the rogue variable and its influence throughout the operation. A poor plan executed by technical and tactical experts can still result in the achievement of the objective. Likewise, a great plan and a reasoned decision can result in an operational failure if the rogue variable negatively affects the operation.

Additionally, a failed operation based on the aforementioned criteria can result in collateral benefits, which dampens the appearance of failure. Consider the example of a strike force conducting a raid to capture or kill a target. During the operation, the strike force kills multiple enemy combatants and captures enemy materials for intelligence analysis. However, the strike force does not capture or kill the targeted individual. By definition, the operation failed, even though the raid resulted in collateral benefits. Furthermore, if nothing perceived as negative occurs in the operation, many consider the operation a relative success because of the collateral benefits and the minimal costs incurred. However, as military professionals, decision-makers must review the decision process following an operation that fails to improve and minimize repetitive decision errors.

E. IMPLEMENTING THE MODEL IN MILITARY OPERATIONS

Decision-makers can implement the Rational Choice Model for Military Operations as a guide during the decision-making process and also as a tool before

finalizing a decision. During the Military Decision Making Process (MDMP) and the Joint Planning Process (JPP), leaders should logically progress through the Rational Choice Model for Military Operations when they discuss operational risk management in the Course of Action Approval or Course of Action Analysis steps. Taking a critical look at the team's own preferences and biases in conjunction with a thorough cost-benefit analysis may rule out courses of action that represent a lesser expected value.

Additionally, progressing through this procedure at the COA Approval or Analysis step will remind the team of the primary objective. Often when developing courses of action, associated goals emerge which may divert the team from focusing on the primary objective. Circling back and stating the primary objective during this procedure may highlight courses of action that cannot achieve the military objective.⁹⁸ President Kennedy did this multiple times as he deliberated throughout the Cuban Missile Crisis. The case study details his pre-existing COA preferences and shows how he set those aside to select a COA with a higher expected value. He did not allow those preferences to distort the objective cost-benefit calculations that his team presented. However, President Nixon continued to pressure his team to execute the operation at Son Tay, even after conflicting information continued to dampen the possibility of rescuing hostages. The desire for achieving proximate goals and Nixon's staunch pro-military position seemed to overcome objectivity.

Leaders should self-reflect and identify their pre-existing COA preferences for their own awareness. However, decision-makers must not direct COAs prior to an objective cost-benefit calculation. When decision makers direct a cost-benefit analysis with a pre-existing bias, their team may tailor the results of the calculation to satisfy the decision maker and produce a course of action that does not maximize the expected value. Asserting pre-existing biases limits opportunity and can often lead to a decision made in error as depicted in this study. Leaders should leverage the intellectual capacity of their entire team

⁹⁸ Author has served on several military staffs as the lead planner for joint operations. Throughout the Military Decision Making Process or the Joint Planning Process, the development of courses of action can often divert from the original primary objective as associated goals emerge. This can ultimately lead to the selection of a COA, which cannot achieve the primary military objective.

and seek alternate opinions, which conflict with their own. If everyone on the team appears to agree, then the team might miss something.

F. SUMMARY

I argue that risk and military decision-making is more about what we do not know than what we do know. It seems unwise to ask only the questions about what we know and wish away the things that we do not. Conventional military risk management focuses on a rudimentary view of risk management, which generally only includes observed hazards and the potential for the dangers that we know about or have experienced. Military professionals need to inquire about the difficult questions during risk discussions, which include the questions that inform the possibility of negative consequences. Decision-makers need to identify the uncertain variables for every decision instead of simply affirming what we know in risk discussions. Military professionals also need to identify their true biases and preferences when making a risk decision. Failing to acknowledge one's own biases may cloud their judgment when evaluating the costs and benefits of a decision, increasing the potential for mission failure.

LIST OF REFERENCES

- Barnes, Gregory. *Who Dares Wins—The SAS and the Iranian Embassy Siege 1980*. London: Osprey Pub., 2014. <http://rbdigital.oneclickdigital.com>.
- Bernstein, Peter L. *Against the Gods: The Remarkable Story of Risk*. New York, NY: Wiley, 1998.
- “Best Laid Plans: Great Military Blunders Documentary.” Documentary. *Timeline—World History Documentaries*. United Kingdom, n.d.
- Bowden, Mark. *Guests of the Ayatollah: The First Battle in America’s War with Militant Islam*. 1st ed. New York: Atlantic Monthly Press, 2006.
- Fischhoff, Baruch, and John David Kadvany. *Risk: A Very Short Introduction*. Very Short Introductions 270. Oxford; New York: Oxford University Press, 2011.
- Gargus, John. *The Son Tay Raid American POWs in Vietnam Were Not Forgotten*. Rev. ed. Williams-Ford Texas A&M University Military History Series; No. 112. College Station: Texas A&M University Press, 2010.
- Hillson, David, and Ruth Murray-Webster. *Understanding and Managing Risk Attitude*. 2nd ed. Aldershot, England; Burlington, VT: Gower, 2007.
- Jones, Sherry. “Peter Jennings—The Missiles of October: What the World Didn’t Know.” Documentary. ABC, 1992.
- March, James G. *A Primer on Decision Making: How Decisions Happen*. New York: Free Press, 1994.
- Perez, Carlos. “Anatomy of a Hostage Rescue: What Makes Hostage Rescue Operations Successful?” Master’s thesis, Naval Postgraduate School, 2004. <http://hdl.handle.net/10945/1367>.
- “Plan 1: Limited One Time Strike (50 Sorties) against MRBM Sites in Cuba—Declassified from Top Secret September 2012,” September 2012. <https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.
- “Plan 2: Blockade—Declassified from Top Secret September 2012,” September 2012. <https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.
- “Plan 3: Invasion—Declassified from Top Secret September 2012,” September 2012. <https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.

- “President John Kennedy’s Speech—Air Attack—Declassified from Top Secret September 2012,” September 2012.
<https://www.jfklibrary.org/sites/default/files/archives/RFKAG/217/RFKAG-217-001>.
- Shore, Zachary. *Blunder: Why Smart People Make Bad Decisions*. New York: Bloomsbury USA, 2008.
- Simon, Herbert A. *Reason in Human Affairs*. Harry Camp Lectures at Stanford University 1982. Stanford, Calif: Stanford University Press, 1983.
- Singleton, W. T., and Jan Hovden, eds. *Risk and Decisions*. Chichester [Sussex] ; New York: Wiley, 1987.
- Taleb, Nassim Nicholas. *The Black Swan: Second Edition: The Impact of the Highly Improbable: With a New Section: “On Robustness and Fragility.”* 2nd edition. New York: Random House Trade Paperbacks, 2010.
- John F. Kennedy Presidential Library and Museum. “The World on the Brink: John F. Kennedy and the Cuban Missile Crisis,” n.d.
<https://microsites.jfklibrary.org/cmc/>.
- Vandenbroucke, Lucien S. *Perilous Options: Special Operations as an Instrument of U.S. Foreign Policy*. New York: Oxford University Press, 1993.
- White, Mark. *Cuban Missile Crisis*. London: Palgrave Macmillan, 1996.
- Wilson, Richard, and Edmund A. C. Crouch. *Risk-Benefit Analysis*. 2nd ed. Cambridge, MA: Harvard Center for Risk Analysis, 2001.

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