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COUNTERING GROUPTHINK: THE INNER-CIRCLE OF INFLUENCE

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COUNTERING GROUPTHINK: THE INNER-CIRCLE OF INFLUENCE

A DISSERTATION APPROVED FOR THE
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Table of Contents

List of Tables

List of Figures

Abstract

As noted by research journalists, 't Hart, Stern & Sundelius (1997), foreign policy decisions "…are shaped in relatively small groups and informal face-to-face interaction" (p 4). This study explores the influence of small groups on the effectiveness of decision-making techniques and examines how to counter the new forms of groupthink such as an inner-circle of influence.

This project utilizes an experimental design study to test the relative efficiency of two decision-making models in a pre-scripted scenario in countering this new inner-circle form of groupthink. Using a cross-over research design, participants responded to each scenario with random assignment into one of two decision-making models: the Delphi model and an iterative feedback technique referred to in this paper as the Continuous Group Problem Solving (CGPS) model. After completing two decision-making scenarios, participants identified the most effective decision-making model overall and potential for this method to counter dominance by an inner-circle of influence.

The results from this study are significant since the findings reconceptualize the term groupthink as a simpler term implying inner-circle influence that preempts thorough decision-making. The findings also provide insight for future application in countering the deleterious control of an "inner-circle." These exploratory research results are ripe for replication in large corporate or Government organizations, The desire to have a voice in the decision process and to overcome inner-circle influence will be of value to those conducting future research.

Chapter 1: Introduction

As individuals, we often consider several potential options before making a decision. Individuals weigh the benefits and sacrifices of various options that could be realized by implementing their preferred course of action and then decide which to select. The duration of the decision-making process may vary dependent on the importance of the decision outcome to the individual. The individual must assign weights to each option and re-evaluate information against new considerations for each alternative before making a decision. The more time an individual has to make the decision, the more time there is to gather information sufficient for a thorough and informed decision to be made based on facts available.

Much the same is true when collective decisions are made by a group. The group members must find and evaluate alternatives, assign weights based on benefits or sacrifices, and comparatively evaluate the alternatives prior to making the final decision (Beebe & Masterson, 2003; Yukl, 2002). However, there are additional interpersonal dynamics to consider in a group decision process such as reinforcement of the individual's position (or the taking-of-sides), and actions by a small group of colleagues serving as an inner-circle (ibid.). This research is focused on identifying actions of a subgroup, or an inner-circle, to manipulate a group decision not fully supported by all members. The results may also provide recommendations for countering inner-circle influence during the decision-making process.

Contemporary scholars claim organizations rely on perceived interpersonal synergy to support effective group decision-making (Beebe & Masterson, 2003; Yukl,

2002; Deutsch & Coleman, 2000). Groups are known to have more relevant knowledge and ideas than individuals, and this knowledge and ideas can be pooled to improve decision quality. Active participation within the group will increase member understanding of decisions and member commitment when implementing the decision (ibid.). Groups may encounter problems reaching a final decision based on consensus, especially when one or a few members dominate the process or fail to compromise, or worse, fail to participate. This is one reason individuals often seek out a subgroup within the main group; a group were members have similar interests and are more likely to reach consensus within the subgroup. Group members may also join an inner-circle of members who have similar perceptions of the outcome intended by leadership of the organization or the decision-making group. Thus, this in-group of people with similar interests or objectives takes the form of an inner-circle. While the inner-circle allows consensus it may also stop short of thoroughly reviewing alternatives if a premature consensus is reached (ibid.).

In 1997, 't Hart, Stern & Sundelius noted that:

> "As the eminent political psychologist Philip Tetlock and his associates (Person, McGuier, Change, and Feld) have argued, 'Most political decisions in the workplace today are the product of a collective decision-making process'. One can make a strong prima facie case that how this group decision-making process unfolds plays a crucial role in determining the fate of (organizations)…" (p. 123).

As organizational leaders depend more on the use of groups for information, advice and decision making, the fate of the organization is at risk as assumptions may be left unchallenged and the views of dissenters cast aside if consensus is reached prematurely (Beebe & Masterson, 2003; Deutsch & Coleman, 2000; Jablin & Putnam, 2000).

Janis first proposed the classical concept of groupthink in 1972, later updating the concept to acknowledge the rational decision process (Janis, 1982). His updated concept of groupthink includes these shortcomings; incomplete problem definition, incomplete development of solution alternatives, and a lack of review and analysis prior to group consensus seeking (ibid.). Premature consensus or concurrence seeking group members performing in highly visible or stressful situations was identified by Janis as the reason groups did not thoroughly evaluate the decision to be made. "While unfashionable among mainstream social psychologists during most of his career, Janis' position helped to lay a foundation for the exciting wave of research into social cognition… since the early 1980s. Like Janis, much of this more recent work acknowledges the importance of emotionally charged 'hot' cognition so common in real-world decision making…" ('t Hart, Stern & Sundelius, 2007, p. 36). As acknowledged by Janis (1982), emotionally charged situations can drive incomplete analysis of the decision criteria and solutions as typical in individual decision-making and thus are not necessarily a sign of groupthink. In 1982, Janis modified and updated his groupthink model to focus on concurrence-seeking leading to premature consensus. More recently, action by an inner-circle to influence a decision and pushing for unanimity or premature consensus is identified by Van Assche (2008) and today's media as the new definition of groupthink.

Janis' theory of 1982, attributes groupthink to collective avoidance, escalation, and collective optimism (Van Assche, 2008; 't Hart, Stern & Sundelius, 1997). Group member optimism, either by a subgroup or by all, is the attribute 't Hart, Stern & Sundelius identified as the key element behind groupthink when no pressure is evident

as called for by Janis in his groundbreaking theory of groupthink. Collective optimism and avoidance were labeled as neo-groupthink by 't Hart, Stern & Sundelius in their book, *Beyond Groupthink* (1997). Van Assche (2008) identifies collective optimism, unanimity, and the desire to avoid doubt as key issues behind an inner-circle of influence within the Bush administration decision to enter the Iraq War. In recognizing this inner-circle of influence as a form of groupthink, the Senate Intelligence Committee has endorsed this new definition of groupthink (ibid.) and effectively removed the label of neo-groupthink proposed by 't Hart, Stern & Sundelius. Social and public media have further endorsed the new definition of groupthink as decisions made by, or heavily influenced by, an inner-circle (BBC News, 2012; CNN, 2012; Dougherty, 2012). The cause and effect of groupthink proposed by Janis, and the new inner-circle of influence variation of groupthink, will be explored in addition to methods to counter inner-circle influence will be analyzed further in the literature review.

Ultimately, this research seeks to answer the questions: How extensive is the inner-circle of influence phenomenon, commonly recognized as groupthink, in decision-making? And, how effective are two decision-making models in countering this influence? The qualitative results of this research are exploratory pilot study and ripe for an expanded replication with quantitative analysis.

Chapter 2: Literature Review

To fully understand the workings of groupthink and the decision-making process, one needs to know the context in which Janis derived his definition of groupthink and then understand the subsequent research over the last 30 years. Research trends between the world wars evolved from organizational level theories of the individual, the role of the individual in groups, group cohesion, and group problem solving and decision-making. These theories were later revised between 1950 and the late 1970's to form new organizational theories used by Janis (1982) to revise and enlarge his concept of concurrence seeking as groupthink.

In this chapter the literature on the decision-making process is reviewed to determine first; the continuing relevance of Janis' groupthink model with subsequent research, and the new "inner-circle" known as groupthink, and second; to identify decision-making techniques that enable a small decision group to overcome the problems commonly associated with the inner-circle of influence labeled as the new groupthink phenomenon. The goal is to identify the circumstances that lead to groupthink and to identify potential strategies to counter it effectively as it occurs. This research will be valuable to those organizations dependent upon small groups for strategic decision making.

The Decision Process

Philosophers and historians alike ponder what past decisions say about our values and how we decide to allocate resources. Research has focused on methods, such as risk management analysis, to improve the decision-making process and obtain a

desirable outcome. Tradition and research have taught us to use constraints in making the best decisions possible.

> "Sometime in the midst of the last century, Chester Barnard, a retired telephone executive and researcher of The Functions of the Executive, imported the term 'decision making' from the lexicon of public administration into the business world. There it began to replace narrower descriptors such as 'resource allocation' and 'policy making.'
>
> The introduction of that phrase changed how managers thought about what they did and spurred a new crispness of action and desire for conclusiveness… 'Policy making could go on and on endlessly, and there are always resources to be allocated…'Decision' implies the end of deliberation and the beginning of action." (Buchanan & O'Connell, 2006, p.33).

As we try to employ the latest technology and gather all pertinent facts surrounding the decision to be rendered, only limitations on time and the availability of information prevent us from making rational decisions (ibid.).

Decision processes or models are typically cognitive or normative in perspective (McDermott, 2006). The cognitive process adapts to the parameters and changes thereto during the decision-making. A normative process applies a rational and logical analysis of alternative choices to make the best informed decision. These two approaches are often combined lead one to a cognitive process following a logical order of analytical steps to evaluate and weigh the alternatives to identify the best decision. The end result is the rational model commonly used today (ibid.).

Nominal & Rational Methods

The nominal method, or nominal group technique (NGT), is ideal for making a quick decision to avoid the endless discussions mentioned by Buchanan and O'Connell (2006). The NGT method as originally proposed by Delbecq and Vande Ven (1971), calls for group members to present their solution along with an explanation. Solutions are grouped by like kind based on common parameters, and then rank ordered to

identify the solution considered best. NGT offers diversity of thought with the potential for combining ideas into a new solution alternative. The availability of synergistic solutions can lead to improved decision-making (Beebe & Masterson, 2003; Deutsch & Coleman 2000; Gustafson, Shukla, Delbecq, &Walster, 1974). The solution identified with the best ranking score then becomes the final decision. The standard procedure to reach final decision includes these five steps:

1. Introduction of purpose and procedure of the group meeting, such as resolution of a hot, emotional issue or one of significant importance.
2. A reasonably short period of silent generation of ideas with no discussion among group members. This step enables those who think well without disturbance to have quiet time. It also avoids undue influence by the most vocal members.
3. Sharing ideas and explanation behind the group member proposed solutions.
4. "Neutral" group discussion of details and intent for a common understanding of each solution proposed.
5. Rank ordering to identify the solution that best meets original purpose. Either by a vote or point scoring system for each solution. The meeting concludes with a known outcome shared with each participant. (NGT, 2010)

The NGT technique featuring silent brainstorming (and silent brain writing to generate a maximum number of alternatives), when compared to techniques calling for interactive groups is thought to produce more creative ideas and stimulate balanced

participation by group members. Group members may gain greater satisfaction and a sense of pride of ownership (Delbecq & Vande Ven, 1971). For decisions requiring extensive discussion and analysis, the nominal approach can be expanded if time is available to allow a rational exchange of ideas between interactive group members (ibid.).

Rationality applied in a decision process is based on the realist's rational actor model wherein one acts in a logical and ethical manner. An alternative, "instrumental rationality" is rational only if one accepts the leader's goals regardless of intent (Damerow, 2010). Over time, a rational decision process resulted in the interactive rational decision-making model, figure 2-1. The model follows a logical and orderly path from problem definition through generation of alternatives, evaluation, and a final decision (McDermott, 2012).

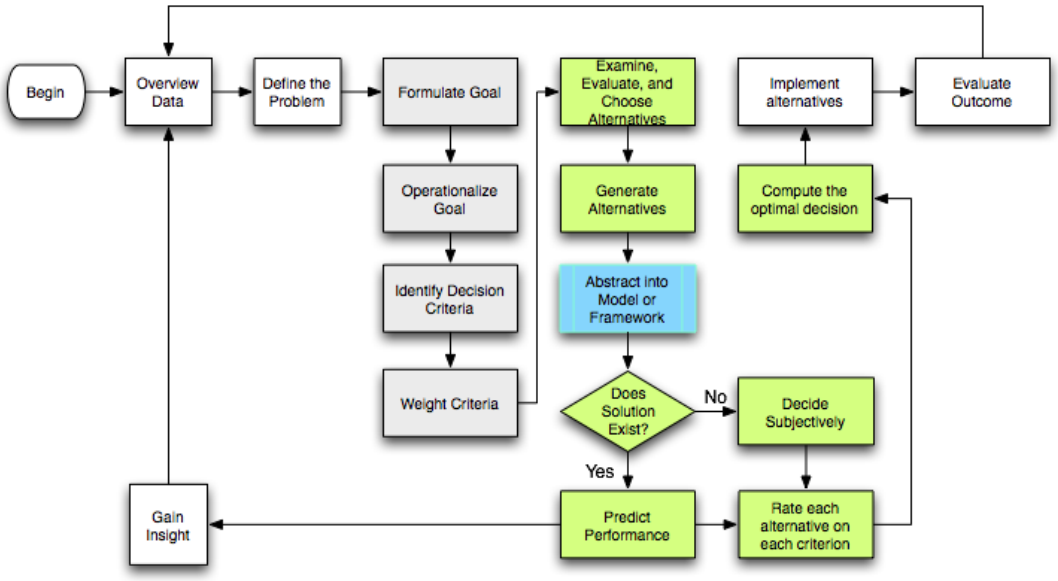

Figure 2-1: Rational Decision-Making Model

The first step is defining the exact problem which may not be obvious to the group making the decision. Leadership must provide some guidance to assist in defining the problem and the desired outcome (ibid.). Once the group members agree upon the problem definition, it becomes possible for the group members to effectively generate alternative solutions.

The second step requires group identification of evaluation criteria to measure the potential outcomes (success or failure), of a given alternative solution. An initial evaluation of alternatives may lead to generation of new alternatives and a second evaluation prior to final assessment of the alternatives to be considered. Upon reaching final assessments of alternatives, the group is then ready to decide on the best alternative. These steps conclude the basic rational process. There are multiple versions of this model based on 7, 8 or even a 9-step process, most if not all, contain these basic steps above (ibid.). Additional steps added to the basic process include; implementing the decision, monitoring the outcome over time, generating feedback on effectiveness of the decision, followed by a review of the basic steps of problem definition leading to selection of an alternative to identify possible improvements that could lead to a new or better solution and implementation (ibid.).

Limitations of time, available information, effective evaluation criteria, the participant's cognitive abilities, and political restraints, have detracted from the popularity of the rational decision-making model (McDermott, n.d.; Usry 2004). It is argued today that the model is still valuable if the political aspect is omitted.

In an attempt to resolve some of the shortfalls in the rational decision model, in the early 1990s, the U.S. Army War College conducted a strategic leadership

conference to forecast future needs of leadership in leveraging information technology and real world factors within the rational model. The workshop teams proposed use of the rational decision-making model combined with a "naturalistic approach" to offer leaders more flexibility for innovation while following the basic model (Shambach, 1996). The flexibility allows for intuitive and analytical methods to mix during the decision process. They concluded that future leaders should be given the flexibility to expand the rational model to accommodate decentralized decision-making and virtual technology in an attempt to capture real world events and respond accordingly (ibid.).

Today, the U.S. military continues to use the rational MDMP as its primary decision tool. As outlined in the Department of Army (DA) Field Manual (FM) 101-5, the MDMP consist of the following steps:

Step1. Receipt of Mission.
Step 2. Mission Analysis.
Step 3. Course of Action (COA) Development.
Step 4. COA Analysis.
Step 5. COA Comparison
Step 6. COA Approval.
Step 7. Orders Production (implementation guidance)

To prepare for civil-military cooperation in emergency response situations, the military now uses "The Crisis Action Planning Model" (Shambach, 1996). This model follows the sequential path outlined below:

- Set Organizational Goals and Objectives
- Develop Alternatives
- Compare/evaluate alternatives using objective criteria and weights based on the leader's guidance
- Choose among alternatives the one that best matches the criteria
- Implement the decision
- Command, lead and manage
- Feedback loop-observe results and begin process again as required

The Crisis Action Planning Model is based on the rational model and the use of synergy available through collaborative decision-making. Leveraging the synergy that can occur through interaction, the model aids the group in applying critical thinking to overcome homogeneity, polarized cohesion, biases, and suppression of dissenting opinions (ibid.). Note the final step in this model is the feedback loop for application of critical thinking called for by Van Assche (2008), Usry (2004), 't Hart, Stern & Sundelius (1997), and Janis (1982).

Use of Expert Consultants

Janis responded to critics in 1982 by adding the option to use expert consultants during the decision-making process he recommended to prevent groupthink. Previous to this addition by Janis, the Delphi model became a popular tool for policy making during the 1970's. The Delphi model evolved at the onset of the Cold War. As developed by the U.S. Army Air Corps, the Delphi model employs a panel of experts to provide cognitive input for discussion by others as a form of creative synergy (Helmer & Dalky, 1999). Several versions of the Delphi model were adapted for policy decisions and general decision-making dependent upon a group of subject matter experts (SME's). The Delphi model employs a multiple round of communication feedback to allow interactive decision-making in a virtual and democratic process with the group leader making the final recommendation or final decision based on the input of the SME's. The interaction provides a structured process to create "collective intelligence" (Hiltz & Turoff, 1978).

The Delphi structure is based on several key characteristics. Characteristics include anonymity of participants and monitoring of regular feedback by a panel

facilitator or group leader (Rescher, 1998). Contributions from the panel of experts are collected in response to a survey or questionnaire after consent to participate is arranged. The facilitator moderates the interaction of participants by filtering out superfluous or irrelevant comments between rounds of discussion to avoid negative feedback often generated in face-to-face (FtF) discussions. The director then filters comments received and initiates another round of input based review of the prior round of comments received. The series of communication efforts is diagramed in figure 2-2 (ibid.).

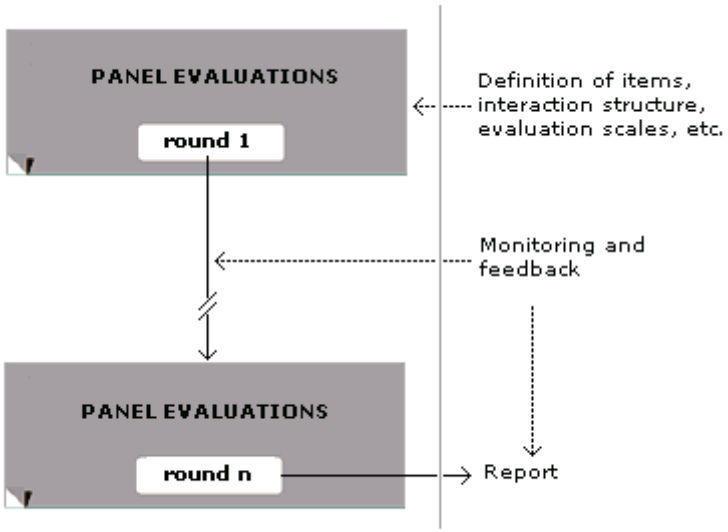

Figure 2-2: The Delphi Model Communication Structure

A Michigan State University (MSU, 1994) extension group listed the following steps or rounds of panel discussion and feedback in order to:

1. Identify the problem
2. Develop alternatives
3. Analyze and evaluate alternatives
4. Explore background information leading to differing evaluations
5. Seek new information
6. Correlate informed judgments based on new evaluations
7. Conclude with a summary or final outcome

The MSU group confirmed these steps outlined above were similar to the nominal or rational group processes. The intent of the multiple rounds of evaluations in Delphi model is to gain consensus through the iterative process (ibid.).

The Delphi model has been known to produce poor results in some cases and to be time consuming. The success of the participants is dependent upon the depth of their knowledge and written skills. To limit time impacts, repetition, or failed consensus due to lack of effective input, Murray Turoff (as described in Rescher, 1998) proposed the Delphi model be used in support of decisions by the group leader or those responsible for the final report. The leader or facilitator is then responsible for bringing closure by determining a final outcome.

Inner-Circle Decisions and Groupthink

As fallout from the corporate failures by Enron, Xerox, Tyco, Qwest, HealthSouth and several other firms, to protect stock holder interest, the terms groupthink and inner-circles manipulation became synonymous with one another. Inner-circle failures to remain objective and protect stockholder interest were blamed as the mechanism for groupthink to occur. James Fanto (2003) in his research paper, "*Whistleblowing and the Public Director: Countering Corporate Inner-Circles*", references several cases of corporate corruption labeled as groupthink where one or more inner-circles of decision-

makers are identified as responsible for failure of the firm to serve stockholders responsively. Fanto identified some cases where failure to uphold stockholder interest were directly related to inner-circle competition wherein on inner-circle "cooked the books" to appear more successful to gain reward over competing inner-circles or divisions within the organization. Multiple references from media sources label this inner-circle culture of manipulation as groupthink. By the late 1990s, the media had embraced this new label of groupthink and continue to refer to groupthink as failure by inner-circles of decision-making teams.

As evident in today's media, the term groupthink has emerged as an indicator of failed decision-making by an inner-circle of confidants. News stories such as the Bush administration decision to enter the Iraq war (Isikoff & Corn, 2012, Van Assche, 2008), and the ABC Nightline and Philadelphia Enquirer (Cohen & DeBendedet, 2012; Sheridan, 2012), coverage of Penn State university officials who discredited the university in their handling of the Jerry Sandusky scandal, continue to identify inner-circles behind the scene accused of groupthink. In President Bush's case, the inner-circle called themselves the "Vulcans" and consisted of many strong personalities to include the President, Vice President Chaney, Defense Secretary Donald Rumsfeld, his deputy Paul Wolfowitz, National Security Advisor Condoleezza Rice, and Secretary of State Colin Powell (Van Assche, 2008). The Vulcans are accused of high pressure tactics in persuading the security community into validating evidence supporting the need to intervene in Iraq to prevent use of weapons of mass destruction.

Additionally, as reported by CNN and BBC News, the ongoing Syrian conflict is credited in part to faulty decisions by Al-Assad's inner circle (BBC News, 2012; CNN,

2012; Dougherty, 2012; Levs, 2012). It appears members of the media are now focused on who is responsible for failed decision-making and often reference an inner-circle of influence is involved.

In his 1982 book on groupthink, Janis acknowledges the work of an inner-circle may be at hand in some of the political case studies he reviewed. Janis claims at least two of the case studies (political decisions) include signs of an inner-circle directing the decision outcome without use of structured decision-making model. Janis sites the inner-circle identified by Neville Chamberlain within his own War Cabinet as a driving force that failed to prevent the escalation of WWII. He also believes the Bay of Pigs fiasco under the Kennedy administration is another example of an inner-circle failure to identify the best alternative. This inner-circle was driven by Robert Kennedy and Dean Rusk whom other group members believed were acting on behalf of, and empowered by, the President. The Kennedy inner-circle was identified as the group of "wise men" the President consulted during several political decision of his administration ('t Hart, Stern & Sundelius, 1997). Although these historical cases were acknowledged by 't Hart, Stern & Sundelius, they hypothesize polarization and other causes may in fact be the driving force in some of the historical fiascoes studied by Janis.

Deutsch and Coleman (2000) have found a cohesive subgroup of the team, acting as an inner-circle and empowered by the leader or empowered by the group hierarchy, may pressure and influence the team decision by avoiding critical thinking and seeking concurrence. This pressure may take the form of dehumanizing or irrational actions toward those who do not concur. This is consistent with much of the research and theory of the past 30 years indicating group decision-making is not consistently

structured in an orderly way with rational thought (ibid.). Rather it is flawed by cognitive bias, group liability, group restraints, or organizational restrictions that limit the group's ability to perform effectively (ibid.).

Ineffective group performance is the result of limited discussions and interaction. Janis (1982) claims the symptoms of defective decision-making will also be present in ineffective groups exhibiting symptoms of groupthink. He believed the more often a group displays these symptoms; the worse will be the quality of its decisions, on the average (ibid.). He acknowledged groupthink symptoms can be driven by concurrence-seeking typical of a group pressing to meet a deadline, or as guided and manipulated toward premature closure by an inner-circle (ibid.).

Several research teams (Beebe & Masterson, 2003; Deutsch & Coleman, 2000; Jablin & Putnam, 2000; 't Hart, Stern & Sundelius, 1997), disagree with consensus-seeking as being a key factor in groupthink and claim cohesion of the group can lead to a positive consensus effect or a rational decision. The team of 't Hart, Stern & Sundelius refer to the 1981 research by Shaw as confirmation of cohesiveness as positive and desirable among group members. The desirable effects are: improved member-to-member communication, increased member satisfaction, decreased member tension, and effective group task accomplishment (ibid.). The use of situational leadership techniques with a focus on task and objectives for the decision group can increase cohesiveness and enhance the group's problem solving ability. The leader is responsible for providing the decision background and may recommend a rational model to the group. The leader selects the appropriate model, Delphi etc, and identifies relevant factors associated with the decision (ibid.). One note regarding the

effectiveness of face-to-face interaction (of nominal and rational methods) is the potential for reduced generation of alternative solutions and critical thinking during analysis of alternatives. The face-to-face interaction also allows undue influence of inner-circle members. The use of the Delphi technique to avoid face-to-face interaction, or to gain insights from a panel of experts, can lose the face-to-face communication richness and trust among members as the group leader has directional authority over discussion of alternatives. Although directional leadership can be constructive for identifying the problem, undue directional influence by the leader is countered by the new model proposed below.

General Group Problem Solving Counters Groupthink

In effective decision-making models, the group acknowledges its goals, objectives and task to perform (brainstorming, analysis & evaluation, etc.) in making the decision. The decision will be dependent on having good options or good alternatives. The group may then draw a conclusion or make a recommendation for implementing the decision it has made (Beebe & Masterson, 2003; Deutsch & Coleman, 2000; 't Hart, Stern, & Sundelius, 1997). As claimed by 't Hart, Stern & Sundelius (1997), a model of high-level policy decision-making was missing until 1983 when Aldag & Fuller proposed the General Group Problem Solving (GGPS) model as comprehensive enough to account for all the missing factors. They claim the GGPS model is a decision tool that can be used for any decision-making challenge, at any level. A variation of the GGPS is proposed by 't Hart, Stern & Sundelius to counter this shortcoming and the input from an overbearing or directional leader (shown below).

The GGPS model includes the five main phases: problem recognition, development of alternatives (solutions), evaluation and selection of the best alternative, implementation of solution, and decision control. Fuller and Aldag explain that all of Janis' groupthink factors are addressed and countered in these five phases (ibid.). For example, Janis' groupthink defects can be categorized by the following phases:

1. Incomplete survey of each objective is a failure during the problem recognition phase.
2. Incomplete survey of each alternative solution is a failure during development of alternatives.
3. Failure to examine risk of preferred alternative is a failure during the evaluation and selection of the best alternative.

To counter the potential for groupthink, leadership bias, or bias in the form of inner-circle influence, 't Hart, Stern & Sundelius propose a variation to the Aldag & Fuller model for inclusion of a continuous feedback process to the GGPS model. This would be similar to the recommendation for a second chance review of the final decision as proposed by Janis in 1982, but goes further by applying the continuous feedback in all steps of the process. The researcher refers to the modified GGPS model as a Continuous Group Problem Solving, or CGPS, model. The CGPS model includes a feedback loop as shown in figure 2-3 to allow for quality improvement in; generation of alternatives, decision quality, implementation, and satisfaction of the leader and group members (ibid.).

The modified Aldag & Fuller model also presents all characteristics of the decision process in neutral terms. Neutrality is further enhanced when, and if, an anonymous feedback process is included by the leader. Finally, the model adds political influence factors and a measure of proactive actions by the group for consideration in feedback.

The addition of multiple feedback opportunities provides for dynamic interaction throughout the CGPS model. Thus, the model is more successful than most in applying critical thinking and identifying bias ('t Hart, Stern & Sundelius, 1997), and may be a good tool for countering inner-circle influence. The basic GGPS model proposed by Aldag and Fuller is modified as shown in figure 2-3 by addition of the feedback loop at the bottom indicating feedback reviews for each step of the process, to include a final review of all steps before making a final decision. The continuous feedback loop is proposed by 't Hart, Stern & Sundelius as a tool for capturing real world changes and developments as new information is presented during the decision process. Van Assche (2008) claims the potential for constant negative feedback, or a shocking contradiction of group perceptions (such as the 1968 Tet offensive in the Viet Nam War), are the two factors evident in case studies effective in changing concurrence or unanimity of thought. The constant feedback, or wide-eyed reality of a shocking turn of events, was found to be effective in bringing negative feedback to the forefront for resolution. Case studies reviewed by Van Assche indicated negative feedback was easily overlooked without a mechanism to constantly reintroduce the feedback. Perhaps constant negative feedback together with smaller perception changes (not the shock factor Van Assche

describes), would also be effective in changing group perspectives and decision outcomes.

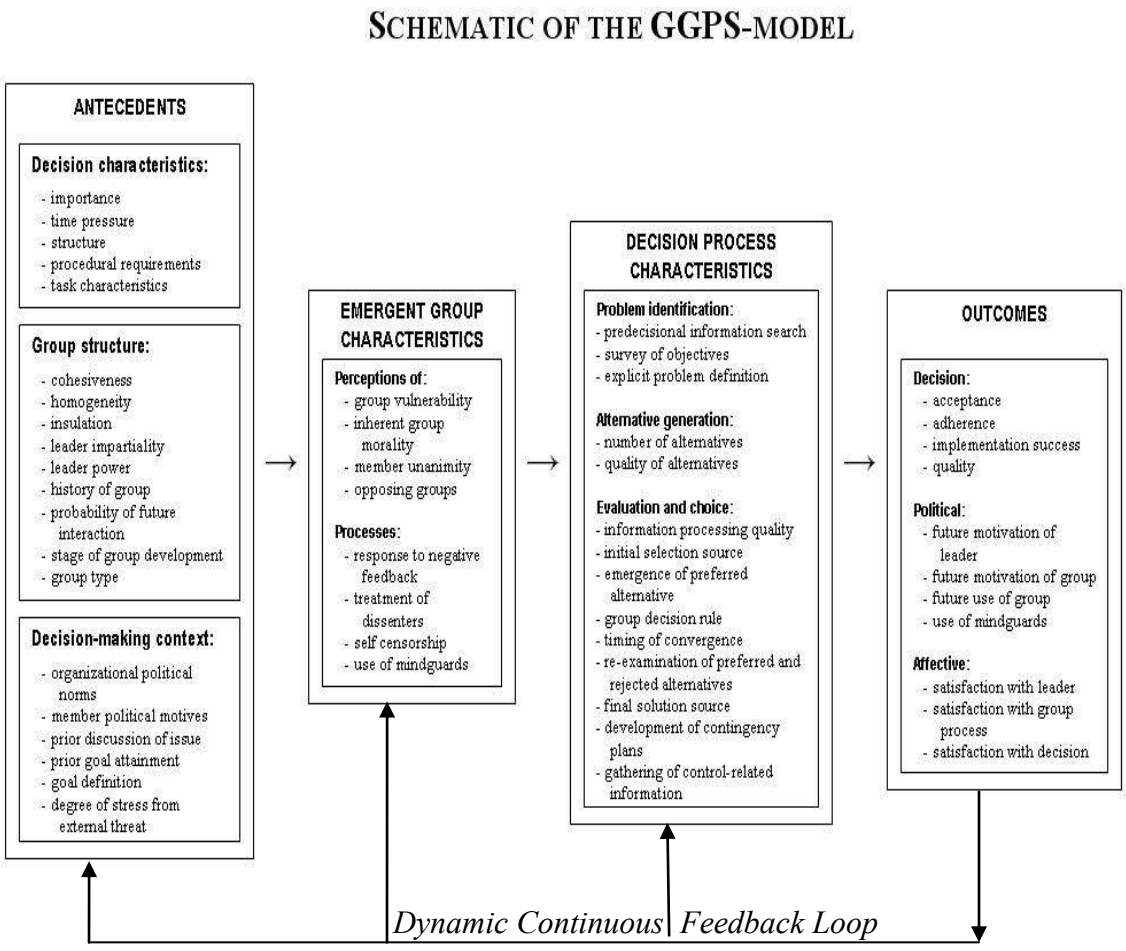

Figure 2-3: Modified Fuller and Aldag GGPS model (CGPS)

(*From Wikipedia w/addition of the dynamic continuous feedback loop*)

The Groupthink Phenomenon

Irving L. Janis is credited with coining the phrase "groupthink" in 1972 and in his book by this title issued in 1982, he states acknowledges both groups and individuals have similar shortcomings, yet the group can bring out the best in a person or the worst.

Janis continues to explain "groupthink" as an easily understood term to describe a way of thinking for people when they become a part of a cohesive in-group with the desire for harmony and closure leading to premature consensus. Premature consensus (closure) is reached through inadequate formulation of alternatives or a limited perspective regarding the number of acceptable alternatives (ibid.). This lack of critical thinking together with high cohesiveness among group members are the central features identified by Janis in updating his definition of groupthink.

The in-group may also be a subgroup or inner-circle within a larger group. Janis later refers to groupthink in the following terms.

> "I use the term 'groupthink' as a quick and easy way to refer to a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the member's striving for unanimity override their motivation to realistically appraise alternative courses of action. 'Groupthink' is a term of the same order as the words in the newspeak vocabulary George Orwell presents in his dismaying *1984* – a vocabulary with terms such as "doublethink" and "crimethink." By putting groupthink with those Orwellian words, I realize that groupthink takes on an invidious connotation. The invidiousness is intentional: Groupthink refers to a deterioration of mental efficiency, reality testing, and moral judgment that results from in-group pressures. (Janis, 1982, p. 9)

Janis develops his groupthink theory based on cause and effect of observable group symptoms found in case studies in crisis situations. Janis initially identified eight symptoms of groupthink in 1972 (ibid.). Later, after agreeing that many of these symptoms were in fact basic causes of poor decision-making (and lack of a structured decision methodology such as the rational model), Janis subdivided the symptoms into three main types below (ibid.).

Type I: Overestimations of the group – its power and morality

1. An illusion of invulnerability, shared by most or all the members, which creates excessive optimism and encourages taking extreme risks.

2. An unquestioned belief in the group's inherent morality, inclining the members to ignore the ethical or moral consequences of their decisions.

Type II: Closed-mindedness

3. Collective efforts to rationalize in order to discount warnings or other information that might lead the members to reconsider their assumptions before they recommit themselves to their past policy decisions.

4. Stereotyped views of enemy leaders as too evil to warrant genuine attempts to negotiate, or as too weak and stupid to counter whatever risky attempts are made to defeat their purposes.

Type III: Pressures toward uniformity

5. Self-censorship of deviations from the apparent group consensus, reflecting each member's inclination to minimize to himself the importance of his doubts and counterarguments.

6. A shared illusion of unanimity concerning judgments conforming to the majority view (partly resulting from self-censorship of deviations, augmented by the false assumption that silence means consent).

7. Direct pressure on any member who expresses strong arguments against any of the group's stereotypes, illusions, or commitments, making clear that this type of dissent is contrary to what is expected of all loyal members.

8. The emergence of self-appointed mindguards – members who protect the group from adverse information that might shatter their shared complacency about the effectiveness and morality of their decisions.
(Janis, 1982, p. 174)

Type III symptoms are common of the in-group unanimity. A subgroup within the decision team, an inner-circle of high-esteem colleagues, may be more prone to display all three types of symptoms listed above, in part or in whole, while using

pressure on group members to conform to the inner-circle goals and objectives. Janis (1982) explains this is the case in the Chamberlain WWII decision and the Pay of Pigs fiasco as discussed previously. He also refers to research by others such as Baruch Fischhoff who responded to Janis' theory by cautioning readers to consider that people consistently overestimate the predictability of past events using 20-20 hindsight once they know how events unfolded (ibid.).

Causes of Groupthink and Inner-Circle Influence

Janis is quick to point out that nobody is perfect and to err is human. In our efforts to seek coherence and support from others we let ourselves develop chronic blind spots in our logic (Janis, 1982). The inner-circle is also subject to blind spots when they refuse to accept input from other members of the group or outside expert opinions. Janis notes the blind spots occur as a disturbance in the individual's behavior in decision-making due to temporary states of elation, fear, or anger thus reducing mental efficiency (ibid.). Of course, some blind spots can evolve from the personality and personal experiences of the individual and therefore not a product of groupthink. The limited mental efficiency mentioned above is also attributed to groupthink by 't Hart, Stern & Sundelius (1997). Deutsch & Coleman (2000), and 't Hart, Stern & Sundelius (1997), acknowledge reduced mental efficiency is generated by deadlines or other pressures for closure.

Cohesiveness is identified as a problem by Usry (2004), 't Hart, Stern & Sundelius (1997), and Janis (1982), when it leads to members becoming too close and too sensitive to each other's feelings. This can result in members agreeing too quickly on a solution without a thorough and objective review of the problem. This can also

lead to fear of rejection by fellow members if one speaks out against a majority (or inner-circle) during decision-making. As a result, critical analysis of the problem is avoided and creativity is limited (Usry, 2004; 't Hart, Stern, & Sundelius, 1997; Shambach, 1996). The main detraction or risk involved with groupthink is concurrence-seeking which leads to overconfidence and possibly a feeling of being bullet-proof or invincible (Janis, 1982). The group may overestimate their chances of success and take on too much risk. Often the illusion of moral superiority goes with the bullet-proof mentality. This may lead the in-group (*or inner-circle*), into decisions that the individual members would consider as immoral or unethical when making their own decisions (Yukl 2002; Janis, 1982).

In his updated philosophy on groupthink, Janis (1982) summarizes three conditions that must be present for groupthink to occur. That is, these conditions are cause for group members to no longer remain objective, and cause groups to deviate from the rational decision model. The three cultures occur under the following circumstances:

1. Insulation of the policy-making group, which provides no opportunity for the members to obtain expert information and critical evaluation from others within the organization.

2. Lack of a tradition of impartial leadership. In the absence of appropriate leadership traditions, the leader of a policy-making group will find it all too easy to use his or her power and prestige to influence the members of the group to approve of the policy alternative he or she prefers instead of encouraging them to engage in open inquiry and critical evaluation

3. Structural factors such as group processes or "norms" can provide shortcomings if methodical procedures for dealing with the decision-making tasks are not inclusive.
(Janis, 1982, p. 176)

Impartial or directive leadership, either by the leader or by the inner-circle, along with signs of high cohesion among team members are indicators that groupthink may occur. The inner-circle can use these conditions above to their advantage as they can more easily influence the decision of the other team members through group pressure (ibid.). Janis also found such concurrence-seeking tendencies probably are stronger when high cohesiveness is based primarily on the rewards of being in a pleasant "clubby" atmosphere or gaining prestige from being a member of an elite group (ibid.).

Identifying Groupthink and the Inner-Circle of Influence

As mentioned previously by 't Hart, Stern & Sundelius (1997), and Janis (1982), groupthink has the potential to occur every time a cohesive group meets. The following four questions were proposed by Janis as a structured approach in reviewing case studies to identify cohesive groups and the possibility of groupthink.

1. Who made the… decisions? Was it essentially the leader alone or did *group* members participate to a significant degree? If the members participated, were they in a *cohesive* group?

2. To what extent was the (decision) a result of *defective decision-making procedures* on the part of those who were responsible?

3. Can *symptoms of groupthink* be discerned in the group's deliberations? (Do the prime symptoms pervade the planning discussion?)

4. Were the *conditions* that foster the groupthink syndrome present?

(Janis, 1982, p. 14)

Even strong individuals with high self-esteem and low dependence can get caught up in groupthink, especially when defective decision-making promotes concurrence-

seeking as pressure toward unanimity (ibid.). Janis (1982) states, "even when some symptoms are absent, the others may be so pronounced that we can predict all the unfortunate consequences of groupthink" (p. 198). Unfortunately, the symptoms may not be evident if the individual members do not exhibit concurrence seeking.

It is possible for an inner-circle to reach their goals without actively seeking concurrence. The inner-circle may be able to operate undetected or in a way to reinforce other group members who favor the same outcomes desired by the inner-circle ('t Hart, Stern & Sundelius, 1997). As a result, false negative findings (the failure to recognize or know if a symptom occurred), is highly possible. It is also possible for a false positive observation. That is, the observer may recognize several of the symptoms yet concurrence seeking and groupthink may not have occurred (ibid.). Van Assche (2008) refers to findings of 't Hart, Stern & Sundelius, as well as findings of Esser, to conclude unanimity of group members (or within an inner-circle) may create blind spots and groupthink tendencies without the presence of high stress or concurrence-seeking called for by Janis as factors leading to groupthink.

No research to date has tested the concept proposed by Janis and there appears to be little or no support of the model in its entirety ('t Hart, Stern & Sundelius, 1997). Much of the past study of groupthink involves previous governmental policy decisions or studies involving student volunteers and may be problematic. Use of students may provide good insights to problem-solving dilemmas and they are our organizational leaders of tomorrow, but they cannot fully grasp a decision-making exercise they are not trained to perform (ibid.). Unfortunately, extreme situations involving political compromise and internal or external power struggles, and the workings of an inner-

circle, are almost impossible to replicate for study. Therefore, the original intent behind Janis' theory, of cohesion as a necessary force, still has not been tested. The fact that Janis extracted his model from a study of "hot" policy decisions, does not lend itself to fit everyday events or common situations that can be reproduced in the laboratory (ibid.).

The one consistent finding of past studies is the tendency for impartial and directional leadership to promote groupthink (ibid.). A possible fallacy exist as failure to evaluate alternatives is one factor common to both poor decision-making and directional leadership, and although it may lead to a poor decision it does not always result in groupthink (ibid.).

Group Dynamics & the Inner-Circle

The individual is often considered to be the ideal form of creativity. Less conflict is involved in the decision-making process of the individual (Deutsch & Coleman, 2000). The individual's decision process is based upon self-interest and gain. It is this self-interest and desire for benefits that drive the individual to join a group or an inner-circle (ibid.). It is the group roles and norms that allow common objectives and goals to be achieved in a way satisfactory to both the group and individual. Synergy is the result of multiple individuals who combine their creative processes for a better decision outcome (ibid.). Beebe and Masterson (2003) describe high performing teams as having a strong sense of interpersonal commitment, team purpose, urgency of goals, and awareness of a team approach. The inner-circle is sustained by this same level of commitment to the members of their in-group. Directional leadership or strong subgroup members (such as an inner-circle of high status colleagues), may be able to

influence the group decision by exploiting the symptoms identified by Janis in his three types of groupthink described above (‘t Hart, Stern & Sundelius, 1997).

Group Awareness

There is a strong awareness of failure in the high performing team. That is, the team culture is one of mutual concern for each other’s growth and wellbeing. Research by Deutsch & Coleman (2000) indicates that individuals who embrace the group and support their goals are likely to put aside personal interest in favor of the group. The individual’s focus and that of the group are centered on expectation of outcomes and the benefits to be gained by a decision. That is, will the decision gain what the group intended and just how important is the perceived gain. In contrast to individual motives, the culture of the inner-circle focuses on the need to overachieve even at the expense of the out-group members (ibid.).

Beebe and Masterson (2003) state the high performing group’s advantage over other groups is their common goals and objectives. The inner-circle survives with common goals and objectives imparted by the leader or the members of the circle. Group members who are close to each other and believe their supervisor respects their decision-making ability, will contribute the most resources for the good of the organization (ibid.). An inner-circle of high status members may combine their resources in an effort to influence the group decision. If the opportunity presents itself, the individual will bond with the inner-circle to gain high status and influence (ibid.).

The individual will always focus on gain and not loss. Individuals tend to be “*loss-averse*”, so much so that one will forego gain to avoid loss, and one will be more willing to make concessions that forgo gain rather than concessions that result in loss

(ibid.). Stress can build as the individual weighs the gains against the losses. Stress can reduce the ability of the individual to apply rationale during decision making. If stress is low, or when a positive mood prevails, the individual will seek more risk when the chance of a successful outcome is high and conversely, less risk if the outcome is in doubt (ibid.). The individual may counter the burden of pressure by simply adhering to the low risk (for blame) direction offered by the leader or the inner-circle. If the individual opposes the inner-circle, a strategy to counter the inner-circle must be found by the individual or other members of the out-group (ibid.).

Group Status

As the group becomes more effective, the individual is more directly influenced by the group's attributes. Thus, being a member of an effective group reinforces the members will to communication at a higher level (Jablin & Putnam, 2001). The desire to reach a higher level of communication and the resulting influence is motivation for the individual to seek groups of high power and influence such as a dominant inner-circle.

Continuing to examine self interest of the individual, Schultz found the individual's need to belong centered on the ability of the individual to gain power and control of one's self and others while sharing an emotional closeness not possible otherwise (Beebe & Masterson, 2003). The individual satisfies the physiological need to belong as first identified by Abraham Maslow (ibid.). The "we" tendency adopted by the group, as in "we versus them" ('t Hart, Stern & Sundelius, 1997). This need further strengthens group cohesion under the "sociological concept of 'primary group'" (Beebe & Masterson, 2003). The theory of primary group being used to explain the

assurance found in strength in numbers such as a band of brothers in combat or an emergency response team. Group membership provides the individual self-esteem and respect (ibid.).

An individual with high-status when joining a group is placed in a position of influence (ibid.). Individuals with high-status can then unite with other high-status individuals, or close confidants, to form an inner-circle. Groups often rely upon the advice of the high-status person and offer a greater share of the group's reward to those of high status (ibid.). A member with high status is in the best position to become the group leader, and their inner-circle is in the best position to guide and direct the group during a decision-making task. Beebe and Masterson (2003) concluded the ability to influence decisions within the group is legitimate power held by the high-status members of the group.

Group Performance

Today, workgroups and management teams are common in all organizations. In most countries and the United States over the past sixty years, the workplace has evolved to a more participative environment based on working relationships and cohesiveness (Van Assche, 2008; Jablin & Putnam, 2001). Control by senior staff has relaxed in favor of participation of supporting staff members who form a collaborative relationship within work teams. This trend is attributed to increased competition on a global scale, productivity demands, and union acceptance toward a more democratic work place (ibid.). Collaborative work groups are becoming the standard in the workplace.

However, when a high-status member of the group (member of the inner-circle) favors a decision alternative not endorsed by the remainder of the group, the group faces a negotiation process to reach a final decision (Deutsch & Coleman, 2000). As negotiation progresses, it is usually the low-status group or low-power members who are more likely to initiate a win-win solution and the high-power group is less likely to do so (ibid.). Subsequently, the low-power members have the onus of proposing a decision to maximize the interest of most group members. Reaching consensus on the decision will require the members to overcome the egocentric interpretations of fairness described by Thompson and Lowenstein in their research (ibid.).

Beebe and Masterson (2003) found the predictability of group actions produces a trust among members that helps them to get past conflicts and individual interest in order to perform at a high level. Jablin and Putnam (2000) acknowledge the willingness of management to invest the resources necessary, and to offer structured decision processes with the expectation of "reciprocity", that is, leadership then expects the group members to perform at a higher level and in the best interest of the organization.

Deutsch & Coleman (2000) and Jablin & Putnam (2000) agree a mature group can perform at a higher level if the group communication rules (norms) for working together includes participation and sharing of knowledge. The group culture must allow and encourage communication of critical thinking necessary to overcome pressure from the inner-circle, or pressure for premature consensus, to achieve the group's objectives. The group can then take advantage of all the brains in the group (ibid). Beebe & Masterson (2003) explain a group culture in support of communication

will encourage members to act on information (thereby influencing the group), focus on goals, adhere to behavior allowed (avoiding behavior not allowed), and embrace cohesiveness among members. The variables combine to form the group competence needed to succeed in problem solving, making decisions, and managing conflict (ibid.).

The positive group culture described above enhances cooperation and group synergy through unity of effort thereby enabling the group to be more productive than the individual (Beebe & Masterson, 2003; Deutsch & Coleman, 2000; Jablin & Putnam, 2000; 't Hart, Stern & Sundelius, 1997). The group performs a more complete and superior evaluation of information at hand by filtering out faulty data during an "information-triage" review and assessment. Advantages inherent within the group are improved communication, the collective sum of information, discriminative & evaluative listening, the ability to stimulate creativity, better recall, satisfaction in participation, reduced stress, and increased self awareness (ibid.). These findings indicate the individual works harder when part of a collective. Additionally, 't Hart, Stern & Sundelius (1997) reference research by Fuller, Aldag & Moorhead, indicating the group culture may limit the influence of cohesiveness and lessen its potential for premature consensus during the decision process. As a result, situational leadership with a focus on task and objectives may keep cohesiveness positive and enhance the group's problem solving ability (ibid.). However, the findings are not all positive. The problems of group dynamics mentioned above may result in peer pressure on members to conform to the group, domination of discussions by one member, reliance on other members to get the work done (loafing), and the additional time required for a group to work through a decision (Deutsch & Coleman, 2000; 't Hart, Stern & Sundelius, 1997),

all of which may enable the inner-circle to pressure the group toward premature consensus. When time is limited, it may be to the group's advantage to delegate the decision to a subject-matter-expert, from within the group or brought in from external resources (Beebe & Masterson, 2003; Janis, 1982).

Group Decision Process

Based on research of the past thirty years, the purpose of group decision-making is to reach agreement after full consideration of well understood alternatives and deciding on the option that has the most realistic potential for achieving the group's objectives (Deutsch & Coleman, 2000). High-quality decision-making relies on each alternative receiving a fair and open minded critique of strengths and weaknesses. As an example, reference is made to Martin Luther King Jr. and his letter from Birmingham Jail wherein King asked us to challenge each other's reasoning and logic concerning when civil disobedience is constructive or not (ibid.). Deutsch & Coleman (2000) and Jablin & Putnam (2004) state a structured decision process involving critical thinking is required for better, high level, decision-making.

Diversity of Talents

As found in most work groups today, cultural and racially diverse groups rely on a range of talents and experiences in bringing multiple perspectives to problem solving (Beebe & Masterson, 2003; Deutsch & Coleman, 2000). The addition of multiple perspectives stimulates a creative conflict during the evaluation of the problem and decision alternatives. Although diverse groups may have more challenges to overcome during the forming of a group culture, diverse groups can find common interest and goals upon which they can base their interaction and productivity. Their diversity often

leads to more positive participation through flexibility, multiple perspectives, and by generation of multiple options based on the collective information at hand (ibid.). The inner-circle will tolerate diversity of thought and outside sources provided the input is compatible with the goals and objectives of the inner-circle. If not, the inner-circle will attempt to discredit the source (ibid.). The latter is evident in the cabinet members of President Lincoln referred to as the most unusual cabinet in the history of the presidency. President Lincoln included a broad variety of party members, republicans, whigs, democrats, and even challengers from within his own party for the nomination of presidential candidate. Lincoln was confident in his own ability to facilitate this diverse group and make the best decisions with their input (Kearns Goodwin, 2005). From the Lincoln library (n.d.), he is quoted as saying, "We needed the strongest men of the party in the cabinet… these were the very strongest men… I had no right to deprive the country of their services."

Comparison of diverse work groups to homogenous groups, reveals the diverse group as more productive than the homogenous one. Jablin & Putnam (2001) make reference to research by Stohl indicating "the greater number of diverse groups from which a circle received relevant information, resources, and support, the more influential that group was in" ...selling their proposal to management. The group then received the needed resources and buy-in from others in the organization to carry out the decision (ibid.).

Creative Conflict

Study of conflict by Deutsch & Coleman (2000) reveals it to be a stimulant among group members. Lack of conflict generally results in loss of creativity.

Therefore, creativity is dependent on the presence of conflict in one form or another (ibid.). Conflict exposes the group members to multiple viewpoints and perspectives upon which they may construct alternative solutions. In a related statement, Sir Isaac Newton said, "If I have seen farther, it is by standing on the shoulders of giants" (p. 354).

When conflict is evident among cohesive group members they tend to pressure one-another to support the group cause. The members unite to discriminate against the out-group thereby maintaining harmony within the group. Harmony and cohesiveness are key factors enabling them to be effective and reach their objectives (Deutsch & Coleman, 2000). As noted by Beebe and Masterson (2003), for the group to remain effective, small group size is generally accepted as less than 12 members. Although research is not conclusive, it is generally agreed that groups larger than 12 reduce the level of interaction among group members to the point where the individual's influence upon the group is diluted. There is also the possibility that the larger the group, the more likely it will naturally subdivide into smaller groups that share common interest or similar goals thus diluting conflict levels and creativity (ibid.). For groups to efficiently carry-out a rational decision model, the group size should be kept below 12 members.

Today the decision-making success of an organization lies more in its human capital and system capability than the physical assets. Jablin & Putnam (2000) state human capability is limited to a small "scratch pad" of instant recall. Use of outside subject matter experts, or SME's, can leverage the group's creativity and ability to perform critical analysis when following a structured rational process similar to the Delphi model. Government and industry are leveraging their leaders and organizational

group decision-making abilities by use of a structured process, often taking advantage of external sources, in order to maximize effectiveness (Van Assche, 2008; Yukl, 2002; Jablin & Putnam, 2001).

For effective group decision-making, the organization must leverage the diversity in its human capital to raise creativity levels and stimulate multiple viewpoints in creating decision alternatives (Deutsch & Coleman, 2000). The diversity inherent within the group provides more information and creativity for the generation and evaluation of alternatives. Group members must share an awareness of potential pitfalls such as peer pressure to conform to avoid loss of critical thinking. Small groups of twelve or fewer members are recommended for maintaining participation by all without the development of sub-groups or excessive peer pressure. The small and diverse group is also capable of creating synergy needed to generating multiple perspectives and the collective information required for high quality decision-making (ibid.).

Methods to Counter Groupthink

To combat the potential for inner-circle groupthink, the leader must focus the team on self evaluation and motivation in achieving objectives. One technique useful for this purpose is the use of productive conflict, known as constructive conflict, to force analysis of opposing and divergent views (Beebe & Masterson, 2003). If the team does not possess the ability to evaluate divergent views, the leader must provide the resources necessary to permit the team to be successful. The resources provided by the leader can be an outside evaluator, or consultant, and a structured process to apply to the decision-making at hand (ibid.). This is best accomplished by use of the

feedback loop and continual evaluation of the process as proposed by 't Hart, Stern & Sundelius (1997).

Constructive Controversy Procedure

In addition to a structured process for decision making, constructive controversy is required for critical evaluation of the alternatives. Research since the early eighties indicates constructive controversy is required for decision-making to be effective. Aristotle was a proponent of discussion to evaluate the advantages and disadvantages of proposed alternative solutions with the intent to create a synergistic effect (Deutsch & Coleman, 2000). Constructive controversy occurs when one members ideas, alternatives or opinions, contrast with those of another member during discussions. For constructive controversy to be successful, the two members must seek to reach a consensus or agreement (ibid.). This form of constructive controversy and consensus based upon the generation of alternatives is expected to have more positive outcome as opposed to the concurrence-seeking described by Janis (1982). Campa, a professor at MSU, noted there are several assumptions underlying constructive controversy such as: having a common objective and a norm to accept proposals by all members of the group, accept their ideas, and accept evaluation of alternatives proposed by others (as described in Deutsch & Coleman, 2000). To use this approach would require the assumed agreement to use skilled discussion of both sides during a critical evaluation, while respecting each other's perspectives. Openness and objectivity would counter the influence of the inner-circle (ibid.). As previously noted, such cooperation by members must be a part of their group culture. This form of cooperation is the basis for rational decision-making (ibid.).

Constructive controversy leads groups to higher-quality decision where differing perspectives can be developed for consideration including ethical concerns. The past thirty years of research have "(1) developed a theory of constructive controversy; (2) validated it through a program of research; (3) trained teachers, professors, administrators, managers, and executives…(globally) to field-test and implement the constructive controversy procedure; and (4) developed a series of curriculum units, academic lessons, and training exercises structures for controversies" (Deutsch & Coleman, 2000, p. 76). Use of the constructive controversy in the rational decision model will avoid poor decision-making and inner-circle influence (ibid.).

Strategic Leadership & Decision-Making

The capacity to manage human knowledge and to convert it into end products and services is becoming an essential leadership skill. A leader needs to think in terms of system design and dynamics, or a systems perspective, to better leverage these abilities and expertise (Yukl, 2002). The leader must find ways to enhance existing processes and identify when a new process is required to enable the organization to become successful. This level of thinking is referred to as "systems thinking" (ibid.). System or process execution is improved by setting intermediate as well as final goals and clearly articulating them to the group (Powell, Piccoli & Ives, 2004). The impartial leader described here is proposed by Fanto (2003) as the solution to corporate manipulation by inner-circle groupthink associated with the Enron failure. Fanto proposes independent Chief Executive Officers (CEOs) be appointed to oversee corporate decisions to provide goals and processes to counter self-interest of an inner-circle or competing inner-circles.

The leaders' role is to provide structure and articulate the goals and objectives in a clearly understood frame of reference for the group ('t Hart, Stern & Sundelius, 1997). Leaders must frame a problem situation in a way that it is understood. The leader must make sense of the situational facts related to the problem. The leader must also provide frames of reference for conduct, professionalism, time management, and allowances for creativity necessary in brainstorming (ibid.). Impartial leadership mentioned previously is most often ideal for establishing these frames of reference.

The ideal leader is described by most writers as a combination of directive and democratic leadership traits (Yukl, 2002). Yukl claims the formal leader with a focus on task…, is overbearing and quality suffers (as the leader is too directive in nature). An overbearing leader also empowers an inner-circle directly or indirectly through common goals and objectives held by, or adopted by, the inner-circle (ibid.). The group-centered relationship oriented leader (often democratic in nature) can serve as a facilitator and advisor and serves as a manager of the group. As Yukl (2002) describes it:

> "A leader's personality and preferred leadership style often critically affect how the advisory group is structured, the roles of group members, the nature of debate and information processing within the group, and the quality of the decisions emerging from the group. ….leaders often set up the "rules of the game" regarding leader-adviser interactions… …They reflect the leader's work habits, the way he likes to receive information, the type of people he prefers to have around him, and the way he makes up his mind or takes decisions (p. 330).

Perhaps Yukl's thoughts on team leadership are best captured in figure 2-4 below, Hill's model of team leadership recommended by Northouse (2004) to simplify the problem solving challenge for leadership. The model is recommended for the leader, or

team member acting as leader, as a tool for determining when intervention is needed to stimulate or correct team decision-making .

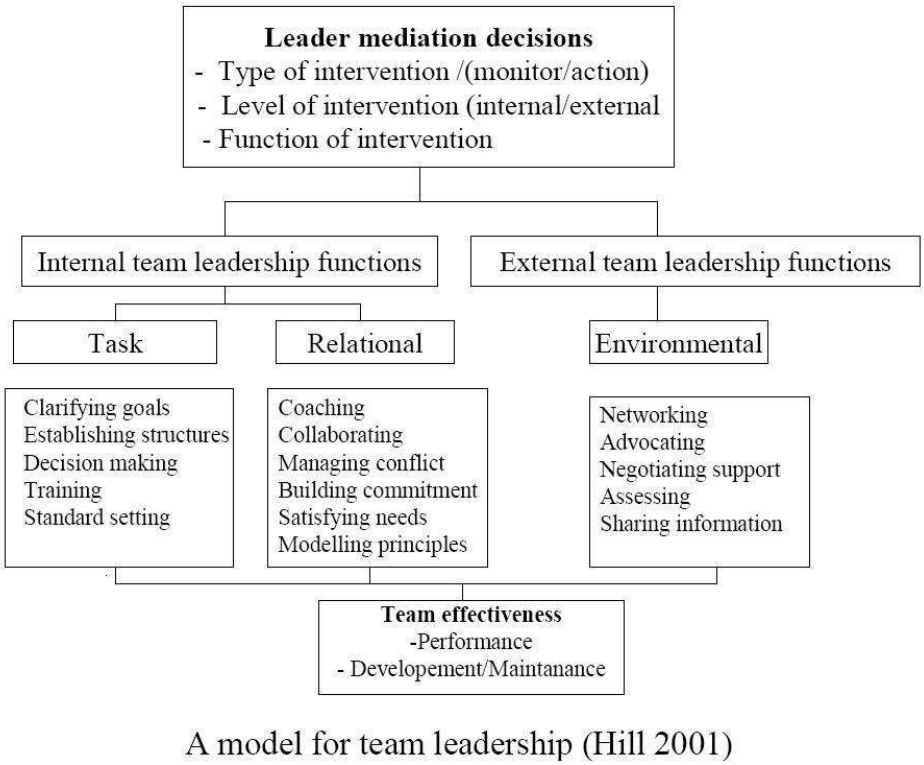

Figure 2-4: Hill's Model for Team Leadership (Leadership Theories, 2010)

Similar tendencies of leadership are summarized by 't Hart, Stern &Sundelius (1997), as the five dimensions of leadership orientation. The first dimension is structure orientation or the desired degree of control over the group. Second is the need for information management orientation in the form of structured rules, either for open debate with the leader as the hub, or formal analysis. The third orientation is for information processing and the need for mind guards to accommodate openness to conflicting information. Fourth, is the interpersonal orientation with a focus on social needs of others versus a task orientation. The fifth is conflictual orientation or the

leader's tolerance for creative conflict so vital to decision-making (p. 198). In his 1982 book, Janis acknowledges similar needs for leadership dimensions to provide structure, constructive conflict, outside expertise, and a second chance or final review of the decision to allow resolution of any remaining doubts. To find the correct blend of Yukl's orientations and the dimensions acknowledged by Janis, will require the leader to evaluate the situational needs of the decision-making group and provide the appropriate decision model and guidance.

Review Summary

Review of literature clearly reveals groupthink as caused by concurrence-seeking alone is, "lacking empirical support and resting on generally unsupported assumptions… (*indeed*) perhaps the most remarkable aspect of the groupthink model is its continuing appeal in the face of nonconforming evidence" ('t Hart, Stern, & Sundelius, 1997, p. 92). The groupthink model has served a valuable role in bringing the group decision-making processes to the forefront of social and organizational research. Over the years since Janis first proposed groupthink, various methods used to test for detection and prevention have proved to have moderate success at best (ibid.).

Today, we appear to have consensus among the press and within Congress to define groupthink as an inner-circle influence, or as an in-group acting as decision-makers for the larger group (Van Assche, 2008; 't Hart, Stern & Sundelius, 1997; Janis, 1982). Methods to counter inner-circle influence were validated to include the structured approach found in the rational decision model. The Delphi model, the CGPS model, and even the MDMP decision-making process all appear to be valid tools for countering groupthink yet none have been validated as effective in preventing inner-

circle influence. The one advantage the Delphi model may have is the anonymous nature of group members and the absence of face-to-face interaction (Rescher, 1998). The advantage offered by the modified GGPS, referred to here as the CGPS model, is the continuous feedback element within the decision-making model to enable detection of social biases, faulty analysis, and undue influence from leadership or an inner-circle of group members ('t Hart, Stern & Sundelius, 1997). Face-to-face interaction offered by CGPS and MDMP provides the many benefits of; empathy, sincerity, non-verbal communication, and instant feedback.

To test the effectiveness of any one decision process to counter the inner-circle of influence requires selection of one or more of these rational models to test, then formulation of research questions to validate effectiveness. For this research, the Delphi and CGPS models were selected for testing. The research will focus on answering research questions using these methods as described in the next section.

Research Questions

To determine the effectiveness of the Delphi and CGPS models in avoiding groupthink, a series of research questions were designed to identify specific traits and abilities in each of the models. The research questions and a narrative explaining the intent of each question follows:

1. Are research participants able to identify inner-circle influence, or directive influences, and will they identify this influence as groupthink?

- Participant validation of inner-circle influence as a new definition of groupthink is important to understand the public perception of groupthink today, and for use in future research.

2. Do participants view the Delphi and CGPS decision-making models as effective? If yes, do participants recommend these models to counter the inner-circle influence?
    - Validation of the Delphi and CGPS models and their ability to counter inner-circle influence is the main objective of this research. Once validated here, these models can be put to use by industry and government alike. The models will likely be studied further dependent on the results of this experiment.
3. Which model, Delphi or the CGPS, or a non-researcher specified model, is preferred in countering directive members or inner-circle influence?
    - Participant selection of a preferred decision model for use to counter the inner-circle identifies the model most likely to be successful and aids the leader in selecting a model for this purpose. This information is also pertinent to future research.
4. What are the respective strengths and weaknesses of the Delphi and CGPS models?
    - Identifying the strengths and weaknesses provides information regarding improvement of the model for future use or future research. Strengths are also good indicators of the models ability to counter inner-circle influence.

5. What is the utility of a feedback loop in identifying directive or inner-circle influence and countering its effect?
    - If not identified specifically as strength in the models, it is valuable to know if the use of feedback in the models is helpful, and if this feedback aids in countering inner-circle influence.
6. How can the preferred decision-making model be improved and can you identify a model you consider to be superior to the preferred model in this experiment?
    - Future research criteria and revisions to improve the decision models ability to counter the inner-circle are directly related to the models success. Future decision-making is dependent on improvements or use of new decision-making models recommended by the participants.

Chapter 3: Methodology

Overview

The purpose of the research is to validate use of the Delphi and CGPS decision-making models as effective tools for countering the influence of an inner-circle and to validate which model is most effective. Research was conducted through an experimental design with random assignment that featured an intervention and post-test design consisting of a scenario for the first decision-making model (Delphi or CGPS), and a questionnaire to gather feedback data generated by participants. This intervention and post-test was then repeated using the second decision-making model. Then, after responding to the two scenarios, the participant completed an additional survey to compare the two decision models. The research notation for this design is: R; X_1 O_1 X_2 O_2 O_3, where R indicates random assignment to a combination of one of two scenarios requiring one of the two different decision-making processes, X represents the intervention of the scenario and the decision-making technique and O represents the completion of the questionnaire survey related to the scenario.

The experiment included two scenarios, one asking the participant to make a decision using the Delphi (labeled DELPHI) and the other making a decision using the CGPS model (referred to as GGPS in the questions listed within the Scenario & Questionnaire section, plus Appendix B, and in the scenario transcripts of Appendices C & D). Scenario strategy required the participants to read two transcripts of decision-making meetings. Scenarios considering public forums, corporate organizations, and county administrators, were considered for this experiment. Due to the researchers

familiarity with military exercises at the combatant command level, it was decided the two transcripts shall each feature a different military setting: one is the withdrawal of U.S. military troops in Afghanistan (labeled AF or Afghan) and the other the collaborative construction of a medical facility (labeled HA for humanitarian assistance), in support of a military exercise. Participants were provided background and environmental information such as time, place, setting and situational conditions impacting the decision. A description of the decision teams in each scenario was also provided as background information. Participants were provided the decision-making structure, setting, and leadership guidance recommended by Yukl (2002) and 't Hart, Stern & Sundelius (1997) in the previous strategic leadership discussion. The participants were instructed to observe strengths and weaknesses of the decision models used in each scenario transcript. The decision model was identified in background information. The scenario scripts provided discussion points for decision alternatives and negotiations leading to the final decision.

As noted by Breen (2004) and 't Hart, Stern & Sundelius (1997), it is difficult to recreate the pressure situations and resulting concurrence-seeking environment described by Janis within a test exercise using students or other subjects. It would be more difficult to create an experiment wherein participants would form an inner-circle of influence during a role playing exercise. Past research by Janis (1982) is based on review of historical case studies. The availability of case studies with inner-circle influence is subject to speculation. For this reason, it was determined to use scripted scenarios to replicate decision-making dialogue involving several group members who acted as an inner-circle of influence. Scripted scenarios simplify the participant role to

one of reviewer rather than active player in the exercise. Each scenario contains elements of inner-circle influence and steps within the model to counter this influence. A questionnaire is employed to validate the internal validity and causality between the decision model (the independent variable, X) and resulting changes in the group's ability (the dependent variable, Y) to overcome the inner-circle influence (CMU, n.d.). Questionnaire data and participant remarks are used to validate the effectiveness of the two decision models to counter inner-circle influence and determine if one model is superior to the other.

Design & Methodology

The intent of each scenario is to provide a familiar setting for a military decision typical of those faced by joint forces (Air Force, Army, Navy and Marine), in order to evaluate the Delphi and CGPS decision-making models. In the questionnaire, participants are asked to evaluate the communication openness, procedures, and the potential to overcome bias or high influence in the decision-making process. Providing a familiar setting for the participants increases their comfort level and enables them to better understand scenario discussions and to focus on strengths, weaknesses, and communication effectiveness offered by each decision-making model (Koenig, n.d.). The final decision was not revealed as the participant was asked to speculate what the decision would be, why or why not they think this decision is appropriate, and how the decision process could have been improved to obtain a better decision outcome.

Participants read both the Delphi and CGPS scenario with the order of exposure being assigned randomly. Each scenario describes the intent of the exercise, background information to include leadership guidance in the form of a commander's

intent and mission statement, as well as the scenario script and the questionnaire. The participants answer the same questionnaire immediately after reading each scenario. The questionnaire asks the participant to identify strengths and weaknesses and any undue influence by team members in the scenario. The questionnaire is tailored to answer the research questions without leading participants or identifying a preferred decision-making model. Participants are asked to reach their own conclusion as to the group decision and to identify influential group members involved. The participant then selects the better decision-making model and justifies the selection.

Participants familiar with military settings typical of the scenario backgrounds provide feedback better suited for qualitative data analysis and verification of conclusions. In lieu of providing an actual case study of inner-circle influence, or asking participants to engage in a role playing exercise, the scenarios offer the best alternative to a natural setting represented by a case study. Without existing or known case studies involving the inner-circle influence, the scenarios serve as a quasi-experimental basis for validation of the decision-making variables (Brogan, n.d.).

Scenario & Questionnaire

Scenarios are drafted based on the researcher's personal experience and familiarity with Department of Defense (DoD) projects for humanitarian assistance (HA) and the ongoing withdrawal of U.S. forces from Afghanistan (AF). The Afghanistan scenario (Appendix C) requires a decision to withdraw U.S. forces quickly or over a prolonged period of time. The HA scenario (Appendix D) involves the selection of a construction site for a clinic in a foreign nation hosting a military exercise. The scenarios do not include any sensitive or classified information and all

background information was found in public news sources. Each scenario includes the key steps for the decision model involved. Key steps for each model are listed below with line numbers indicated where these steps were included in the two scenarios (Appendix C for AF and Appendix D for the HA scenario).

1. Delphi
   a. Assemble group of anonymous experts
      (Line No's: AF 50-56; HA 28-31; and 104-110 for AF and 98-106 for HA)
   b. Develop questionnaire focused on identified problem
      (Line No's: AF 119-123; HA 71-72)
   c. Survey for comments and alternative solutions
      (Line No's: AF 121-123, 123-147, 151-156; HA 73-76, 119-139)
   d. Process feedback
      (Line No's: AF 148-160; HA 139-144)
   e. Distribute summary (common & conflicting views) for comment
      (Line No's: AF 160-165; HA 145-146)
   f. Participants evaluate their own forecasts & those of others, assess progress of group
      (Line No's: AF167-196; HA 146-176)
   g. Process repeats itself until synthesis leads to agreement.
      (Line No's: AF 196-228; HA 177-214)
   h. Final summary report issued to the group.

   (Rescher, 1998)

2. General Group Problem Solving
   a. Identify the Problem
      (Line No's: AF 22-27 and 240-243 summary; HA 3-11 and 221-230)
   b. Generate Alternatives
      (Line No's: AF 251-291; HA 247 and 274)
   c. Evaluation/Consult Experts & Choice
      (Line No's: AF 292-324; HA 231-232 and 280-317)
   d. Anonymous Feedback
      (Line No's: AF 327-356; HA 357-373)
   e. Final Discussion & Choice
   f. Implementation
   g. Control

   ('t Hart, Stern & Sundelius, 1997)

In the experiment, the scenarios include all steps leading to the group decision i.e., for the CGPS model, steps "a" through "d" are included in the scenarios; and for the Delphi model, steps "a" through "g" are included in the scenarios. Background information provides an overview of the decision model used in that particular scenario. A total of four scenario scripts are prepared. Two scenario settings (HA project and the Afghanistan withdrawal) and two scenarios each for the Delphi and CGPS models were prepared to form a (2x2) crossover experiment design. The participants read one HA scenario and one Afghan scenario written under the Delphi and CGPS models respectively. To control for threats to internal validity caused by repeated exposure to the intervention and post-test, participants are divided into four groups alphabetically (A-F, G-N, O-S, and T-Z) to allow for random assignment in equal amounts to review scenarios in the four possible combinations below.

- HA-DELPHI then AF-CGPS
- HA-CGPS then AF-DELPHI
- AF-DELPHI then HA-CGPS
- AF-CGPS then HA-DELPHI

Splitting the participants into four subgroups allowed for both Delphi and CGPS to be tested for each scenario, HA or the Afghan withdrawal, with equal numbers of participants reading each scenario. The randomized distribution of participants strengthened internal validity and it was intended to provide an even number of comparisons of the four combinations above (CMU, n.d.). The randomness further

contributes to the credibility of the decision-making model selected as best for countering inner-circle influence (ibid.). Combined, these actions increased external validity and the possibility for generalization.

The HA scenario involves team members from several participating nations as an administrative committee. The U.S. European Command (EUCOM) provides the team leader, a logistics division member of EUCOM. The country representatives participating in the scenario are Romania (the host nation for the HA project), Bulgaria, Albania, Ukraine, Turkey, Greece, and Italy. Each country representative and the EUCOM representative (except the Ukraine representative who is an advisor), is a voting member of the HA committee. The scenario script includes an inner-circle of influence working behind the scenes together. The country members comprising the inner-circle are the Romanian, Bulgarian, and Ukrainian representatives.

For the Afghanistan (or AF) scenario, the team members in the script are all U.S. Central Command (CENTCOM) representatives. The team leader is the Division Chief (Ch.) of Planning. The remaining members are the Ch. of Intelligence (Intel), the Ch. of Operations (Ops), the Ch. of Logistics (Log), the Ch. of Communications (Comm), the Ch. of Training (Trng), and the Ch. of Resources (Res). The inner-circle of influence working together in the script is the Intel Chief, and the Ops Chief. In the scenario script, the Log Chief plays the role of peace-maker and offers a compromise alternative. The Trng Chief and Res Chief oppose recommendations of the inner-circle members. No names of actual command representatives were used in either of the scenarios. Names contained in the scenarios were created to reflect the HN of the representative or the position of the team member.

Access to the experiment was granted to participants by use of an electronic hyperlink to the Qualtrics Research Suite automated web site. The link was provided in an invitational email sent to candidates requesting their participation. Electronic access allowed participants to review the questionnaire at their convenience in order to strengthen external validity and to encourage participation. The questionnaire is divided into the three sections listed below.

- Effectiveness of the decision model
- Overall comparison of decision models
- Demographic data

Participants answered the first set of questions after reading each of the two scenarios. Participant responses identified the decision they think would be made, why that decision was made, any dominant or influential team members involved, plus strengths and weaknesses of the decision model. The questions are included here with the research variable indicated for corresponding data analysis.

1. What decision do you think was made (**TSol**) in this situation (which alternative did they select)?
2. Why do you think that decision was made (**YTSL**)?
3. What do you think the decision should be (which alternative do you think they should have picked, **TSLP**)?

4. If the alternative you select above is different from the alternative you think the team selected in the scenario, why is your selected alternative better (**YTSLP**)? (If you selected the same alternative, enter "same")
5. Excluding the group leader, who on the decision team had the most influence (**Tinf**) on the decision?
6. What are the strengths of the decision techniques used in this scenario (**DMps**)?
7. What are the weaknesses of the decision techniques used in this scenario (**DMng**)?

After reading the second scenario and answering the seven questions above a second time relative to the second scenario, the participant is directed to the following seven overview questions including a block at the end for entry of remarks. The participants were asked to identify the most effective model for countering high influence team members (the inner-circle). Participants were also asked to identify possible improvements to the models, and then explore any model recommended as superior by the participant based on past experience and familiarity. Several of the questions are open-ended to allow comments and explanations by the participant. The second set of questions and corresponding variables are included here.

8. Thinking back on the two scenarios you read, which decision-making model (the *GGPS* technique, or the Delphi technique) do you think yielded the best decision (**PpreDM**)?
9. Why did you select this decision-making process as the best (**YPpre**) technique used in the two scenarios?

10. Is it possible to improve the decision-making technique you selected as best (**PImpr**), and how would you do so?
11. What is the decision-making method used by you and your colleagues (**DMused**)?
12. Why do you and your colleagues favor this decision-making method (**YuseDM**)?
13. Who in your organization is usually involved in decision-making (**WhoDM**)?
14. If your organization were to start using the decision-making technique you selected as best, how would it improve the decision-making (**HDMID**) in your organization?
15. Remarks

Answers to the overview questions above were then compared to the first set of questions wherein strengths, weaknesses and influential group members were identified. Possible correlations of leader influence or inner-circle influence and manipulation can then be linked to the model identified as best for countering this influence. The eight demographic questions below were used to validate participant qualifications and the generalized randomness desired in the population of participants (CMU, n.d.).

16. How many years of military service have you completed (**YrsSvc**)?
17. Which of the following best describes your race (**PRace**)? (select more than one if appropriate)
18. How much education do you have (**PEdLvl**)?
19. What is your gender (**PGndr**)?
20. What is your Rank/Grade (**PRank**)?
21. Identify your branch of military service (**PMilBr**).
22. What is your duty/position title(**PosDes**)?
23. What is your age (**PAge**)?

The estimated time for completion of scenarios and questions was 45 to 60 minutes. Participants were encouraged to complete the exercises in 45 minutes or less. It was anticipated that this length of time would increase external validity by encouraging participants to forward the scenario exercises to others as time and effort would not be too demanding for those with time constraints (ibid.).

The use of the electronic mail invitation to solicit participants allowed those deciding to respond to do so anonymously online without intervention by others or the researcher thereby strengthening internal and external validity (Grant, 2012). The Qualtrics web based electronic link provided participants anonymous access to the scenarios without providing personal information that would otherwise reveal their identity. The participant identity remains anonymous to the researcher. Questionnaire results are tabulated in the Qualtrics research data base using a random participant number with no corresponding personal identification. The number of participants and corresponding responses are the only information available to the researcher. A copy of the Qualtrics questionnaire is included in Appendix B.

Test Trial of Experiment

To insure a thorough understanding of the scenarios and the questionnaire, a pilot test of the experiment was conducted with volunteer members from various university cohorts. The chair identified volunteers who met the desired qualifications of DoD experience and tenure. To insure construct validity (CMU, n.d.), the volunteers were asked to provide recommendations and critiques required to clarify the scenarios and questionnaire. The researcher asked for clarifications to uncover how to best replicate

actual settings of military decision forums involving HA projects and the Afghanistan withdrawal.

The test trial was distributed using the Qualtrics electronic link and the email request intended for later use for the final experiment. The trial population was provided the scenario intent and target duration. The actual responses of the trial group remained anonymous and secured in the Qualtrics database. The trial responses were not used in the data analysis. Trial members were able to provide remarks via email to the committee chair for consolidation before forwarding to the researcher. Each trial member's identification was removed by the chair prior to forwarding to the researcher.

The volunteers for the trial test were selected based on military work experience plus knowledge of rational decision methods. The trial group provided feedback on ease of access, length of exercise, time required, and the overall clarity of the exercise to include intent, scenario background, sequence of questions, and opportunities to provide remarks. Comments and recommendations by the trial group include the following.

1. The two scenarios appeared to be realistic and thorough (confirmation of construct validity).
2. Terms used in the scenario are understood and familiar to participants.
3. Scenario background and script were found to be both clear, and in need of the following additional information.

a. For the HA project scenario, improve background clarity to include command (leader) priorities to enable participants to better understand the best decision to be made.
b. Specific reference to mission objectives and commander intent are needed in the background information of both scenarios.
c. Background information must state the alternatives were obtained by brainstorming and analyzed for weighting of significance prior to discussions (a rational decision process). Further, background must state this process was completed for each round of discussions.

4. Time required to complete the scenario exercises is longer than the recommended 45 minutes.
5. The background and script for the HA decisions appeared to be typical of these exercises, although this scenario appeared more complicated than the Afghan scenario (HA complexity is realistic and confirms construct validity).

The scenarios were revised to shorten the scenario scripts as much as possible without loss of intent or the inner-circle of influence. Revisions are indicated in it the scenario text of appendices C and D by use of italics. Background information was reduced and made more concise by addition of a formal statement of commander (leader) intent and mission objectives. The background information for each scenario was modified to stipulate the decision team was now in the closing rounds of discussion of the weighted alternatives prior to making a final decision. The HA project scenario was revised to

explain the priorities of the commander. The Afghan scenario was revised to be more concise and to match the HA scenario format.

Additional changes were considered such as limiting the participant's role to evaluation of one scenario containing either the Delphi or CGPS methodology and/or reducing the number of questions. It was decided to keep all of the questions and the two scenarios exercises, one each for Delphi and CGPS, to enable analysis of feedback comparing the two decision models. After comparing the feedback and comments, consistency was found in the feedback indicating the need for two separate scenario settings (HA and Afghanistan) may not have been necessary.

Data Collection

All data and feedback from participants was collected on the secured Qualtrics site, including those participants who entered the Qualtrics site and partially completed the scenarios or questionnaire. Data collection included the participant responses, demographics, and participant factors such as the total number of participants, time required online, number of completed questionnaires, and the number of partially completed questionnaires.

The Qualtrics research tool simplified data collection by allowing participants direct access to the scenarios online by activating the hyper-link provided in the email invitation. The electronic format was ideal for eliminating participant interaction with one another that could possible contaminate responses lessening the internal validity (Brogan, n.d.). Similarly, interaction with the researcher was avoided to eliminate potential for contamination of responses resulting from directive guidance from the researcher (Grant, 2012).

The Qualtrics suite provided participant demographics and the questionnaire responses. The number of total participants and the time each was online in the Qualtrics suite is provided and will be of interest in determining the dropout rate and factors influencing non-participation when reviewing external validity (CMU, n.d.). Participant duration online also reflects the effectiveness of the scenario and questionnaire in complying with the desired target duration recommended in the email invitation. Qualtrics presented a summary file of all data and remarks research variable above, and used in data analysis software to identify trends and common remarks pertinent to the research questions.

Overall feedback from participants centered on the main research topic of decision-making methodology, with no feedback indicating confusion or a lack of guidance in the scenario requirements lending high credibility to the responses. Feedback indicates the Qualtrics hyper-link provided ease of access to participants. Additionally, the Qualtrics tool offered data collection for research purposes while assuring participants of their anonymity prompting candid responses. As a precaution, when using Qualtrics or similar automation, one should ensure scenario revisions and updates are recorded and saved for the final scenario exercises. The exercise link distributed to participants must be tied to the final version of the scenarios, and not a previous version.

Selection of Participants

Sample Population

When establishing parameters for selection of participants, David Koenig (n.d.) recommends the researcher compile a list of characteristics desired for the ideal

candidate. These characteristics and potential sources of acceptable candidates are the basis for the sampling strategy. The characteristics must be tailored to identify candidates appropriate for the experiment involved. The researcher must then identify a source of candidates who qualify for participation. The candidates may then be asked to recommend others who qualify or to forward the request to participate to other candidates with the relevant characteristics (ibid.). Candidates are informed they are permitted direct contact with their colleagues for the purpose of extending the exercise invitation, provided the candidate does not do so by use of mass-mailings such as mail-list servers of service organization listings. The candidates were asked to distribute the experiment to other divisions and members outside their immediate workgroup to avoid like minded responses that may be provided by the candidates' colleagues or inner-circle. The randomization of the distribution reinforces the external validity of researcher's findings (CMU, n.d.).

This use of referral contact among colleagues and friends is known as network sampling or the snowball effect. In the past, it was known to be effective in growing the sample population, (Koenig, n.d.). As explained below, a rather large sample group is desirable. The sample group can then be reviewed for relevant characteristics and those not meeting the criteria eliminated from data collection (Brogan, n.d.).

The sample size is calculated based on the degree of accuracy desired. The larger the sample size, the more accurate the data results will be when using a random sample (Hayes, 1994). The data results will approximate a normal distribution curve and the central limit theorem applies for data fitting the normal distribution. As determined by John Tukey, a minimum sample size of 77 members is needed to obtain such a

distribution (ibid.). As stated by Dr. Joe Rodgers, professor of statistics at the University of Oklahoma, a population of 90 is the accepted standard for a minimum sample size to achieve a normal distribution, with 30 participants the desired number for qualitative analysis. Hayes (1994) explains a desired accuracy interval must be selected, represented by "z", and using the recommended desired probability of 95% for the sample mean falling within 0.10 standard deviations (*s*) of the true mean, we can determine the desired sample size. Hayes sets 0.1*s* equal to "z" (where z = 1.96), multiplied by "*s*", and divided by the square root of the number of samples "N." That is, the *Margin of Err*or = $z(s^2/N)^{0.5}$ where substituting 1.96 for "z", and 0.1*s* for the margin of error, we find N=385. Therefore, it was determined an adequate sample minimum of 90 with a cut-off or maximum number approaching 200 would be effective to achieving the probability desired.

Sampling Strategy

The three key elements of the sampling plan are; the desired characteristics for participants, identifying a pool of resources with highly qualified candidates, and use of network sampling. Koenig (2010) recommends use of known sources of candidates such as an existing network of colleagues and associates. To identify qualified participants who are subject matter experts, the characteristic requirements include the following.

- Familiarity with the United States involvement in Afghanistan, and programs similar to HA.
- Knowledge of military command group mission statements and objectives.
- Experience using MDMP or other rational decision-making models.

To validate candidate qualifications and fit within the desired characteristics, participants were required to provide demographic information regarding education (**PEdLvl**), years of experience (**YrsSrv**), rank or grade (**PRank**), service title (**PosDes**), and age (**PAge**), (Brogan, n.d.).

The intended target audience was DoD service members or civilians with training in rational decision making, namely the MDMP model or equivalent rational model. To insure proper training and background that would provide insight to the scenarios chosen, the targeted participants were senior members of each service department. Seniority is indicated by 15-plus years of service and rank or civilian grade. Colleagues of the researcher, with military background and extensive work experience at the command level, were appropriate candidates for participation in the scenario exercise. These colleagues are journeyman service members, primarily officers and equivalent civilians and provide a pool of convenient candidates.

Candidate familiarity with the structured MDMP model, or other rational models, prepared them to review and analyze the Delphi and CGPS models for strengths (**DMps**), weaknesses (**DMng**), and to identify causality between the model and the group's ability to counter inner-circle (**Tinf**) influence (Koenig, n.d.). Service member participation and familiarity with HA and the war in Afghanistan reduced their learning curve in comprehending the background information for each of the scenarios. A reduced learning curve was anticipated to lessen the burden on participants and increase external validity (CMU, n.d.).

The candidate pool consisted of journeyman colleagues of the researcher and university cohort students with the desired experience at senior joint military

commands and service component commands in the United States, Europe, and Asia. No single command or service organization was the focal point of this research. Anonymity of participation further eliminates data collection pertinent to a single organization and increases generalizability (CMU, n.d.). Based on these factors above, it is understood there is no need for DoD approval to conduct this experiment as it is not focused upon a single military unit. This dissertation research was approved by the University of Oklahoma Institutional Review Board prior to distribution of the email invitation to candidates.

Informed Consent

The email invitation request for participation included the Qualtrics online link to direct participants to the introduction of the experiment with a mandatory informed consent statement for concurrence prior to participation. Participants were informed by continuing with the exercise, their consent was acknowledged as granted and recorded in the Qualtrics data base. The original research design called for snowball sampling to achieve the desired number of respondents. However, the response rate was lower than desired. New snowball threads were extended to persons meeting the inclusion criteria, yet only 23 participants completed the experiment. Since the number of participants was smaller than expected, full quantitative data analysis is not possible. This document reports the results of basic statistical analysis. Commonality of data responses are reviewed for trends and then cross-tabulated with data for the two different scenarios and decision models to verify conclusions on effectiveness and majority preferences.

Demographic Information

The demographic data received from participants validated their qualifications and fit necessary for credible responses to the questionnaire. Use of the demographic data as a whole was the basis for evaluating participants and validating the data collected from them. Demographic data indicating the participant did not fit the required characteristics would have resulted in omission of the participants responses from the data analysis. All participants were verified as meeting the desired qualifications. Taken in part or as several factors together, the demographics provided validation of participants as follows:

- Age (**PAge**), rank (**PRank**), and years of military service experience (**YrsSrv**): Participants were validated as senior, with training in rational decision-making (typically the MDMP).
- Position title (**PosDes**), rank (**PRank**), and organization (**PMilBr**): Participants were senior in rank (Lieutenant Colonel or higher) with command experience in planning or programming of HA type projects. The participants were also familiar with the ongoing withdrawal from Afghanistan.

Additionally, the demographic information revealed the participants also had experience with rational decision models in addition to MDMP, or extensive organizational training in decision-making. Demographic information provided the following:

- Branch of Military Service (**PMilBr**): The senior Air Force and Navy participants were trained in the use of multiple decision-models such as the Delphi and nominal decision models.
- Education (**PEdLvl**): Participants received higher education at the master's and doctoral level including organizational decision theory.

All of the participants validated their level of experience, and familiarity with HA programs and the Afghanistan withdrawal, which made them ideal for participation in the experiment.

THREATS TO VALIDITY

The success of the experimental design is dependent on maintaining a high level of validity. There are three applicable measures of validity considered relative to the design of this experiment. Construct validity measures how well the experiment replicates the concepts to be studied and the degree of accuracy in measuring results (CMU, n.d.). Internal validity is a measure of the causality of changes in variable X resulting in observable changes in variable Y. External validity considers the ability to generalize the results by applying them to a larger population (ibid.), and the ability to replicate this experiment in the future.

Construct validity concerns are satisfied by selection of participants with both familiarity of rational decision models and familiarity and experience in settings typical of the scenario backgrounds (Brogan, n.d.). Demographics were used to verify randomization (**PGndr**, **PRace**, **PosDes**, and **PMilBr**) and validity (CMU, n.d.). Senior Air Force and Navy service schools provide training in the use of Delphi,

MDMP and nominal decision-making techniques. The Army service schools provide FM 101-5 guidance for implementation of MDMP. The construct validity is considered to be high as scenario design closely replicates a military decision process. Feedback on realism and clarity of the pilot test further validated construct validity.

Internal validity is measured through perceptions of the decision model (X) effectiveness in countering inner-circle influence (Y) as identified by participants (ibid.). Concerns for Internal validity were satisfied by use of scripted inner-circle influence in military decision-making scenarios for each decision model. Participant were successful in identifying the inner-circle (**Tinf**) indicating senior military personnel and equivalent civilian participants were familiar with scenario parameters (ibid.). Additionally, the Qualtrics tool offered data collection for research purposes while assuring participants of their anonymity prompting candid responses. Qualtrics collation of data for reporting purposes aids in maintaining data reliability at a high level. The randomization of participants through the snowball effect, together with the anonymity, and reliability, further contributed to the validity of the experiment (ibid.).

External validity measures participant fit, level of participation, and applicability of the decision model for comparison to other decision-making organizations (Brogan, n.d.). The external validity is based upon the ability to translate the military setting to private industry and other government settings. The ability to translate or generalize the results to other government settings is considered to be high, with moderate generalizability for private sector organizations (CMU, n.d.), provided they use rational decision methods or can modify their decision-making models to accommodate lessons learned from this experiment.

Chapter IV: Research Findings & Data Analysis

Recall from Chapter 3 that there were four cells in the experiment based on the order of presentation of the combination of scenario and decision-making technique. In this chapter, the anticipated and preferred decision is described based on the scenario as well as the decision-making technique. Of the 42 persons who accessed the online survey, only 26 participants completed a majority of the exercise, with 23 completing the entire questionnaire. This restricted sample size limits the type of analysis that can be performed to one of trend or pattern identification in responses using qualitative methods. For qualitative analysis, 30 respondents would be desired as recommended by Joe Rodgers. The availability of 26 responses is considered adequate for the questionnaire was extensive and the respondents who vested their time provided valuable feedback. What are reported here are descriptive statistics. Participant remarks and feedback will be discussed in the order received in response to the questionnaire.

Responses Identifying Decision Outcomes

Perceived Group v. Participant Preferred Decisions

When considering the difference between the perceived group and participant preferred decision based on scenario only – irrespective of whether it was presented as the first or second scenario - we find a high degree of concurrence. For the Afghanistan withdrawal scenario, 71% of the time there was concurrence between the solution that the participant thought would be selected by the group and the participant's preferred solution.

Perceived decision team would make:

18 - Slow withdrawal w/Training tail
5 - Rapid withdrawal w/training tail
4 - Rapid withdrawal of all support
0 - Slow withdrawal w/full services
1 - no response

Versus the participant's choice

Decision participant would make in this scenario:

7 - Rapid withdrawal w/Training tail
6 - Slow withdrawal w/Training tail
5 - Rapid withdrawal of all support
3 - Prolonged withdrawal w/full services
7 – no response

The researcher attributes the difference in perceived team decision, and the decision the participant would make, to the participant's recognition for the need to have extended training for stability in Afghanistan. That is, participants believed the decision team would likely follow previous DoD policy to insure stability as a priority by extending the U.S. military in Afghanistan for training purposes. Overall, the participants slightly favored the choice to follow new policy issued by the President calling for a rapid withdrawal. This indicates their acceptance of new policy and willingness to overlook the need for long term stability in favor of new command guidance. It is interesting to note this team decision was in direct opposition to the inner-circle influence for a rapid withdrawal (Appendix C, IC indicated between lines 128-133, 167-173, 202-212, 262-268 and 287-289).

For the HA clinic location scenario, the concurrence between the perceived decision and the decision preferred by the participant was almost unanimous at

approximately 92%. The researcher anticipated a high degree of concurrence for this scenario due to the influence of funding restraints and the overarching command guidance provided to the participants.

Perceived decision team would make:
22 – Constanza (site of exercise)
4 – Bucharest (capitol)
2 – no response

Versus the participant's choice

Decision participant would make in this scenario:
20 - Constanza
6 - Bucharest

That is, the participants would expect the Constanza site to be selected due to funding restraints and mission objectives despite the inner-circle preference for Bucharest (Appendix D, IC preference indicated between lines 120-127, 149-161, 186-202, 247-250, 256-261, 307-308, 318-326, 336-338, and 346-351).

Why Team Decision Was Made

For the Afghanistan scenario, the researcher concluded the participants recognized the correct decision would be to adhere to the President's new policy for rapid withdrawal. The participants also recognized the decision team was indicating there would likely be a future compromise to extend some minor role of U.S. military in Afghanistan. The reasons provided for the team decision indicate the option for a long withdrawal and training tail would be the most logical withdrawal and still meet commander intent as indicated below.

Perceived reason team made this decision (Afghanistan):

12 - consensus on most logical, meets intent
2 - prior experience & SME input
1 - team input stressing need for training
1 - favored by Ch. Ops (IC) and Ch. Pans (leader)
1 - compromise of A1 and A2
1 - easiest
1 - groupthink & political posturing (IC)
1 - A1 quick exit

The perceived reasons for the clinic site location conform to the researchers anticipated response. That is, funding constraints would influence the decision. However, it should be noted the mission objectives and the funding constraints are often interrelated. These two reasons were the top responses indicated below.

Perceived reason team made this decision (HA):

10 - cost / funding limits
6 - mission intent / charter
4 - majority vote / consensus
3 - cost & mission statement (Constanza)
2 - HN desires Bucharest (IC)
1 - Leader driven

Note a high number of participants agreed with the perceived alternative selected by the scenario decision team. This may be attributed to favoritism of that alternative by the participant or an indication the participant would make the right decision (same as the participant's preferred alternative) despite inner-circle influence.

Evidence of misinterpretation or need for clarity in the scenarios was slight and reflected in only two responses indicating the decision required in the HA scenario was inappropriate for a military decision. One response indicated local host nation

authorities and medical personnel should be the ones to make the HA decision. This may be an indication that the participants were skimming the background or misunderstanding the role the clinic played in support of the military exercise to follow the HA project. The researcher assesses these two responses (indicating a misunderstanding of intent), as low in significance to the overall consistency of responses and validity for answering the research questions.

Recognizing the Inner-Circle

or High Influence

Recall the Afghanistan scenario team members exhibiting high influence as members of the inner-circle were the Chief, Intel and the Chief, Ops. The Chief, Trng and Chief, Res were united in opposition to the inner-circle as indicated below.

Team member w/most influence:

11 - Ch. Log
4 - Ch. Trng /Ch. Res (~IC)
4 - Ch. Ops (IC)
3 - SME's
2 - Ch. Intel /Ch. Ops (IC)
1 - Ch. Trng (~IC)
1 - none, consensus

As annotated by the (IC) and (~IC) above, 44% of the participants identified a member of the inner-circle (Chief Intel and Chief Ops), or a member of the united pair in opposition to the intended inner-circle (the Chief Trng and Chief Res), as having high influence. The researcher did not intend for two inner-circles to be present in the scenarios. However, this recognition serves as further validation that participants (or decision team members), will identify all forms of subgroups working together as an

inner-circle, and serves as validation of the inner-circle groupthink first proposed by Janis (1982) then ‘t Hart, Stern & Sundelius (1997), and captured in the public media as noted by James Fanto (2003).

It was not intended for the Chief Log to be recognized as having high influence in his role as a “peacemaker.” By offering a new compromise alternative he was viewed as by half the participants as having high influence. This perception may be of value for use in future decisions to gain influence by an individual or subgroup. Recall for the HA scenario design, the inner-circle consisted of the Romanian, Bulgarian, and Ukrainian representatives. In this scenario it was much clearer to the participants who the members of high influence were as noted below.

Team member w/most influence:

11 - Romanian (IC)
4 - nobody / equal participation
3 - Bulgarian (IC)
2 - EUCOM / team leader
1 - Albania
1 - Greece
1 - SME
5 - no response

As indicated by the (IC) notation above, approximately 61% of the participants identified high influence of the inner-circle. The team leader was also recognized as having high influence which is not surprising in his role as the DoD representative. Participants with DoD experience would be likely to recognize this team leader as having authority and high influence. These responses are interpreted by the researcher

as indicating moderate to high reliability in participant ability to recognize influence of a subgroup or an inner-circle.

Identifying the Inner-Circle Influence as Groupthink

A significant percentage of participants identified dominant team members as inner-circle influence exhibiting groupthink in the decision-making process. Averaging the responses for the two models, approximately 50% identified members of the inner-circle as having a high level of influence. A slightly smaller group (approximately 44%) of those respondents labeled this influence as groupthink ('t Hart, Stern & Sundelius, 1997; Fanto, 2003). Responses indicated the high influence team members either had an influence, or attempted to influence, the decision outcome. In responses where inner-circle influence or groupthink was not identified as a factor, participants indicated the decision was a consensus majority run as a democracy typical of the rational models proposed by Delbecq and Vande Ven (1971).

Table 4-1 below describes the "high influence" team members identified for each scenario by decision model. For the responses identifying the team member with the most influence, again the notation (IC) is added to indicate if this team member was a part of the inner-circle scenario script. A majority of the responses for the HA scenario correctly identified the members of the inner-circle as team members of high influence, and listed the possibility of groupthink as well. This link of groupthink as inner-circle influence was also evident in the Afghanistan scenario.

Afghanistan Team Member of Influence	
Delphi	**CGPS**
Team member w/most influence: 3 - Ch. Ops (IC) 2 - Ch. Intel and Ch. Ops (IC) 2 - Ch. Log 2 - Ch. Trng and Ch. Res (~IC)	**Team member w/most influence:** 9 - Ch. Log 3 - SME's 2 - Ch. Trng and Ch. Res (~IC) 1 - Ch. Ops (IC) 1 - Ch. Trng (~IC) 1 - none, consensus
HA Team Member of Influence	
Delphi	**CGPS**
Team member w/most influence: 8 - Romania (IC) 4 - nobody / equal participation 3 - no response 2 - EUCOM / team leader 1 - Bulgaria (IC) 1 - Greece	**Team member w/most influence:** 3 - Romanian (IC) 2 - Bulgarian (IC) 2 - no response 1 - Albania 1 - SME

Table 4-1: Members of High Influence in the Delphi & CGPS Models

For the Afghanistan scenario, 23% of participants correctly identified the two inner-circle members intentionally written into the script (Intel and Ops Chiefs). A smaller percentage (19%) responded by identifying two additional team members (Trng and Res Chiefs) as having high influence in their united opposition to the Intel and Ops Chiefs (IC). This second pair (Trng and Res Chiefs) was also identified as forming an inner-circle of influence. The occurrence of a second pair of inner-circle members was unintentional but added to the potential for participants to identify influence of an

inner-circle. The total share of participants identifying the two inner-circles of influence is 42% when you combine responses for the two distinct groups labeled as high influence.

In the HA scenario, responses identified these high influence team members by their "grandstanding" or favoring political influence to sway the decision of the team. As a final observation, when asked, "what final decision will be made in this situation, and why?" participants explained the final decision would be based on consensus, mission objectives, and as stated by one participant, "political influence bordering on groupthink."

Characteristics of the Decision-Making Models

Strengths & Weaknesses of Delphi & CGPS Models

As described in the responses below, the Delphi strengths include; anonymity (proposed by Helmer & Dalkey, 1999, to avoid emotion or personality conflicts), an iterative nature allowing decisions to evolve, equal sharing by each team member, less resources or logistical support required, it draws on SME and individual input, and is efficiently run by the group leader who attempts to reach a consensus. Number of participant responses and comments on Delphi strengths are included here.

Strengths of the Delphi decision model:

7 - efficiency of virtual method, anonymity avoids FtF conflict
6 - open & full discussion, shared information, w/no fear of retribution
3 - iterative/allowed for several discussions until consensus via written & verbal input
2 - equality/everyone had an equal voice
1 - attempts consensus
1 - draws on independent comments and analysis
1 - central control by leader avoids emotion
1 - independent expert opinion / SME
1 - less emotion/more time for input

The faults or weaknesses with the Delphi model centered on the lack of FtF richness identified as important for context when attempting consensus (Rescher, 1998). Lack of FtF interaction is claimed as a cause for time consuming iterations (ibid.) and a lack of trust in the Delphi model thus leaving the final decision in the hands of the group leader by default. Participants identify this lack of FtF richness in the Delphi model as a possible source of manipulation in the background between calls for input. Actual responses identifying weaknesses are listed below.

Weaknesses of the Delphi decision model:

6 - no FtF richness, groupthink can occur as members settle on input of others with no way to resolve lack of consensus
4 - time consuming / how to verify results
1 - hidden agendas may be easily hidden
1 - lacked weighting (note missing in background information)
1 - background manipulation by HN (IC)
1 - anonymity could not be guaranteed
1 - dialogue limited via team leader conduit
1 - trust is reduced due to virtual anonymity
1 - none

Responses describe strengths of the CGPS model as; open & candid communication for all, ability to add SME input, FtF richness, interaction among members, buy-in, and consensus building. These strengths agree with benefits noted by 't Hart, Stern & Sundelius (1997). The other significant advantage identified for CGPS is better understanding of the context of team member discussions through both verbal and non-verbal communication as proposed by Fuller and Aldag. Participant comments on CGPS strengths are summarized below.

Strengths of the CGPS decision model:

5 - open & candid discussions, timely, with all having a say
4 - SME input
3 - FtF richness
2 - continuous feedback loop to introduce new information after evaluating alternatives
2 - collaboration and honest feedback
1 - interaction between members
1 - consensus building /leader in democratic role
1 - buy-in by team members

Weaknesses described for the CGPS model are; democratic or majority vote allowing personal opinion to sway the outcome. Personal opinion was blamed for peer pressure (noted by Jablin & Putnam, 2000) to conform as a symptom of groupthink. Anonymity was also identified as a weakness in the CGPS model whereas it was identified as strength for the Delphi model. In addition to being listed as a strength, FtF was also identified as a weakness due to the potential for personality conflicts in the CGPS model. The participant responses for CGPS weaknesses are listed here.

Weaknesses of the CGPS decision model:

4 - peer pressure or political pressure to conform
3 - strong personalities could sway the decision, or personality conflicts may occur
2 - alternatives not weighted for risk (note missing in background information)
2 - groupthink & political influence
1 - time consuming to reach consensus
1 - if no consensus then leader decides
1 - democratizes the process & allows personal opinion to become input
1 – none

Effectiveness of Delphi & CGPS Models

Responses indicate both the Delphi and CGPS decision-making models were interpreted to be effective decision tools. A majority of participants stated both models provided an open environment for frank discussion allowing for dissention without reprisal . Responses are summarized in table 4-3 below.

Delphi and CGPS Benefits & Effectiveness
Reason this method is best:
2 - Delphi allowed more discussion / interaction / iterative process
1 - Delphi ease of adding SME input
1 - Delphi less emotional than CGPS
3 - CGPS - both FtF & anonymous without emotion
3 - CGPS - includes more objective evaluation, evaluate & weigh alternatives
3 - CGPS - FtF richness is more interactive and forced consensus
2 - CGPS - FtF & electronic promotes discussion
2 - CGPS - open dialogue and SME input allowed members to change their minds
1 - CGPS - allows for non-verbal communication
Perceived benefits using the preferred method:
1 - combination of both may reduce personal emotions in discussions
1 - Delphi - offers better understanding of issues
1 - Delphi - adds SME opinion versus just staff input
1 - Delphi - it wouldn't
3 - CGPS - more inclusive/avoids decision-making in a vacuum/members commit
2 - CGPS - more input and open discussion of opposite view without reprisal
1 - CGPS - would decrease the time for decisions
1 - CGPS - consistency if leadership will buy-in

Table 4-2: Effectiveness of Delphi & CGPS Models

The participants desire to be heard during discussions, and to have a fair and impartial process to raise concerns over improper decision-making, appears to be the strengths desired in a rational model. It is possible to satisfy their desires through use

of either the Delphi or the CGPS decision models, or a hybrid mix of the two. The researcher interprets the responses (63%) in table 4-3 as validation the Delphi or CGPS models were selected as effective due to perceived communication richness.

Preferred Decision-Making Abilities

Decision-Making Model Preferred by Participant

After responding to questions on each of the two scenarios that they read, the participants were asked questions about their preferred decision-making model. Responses indicated 16 participants (70%) identified the GPS model as the preferred decision-making model (**PpreDM**) as indicated in figure 4-1 below.

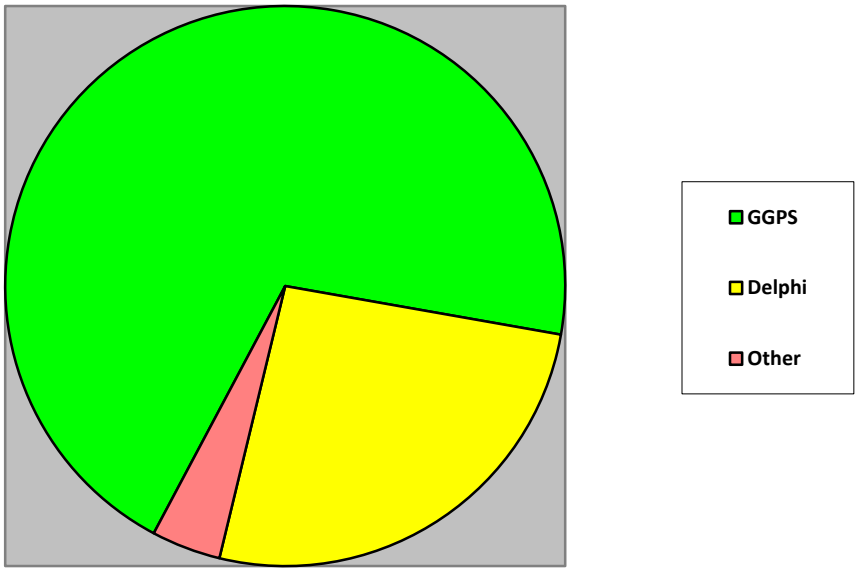

Figure 4-1: Preferred Decision-Making Model

Six participants (26%) selected the Delphi model as preferred and 1 participant (4%) preferred a combination of the Delphi anonymity and CGPS FtF richness. One participant indicated the preference is situational, based on the decision at hand and

availability of team members. This response may offer the most insight as one model will not always be the best fit for the decision parameters involved. The team leader or the group may need to decide which model is best for decision-making challenge.

The CGPS model is clearly the preferred decision-making model. Participant's responses identifying the favored decision-making model are listed below.

Preferred decision method:

16 - CGPS
6 - Delphi
1 - situational / leader selects

The favorable characteristics of the CGPS model serve as validation it was perceived as more effective than the Delphi model. The preferred characteristics identifying CGPS as best, its strengths, and the perceived benefits are consolidated and summarized below.

Reason the CGPS model is best:

5 - FtF & electronic promotes discussion without emotion
3 - FtF richness is more interactive and forced consensus
3 - includes more objective evaluation, best evaluated & weighed alternatives
2 - open dialogue and SME input - allowed members to change their minds
1 - allows for non-verbal communication

Strengths of the CGPS decision model:

5 - open & candid discussions, timely, with all having a say
4 - SME input
3 - FtF richness
2 – continuous feedback loop to introduce new information after evaluating alternatives
2 - collaboration and honest feedback
1 - interaction between members
1 - consensus building /leader in democratic role
1 - buy-in by team members

Perceived benefits using the CGPS model:

3 - more inclusive – avoids decision-making in a vacuum – members commit
2 - allows more input and open discussion of opposite view without reprisal
1 - would decrease the time for decisions
1 - consistency if leadership will buy-in

Although participants favored the CGPS model, both the CGPS and Delphi models were favored over the MDMP model due to communication richness or "voice" provided to team members in the decision-making process. The desire for "voice" validates the desirability of CGPS as noted by 't Hart, Stern & Sundelius (1997). Although the MDMP model offers a voice, it is perceived as too easily manipulated by the team, or inner- circle, unless "leadership buys-in" or enforces open communications as stated by one participant.

The Value of Iterative or Continuous Feedback

The continuous feedback loop (listed as a CGPS strength above) is the key element that makes CGPS an effective decision-making tool in countering inner-circle influence (Fanto, 2003; 't Hart, Stern & Sundelius, 1997). The significant difference between the value of feedback in the Delphi and CGPS models is the ability to continuously add new information for discussion in the CGPS model. Unlike the iterative process in Delphi, the feedback loop in CGPS provides opportunities to revisit steps in the model and to apply critical thinking. It should be noted here that the iterative process of Delphi also allows team members to revisit previous discussions and apply critical thinking, but the team leader may overlook this or decide not to include it in the next round of discussions.

The other significant advantage identified for CGPS is the FtF richness and the opportunity for better understanding the context of team member discussion comments through both verbal and non-verbal communication. The communication advantages of both Delphi and CGPS are summarized here.

Delphi Communication Abilities:

- efficiency of virtual method, anonymity avoids FtF conflict
- open & full discussion, shared information, w/no fear of retribution
- *iterative / allowed for several discussions until consensus via written & verbal input*
- adds SME opinion versus just staff input
- equality / everyone had an equal voice
- attempts consensus
- draws on independent comments and analysis
- offers better understanding of issues

CGPS Communication Abilities:

- open & candid discussions, timely, with all having a say
- SME input
- FtF richness & electronic promotes consensus & discussion without emotion
- *continuous feedback loop to introduce new information after evaluating alternatives w/final discussion*
- collaboration and *honest feedback*
- allows for non-verbal communication
- interaction between members
- consensus building /leader in democratic role
- buy-in by team members

The FtF richness and CGPS continuous feedback facilitate critical thinking and full analysis of alternatives (Van Assche, 2008; Beebe & Masterson, 2003; Deutsch & Coleman, 2000; Jablin & Putnam, 2000; 't Hart, Stern & Sundelius, 1997). The researcher interprets this difference (the participants desire for open communication

and continuous feedback opportunities), as validation of the significance the CGPS feedback loop plays in offering a second chance to be heard, or to counter inner-circle influence.

Ability of Decision-Making Model to Counter Groupthink

The iterative Delphi model and the continuous feedback loop of CGPS both facilitate critical thinking and full analysis of alternatives. Therefore, participants evaluated both models as facilitating critical thinking, additional evaluation of alternatives, and most important, an opportunity to voice opposition to counter inner-circle influence. Facilitation of critical thinking and opportunity to voice opposition were key factors in overcoming groupthink (Van Assche, 2008; 't Hart, Stern & Sundelius, 1997).

As noted in the strengths section above for both models, the potential for open communication (without retaliation), was the predominant reason participants listed for preferring either Delphi or CGPS to counter political grandstanding or members of high influence. Participants were in agreement that either model would improve decision-making in their home organization. Responses indicated open communication during the decision-making process at the parent organization would result in better decisions. The researcher places high significance on participants' desire for a decision model with open communication at their home organization where fear of reprisal from leadership (or perhaps the inner-circle), is absent.

Preferred Decision-Making Model at Participants Home Organization

In an attempt to discover alternative decision-making models not found in literature, the questionnaire asked participants to identify the decision model used in

their home organization, explain why this model is used, identify who participates in the decision process in the organization, and to identify other decision models they considered superior to Delphi or CGPS. As noted by a few of the participants, the decision-making model is often selected by the leader, or team leader within their organization. Decision models in use by the participant's home organization, reason for use, and decision team members, are described below in participant's responses.

Decision method used by Participant at work:

13 - MDMP
5 - CGPS (1- CGPS short version)
2 - consensus driven method
2 - situational, method chosen based on type of decision to be made
1 - rational method
1 - statistical analysis

Reason work team uses the method above:

9 – MDMP – doctrine/leader mandate/structured process/assess risk/assign weights
1 – MDMP reduces emotion
1 – MDMP gains buy-in
2 – consensus - knowledgeable staff sees all angles prior to vote
1 – situational - leader mandate
1 – rational process is the norm
1 – Statistical Analysis - based on fact, not opinion
1 – value analysis weighs alternatives
1 – CGPS - commitment to decision
1 – CGPS - offers full communication, FtF inclusive of non-verbal cues
1 – CGPS - allows leaders or knowledgeable members to easily influence others
1 – CGPS - more inclusive and less likely one or two voices will sway decision
1 – CGPS - more objective data input
1 – CGPS - SME input or input by others to assist less informed members

Participant's decision team at work consists of:

17 - leadership / division & branch chiefs
2 - staff member's w/stake in outcome or as SME
1 - varies by level of importance
1 - SME's (subject matter experts)

Participants offered neither the home organization decision model nor any other models as superior to Delphi or CGPS. One contribution of note here is the makeup of military decision teams as mostly senior officers or branch chiefs who are typically supervisors and may have subordinates on the decision team who could fall under their influence.

Recommendations to Improve Delphi and CGPS Models

The questionnaire included a section for participants to offer insights and recommendation to improve the Delphi and CGPS models. Responses were focused on both the weaknesses and the strengths of the models. It is significant to note 22% of responses indicated the preferred model, either Delphi or CGPS, can be improved by combining strengths of the two models. Participant recommendations for improvement are summarized here.

Improvements recommend to the preferred DM:

3 - combine FtF and anonymous discussion (mix Delphi/CGPS)
5 - CGPS - weigh benefits and risk in a matrix of alternatives (background missing)
1 - CGPS - should vote after each discussion period
1 - CGPS - identify up front the constraints
1 - CGPS - final opinions could be anonymous (mix)
1 - CGPS - decision reviewed by a Delphi group(mix)
1 - CGPS - add video-conference (mix)
1 - CGPS - avoid grandstanding /speeches to sway
1 - CGPS - none
1 - Delphi - should include a final vote
1 - Delphi - weigh benefits and risk of each alternative

Most recommendations for CGPS focused on the possible addition of anonymous input or combining Delphi aspects of anonymity with CGPS procedures. A recommendation to make final opinions anonymous could also stimulate open and honest feedback for the CGPS model.

The recommendation to add a matrix of alternatives and weighting to CGPS resulted from an accidental oversight in background information provided for both scenarios which would have stated the matrix was performed prior to each round of discussions . One participant focused on the logistical concerns for most organizations in recommending use of video-teleconferencing as a method to improve the CGPS model and alleviate obstacles preventing assembly of team members. As teleconference availability grows this may become a logical option. The participant further explained the inability to assemble team members may require use of electronic media such as email in lieu of limited teleconference access.

Those preferring the Delphi model made two recommendations for improvement. Of particular interest is the significance behind the recommendation to combine Delphi with the FtF richness of CGPS. To do so would result in Delphi being a CGPS approach with a panel of SME's as typically Delphi members are selected for their expertise. A decision team of SME's would be ideal in any organization that has the resources available and the flexibility to panel members with the desired expertise. It is unknown why more participants did not recommend combining the strengths of Delphi and CGPS. Perhaps most believed either model alone was sufficient in countering groupthink.

Threats to Validity

Examining the Effect of Order of Presentation

When considering the results across the four cells, it became evident that the majority of participants anticipated that the scenario group would select the same alternative, as the best final decision, as the one selected by the participant. In the presentation of the first scenario, 21 out of 26 (81%) participants selected the same solution as what they anticipated for the group's choice. For the second scenario presented, there was slightly more variation with 67% preferring the same outcome as the group. Overall, the individual raw data responses exhibited consistency regardless of the order of scenario review by the participants, and reliability of data scoring remains high. So there is no threat to the validity of the research design based on the order of presentation of the scenario and/or the decision-making technique.

Limitations & Concerns

The use of DoD participants establishes a boundary for the sample population making it ideal for transferability to government organizations, all military services, but not as readily transferable to the private sector organization. The intent to use military participants trained in rational methods may have introduced participant bias of the structured and regimental DoD environment. For this reason, the data may not be highly transferable to private industry. The use of DoD participants enabled the researcher to better understand and interpret responses indicating heavy military influences due to the researchers extensive background in DoD exercises at the combatant command level. Limitation of participation to researcher colleagues and fellow cohort members hindered the "snowball" network effect in obtaining

participants. For a qualitative study, the 26 responses provide adequate data for trend analysis sufficient to generalize these findings to the private sector and across most Government departments.

This replication experiment and post-test design does not include comparison with a known control group. Therefore, the results of this current research are considered exploratory in value and representative of a pilot study (Grant, 2012). The need for additional replication and future research to validate this experiment, combined with the limitations above, indicate low generalizability and construct validity. Perhaps the results are more generalizable within DoD organizations than the privates sector until future replication indicates otherwise.

Credibility of Scenarios & Questionnaire

Reviewing participation, a total of 42 participants started the questionnaire with only 26 participants completing a majority of the questions. Of the 26, only 23 participants responded to all questions without omissions. Low participation and high dropout numbers are both negative indicators of time burden. For Delphi versions of the scenarios, it is recommended future replication eliminate the initial round of discussions thereby limiting discussions to two rounds to reduce the burden on time required. Concerns for construct validity in the scenarios centers on two threats to validity, the time burden of the scenarios, plus the unintentional addition of a second inner-circle and a peace-maker (an unknown variable) in the Afghanistan scenario.

Transferability of results from the Afghanistan scenario can be interpreted as strengthened by the addition of the second inner-circle. Unfortunately, loss of focus and intent in this scenario may have resulted from the infusion of a peacemaker (Log

Chief) during the generation of alternatives. The peacemaker role detracted from the overall generalizability of the Afghan results as the peacemaker was identified by a significant portion of responses as the most influential team member. These threats to validity can easily be corrected and overcome in future replication.

Observations by participants indicated the presence of two distinct groups of high influence players in the Afghanistan scenario and identified both subgroups as inner-circle influence. The Training and Finance Chiefs working together to oppose the Intel and Operations Chiefs, were perceived as the second group of inner-circle influence. Fortunately, the second subgroup in the experiment was a duplication of the inner-circle. Although not intended, the appearance of two different inner-circles actually enhanced the participant's ability to identify the actions of an inner-circle, yet replication of the experiment should eliminate the appearance of a second subgroup.

Additional comments related to mission and commander's intent indicated the participants were concerned with the actual impacts of the decision and evaluated decision alternatives accordingly. This concern provided the participant with insights as to roles of the "subordinate command" in the Afghan scenario and impacts to be considered by scenario players. That is, the Joint Staff (JS) issued guidance for the subordinate DoD directorates to consider in making the Afghan decision and weighting of potential impacts related to implementation of each alternative for possible success in achieving the JS objectives. In the HA scenario, participants indicated a preference for more upper level guidance. Definitive guidance was intentionally not provided in the HA scenario as most exercises of this type are more open ended and developed

jointly with the host nation. Overall, participant feedback of insights and mission parameters is again a good indicator of moderate construct validity (CMU, n.d.).

Participants Bias

The 26 participants who completed the scenario exercises provided insightful remarks based on familiarity with military settings and discussions presented in the two scenario exercises. The rank, or grade, and position title (**PosDes**) of the service members or civilian participants is also an indicator of experience level and familiarity with the situational parameters included in scenario backgrounds. As indicated below, only one participant actually has less than 15 years of experience (**YrsSrv**) and no advanced university graduate work. At the opposite end of the experience scale, two of the participants possess over 40 years of experience. Although two participants were lower rank (Major) than the target rank of Lieutenant Colonel, the position titles of either operations or engineer planners, and military strategist, indicate job experience provides them with the familiarity and knowledge desired for participation. Demographic of all 26 participants indicated they met the desired qualifications. Internal validity measured by fit of participant remained strong (Brogan, n.d.).

As depicted in table 4-3 below, the number of demographic responses closely matches the number of completed questionnaires. For this reason, the demographic data appears to be a true representation of the participants who completed the exercise. The demographic questions were included at the end of the questionnaire. Three of the 26 respondents did not complete the demographic section, but answered the questionnaire pertinent to the scenarios. The demographics were reviewed to verify the desirability of the participant based on experience (**YrsSrv**) and training (**PEdLvl**) in

use of rational decision models plus familiarity with HA projects and the withdrawal from Afghanistan (**PosDes**). High education levels (Masters and Ph.D) of participants verified their familiarity with organizational decision theory and their ability to offer credible feedback of different perspectives in their responses.

Participant Demographics

Education Level:
1 - undergraduate degree
2 - partial graduate work
22 - masters degree

Experience Level:
1 – (10-14 years)
2 – (15-20 years)
23 – over 20 years
2 – over 40 years

Rank or Grade:
2 – Major/04 (GS 12 or 13 Civilian)
16 – Lt. Col./05 (GS 14)
7 – Colonel/06 (GS 15)

Job Title or Position:
1 – operations Lead Planner
2 – engineer planner
3 – military strategist

DoD Service Component:
1 - Air Force
20 - Army
5 - Navy

Gender:
23 - male
3 - female

Table 4-3: Demographic Data

The ratio of male to female in table is typical of that found within the senior military ranks and senior Government civilians, that is, female numbers represent the lower percentile. Comments did not voice any gender concerns or perceived advantages for one decision-making model over another based on gender bias toward one model as more supportive or useful to female leaders. The low response rate by females may require this issue to be revisited in future research to increase generalizability and external validity (CMU, n.d.).

As explained by Air Force and Navy colleagues of the researcher, their service schools differed from Army training in decision-making methods offered. Army service members are trained to use primarily the MDMP model. Army participants used the MDMP model for comparison to the Delphi and CGPS models in their remarks and indicated a bias in favor of CGPS which is similar to MDMP. The Air Force and Navy participants are trained in use of a wider variety of decision-making models with no preference of use given to MDMP. A bias in favor of other decision-making models would be expected from the Air Force and Navy participants. This bias was not evident in responses due to a lower participation rate by members of those services. The responses were primarily from Army members and thus reflect an MDMP bias in comparisons. The absence of participants representing the Marine Corps is not unexpected as this service is the smallest military organization. Members of the Air Force, Navy and Army, all indicated openness to MDMP, Delphi, and CGPS.

Overall diversity of the participants (**PosDes**, **PRace and PGndr**) and diversity among the military services (**PMilBr**) was validated by the demographic information thereby strengthening external validity (CMU, n.d.). Future replication of this

experiment has potential for both government and large private sector organizations. Replication in military organizations is most practical for service schools or the War Colleges. Replication by a service school promises high participation levels ideal for full statistical analysis. Large corporations with formalized training in decision-making hold potential for replication with high participation and should be considered as desirable candidates for replication.

Chapter V: Summary & Conclusions

This research was intended to resolve and validate inner-circle influence as groupthink, and to identify if there is an effective tool for countering this influence during decision-making within organizations. This current research validated inner-circle influence as groupthink per the perceptions of participants in an experimental exercise for this purpose and concludes that CGPS can be an effective tool for countering this influence. In this section, we directly answer the six research questions and consider the contribution of our research results to extent theory and explore the practical implications of our findings.

Research Question

Summaries

Research Question 1: Are research participants able to identify inner-circle influence, or directive influences, and will they identify this influence as groupthink?

A significant number of participants recognized the high influence of team members and recognized a strong correlation between this influence and the decision outcome. It is concluded by the researcher that this inner-circle influence or groupthink may be responsible for manipulating a decision outcome as suggested by Van Assche (2008), Yukl (2002), ‘t Hart, Stern & Sundelius (1997), and Janis in 1982

Research Question 2: Do participants view the Delphi and CGPS decision-making models effective, and if yes, do participants agree these models counter the inner-circle influence?

Responses and data analysis indicate both the Delphi and CGPS decision-making models were interpreted to be effective decision tools and effective at countering the inner-circle of influence. These models were recognized as effective rational decision-making procedures effective in evaluation of alternatives and improving the final decision outcome. True Delphi requires the use SME's and may not be as practical for all decisions. The CGPS model holds more promise for organizations with limited availability of subject matter experts. The success of the CGPS is founded upon application of the continuous feedback loop (for second chances & critical thinking) recognized by Van Assche (2008) and 't Hart, Stern & Sundelius (1997).

Research Question 3: Is the Delphi model or the CGPS model more effective in countering directive or inner-circle influence?

Data analysis and responses both indicated the continuous feedback loop as a strength that makes CGPS a more effective decision-making tool in countering inner-circle influence. The other significant advantage identified for CGPS is the FtF richness and the opportunity for better understanding the context of team member discussions through both verbal and non-verbal communication. This open communication forum without fear of reprisal against honest feedback was a significant inherent advantage in the CGPS model. Note this CGPS model is the Aldag & Fuller model as modified by 't Hart, Stern & Sundelius (1997) to include continuous feedback loops (figure 2-3), to capture the dynamic and evolving process that is decision-making.

Research Question 4: What are the strengths and weaknesses of the Delphi and CGPS models?

As described in the responses, the Delphi strengths include; anonymity (which avoids emotion or personality conflicts), an iterative nature allowing decisions to evolve, equal sharing by each team member, less resources or logistical support required, it draws on SME and individual input, and is efficiently run by the group leader who attempts to reach a consensus. The faults or weaknesses with the Delphi model centered on the lack of FtF richness identified as important for context and trust when attempting consensus. As noted by Rescher (1998), these traits are inherent in the Delphi technique as it relies upon the team leader for effective execution and drawing conclusions for the final decision.

Responses describe strengths of the CGPS model as; open & candid communication for all, ability to add SME input, FtF richness (verbal & non-verbal), interaction among members, continuous feedback, buy-in, ability to counter high influence, and consensus building. Weaknesses described for the CGPS model are; democratic or majority vote allowing personal opinion and peer pressure to sway the outcome. Personality conflicts were also described as a weakness in CGPS due to potential FtF confrontation. These weaknesses and strengths are known to parallel each other. Confrontation may be necessary to allow those outside the inner-circle to challenge and overcome the inner-circle influence. Approval to challenge the inner-circle influence must be granted by leadership and those of high influence (‘t Hart, Stern & Sundelius, 1997).

Research Question 5: Is the use of Delphi and CGPS with a feedback loop useful in identifying directive or inner-circle influence and countering its effect?

Responses indicate a positive correlation between the preferred decision-making model and members of high influence (inner-circle members). The researcher interprets this significance, and the responses indicating need for open communication with a feedback loop, as validation of the CGPS model with continuous feedback as recommended by 't Hart, Stern & Sundelius as highly significant for countering inner-circle influence. Organizations may easily adopt use of continuous feedback in their current decision-making models by addition of reviews or "second chance" opportunities making this key element practical for application. For these reasons, the CGPS model should be widely considered for application in real decision-making environments, especially in hierarchal organizations to insure all levels of participation are given a voice and opportunity to participate. The Army War College, and all DoD senior universities, should consider inclusion of CGPS with recommendations for leaders to consider its use and the use of the Crisis Action Planning Model as decision-making tools more open to participation and creative synergy than the limited MDMP model.

Research Question 6: How can the preferred decision-making model be improved?

It is significant to note 22% of responses indicated the preferred model, either Delphi or CGPS, can be improved by combining strengths of the two models. Most recommendations for CGPS alone focused on the possible addition of anonymous input or combining Delphi aspects of anonymity of "voting" within CGPS procedures to

stimulate open and honest feedback for the CGPS model. One participant recommended use of video teleconferencing as a method to improve the CGPS model and alleviate obstacles preventing assembly of team members. As teleconference availability grows it may become a logical option for increasing frequency of CGPS use, if not increasing and improving quality of discussions. Although, the participants were asked if they could recommend a decision-making model they considered to be superior to Delphi or CGPS, no superior models were identified.

Research Contributions

This research contributes to decision-making knowledge, leadership awareness, and team member satisfaction. The first contribution is awareness of the value of constant feedback during rational decision-making to counter poor decisions and namely undue influence (and inner-circle manipulation) in the decision process. Although, Janis, Yukl, and Van Assche all note inner-circle influence may have a negative impact on decision-making, they do not propose a method to counter this influence. Literature indicates the inner-circle may have both positive and negative impacts on decision-making, yet only ‘t Hart, Stern & Sundelius have captured the continuous feedback process as both a tool for improving decision-making and for countering the negative influence of the inner-circle. Although Fanto recommends the assignment of an impartial and/or outside CEO to oversee corporate decisions to counter inner-circle manipulation, he does not identify tools the CEO may use to do so. The CGPS is one tool the CEO may turn to if manipulation is suspected or synergy is lacking. The CGPS possibly could have overcome the high influence of the Vulcans during the Bush administration decision to enter Iraq, if President Bush had positioned

himself outside of his inner-circle (the Vulcans) and challenged past assumptions or provided second chance reviews inherent in CGPS. Van Assche recognized the need for continuous feedback to overcome the hubris associated with the Iraq decision. The CGPS is one tool to offer this continuous second chance to introduce new information and overcome past assumptions. Perhaps a diversified inner-circle of advisors for President Bush, similar to the cabinet members under President Lincoln (as described in the creative diversity of talents section of this paper), would also have improved the Iraq decision. The impartial leader must recognize and employ diversity and decision tools such as CGPS or the Crisis Action Planning Model (or similar continuous feedback process) to enable the decision-making team to overcome shortfalls and what they don't know.

The second significant contribution is the validation of inner-circle influence as a newly recognized definition of groupthink. This perception is held by both the public media and by individual participants. This data lends credibility to the assertion by 't Hart, Stern & Sundelius (1997) that we have moved beyond the definition of groupthink first proposed by Janis, perhaps to one of inner-circle influence. Perhaps the revised definition of groupthink by Yukl (p.251, 2013) may be further amended to capture this new public media definition as follows; groupthink occurs when members of a cohesive group are unwilling to question the majority viewpoint or the viewpoint of an influential inner-circle for fear of social rejection. The result is a loss of creativity of alternatives and less than full consideration of options prior to the decision.

The research also contributes to our understanding of the potential – promise and pitfalls – for using experimental designs to a greater extent in social science research.

Failure to achieve adequate participation is indicative of the falling response rates realized in many empirical studies today. The researcher considered use of proxy populations as having systemic problems when replicating the expertise and norms established by professionals which may result in limited internal validity (Tao & Franklin, 2012). The researcher relied upon a sample population of convenience and the snowball effect (CMU, n.d.) which fell short of the participation targets after multiple attempts. One potential for overcoming lack of participation is the combined use of professionals and proxy populations (perhaps students), who are screened for attributes appropriate for the experiment or for a specific phase of the experiment (ibid.). The challenge then becomes identification and rank ordering of attributes and effectively validating qualifications of proxy candidates. The default option is to seek larger candidate pools of professionals to achieve desired participation levels (ibid.).

This experiment offers insights on electronic distribution and the potential for global networking. The use of internet (Qualtrics) based scenario exercises proved to be timely, convenient to participants, economical, and allowed the distribution on a global scale. The latter benefit is important when reaching-out to participants in Europe or outside the continental United States. The inclusion of the HA scenario made participation by colleagues located in Germany very desirable. Their access and participation was facilitated by the Qualtrics online suite wherein consent agreements, participant demographics, organizational procedures, and personal comments are secured. The global reach capability of the online distribution would normally increase participation and external validity although the results indicate this did not occur under the network or snowball effect (Koenig, n.d.). The results indicate the best fit of

participants through the global distribution rather than increased participation. Use of electronic media is highly recommended for sharing the experiments within distribution networks in future research or replication of this experiment.

A contribution for improvement of electronic distribution concerns this experiments failure to include an updated internet hyper-link in the introductory email to connect the participants to the final version of the scenario background information. It appears the link connected the trial version of the background information which did not include updates clarifying the alternatives had been analyzed, revised or made new, and weighted prior to rank ordering for the next round of discussions in the scenario scripts. Feedback from participants focused on the need to generate new alternatives and weighting of alternatives during each round of discussions. The need for this clarity may have detracted from credibility of some comments and the participants focus on scenario players of high influence and the effectiveness of the decision-making model, resulting in reduced construct validity (ibid.). Perhaps future replication of this experiment should include one round of alternative evaluation and weighting followed by one round of alternative discussions prior to a final decision.

Future Research

This exploratory research serves as a pilot study for future research. Due to the limitations of sample population and the corresponding reduction in external validity, the experiment is in need of future replication. The experiment design limitations also lower the internal validity and require replication within organizations outside the government (Koenig, n.d.; Brogan, n.d.). Future research with larger populations and non-military members may offer additional credibility that is lacking for this

experiment. Replication with candidates from within large organizations such as auto industries, or telecommunications firms, may prove of value in achieving adequate participation. Perhaps an ideal source for candidates is the DoD military service schools, or War Colleges, where replication is easily accommodated by a ready pool of experienced professionals. It is recommended future replication consider concealment of the purpose in testing for signs of groupthink to further increase reliability of results. Although the participants in this experiment did correctly identify sings of inner-circle groupthink, the participants may not have placed significance on this influence if not cognizant of the intent to counter groupthink.

Replication of a similar scenario familiar to military, or one familiar to industry and perhaps one involving county emergency management organizations (hierarchal organizations) is appropriate. Reduced time burden is recommended by use of a single scenario (or alternating distribution of scenarios when more than one is used), and by use of very short scripts when more than one scenario is included in the experiment. A single setting would require only one background statement for the two decision-making scenarios (Delphi and CGPS).

The questions pertaining to home organization are recommended for deletion as they proved non-beneficial. To offer participants ease of access, use of electronic distribution is recommended for convenience and for potential increase in overall participation due to the global reach capability discussed previously. The resulting increase in participation will enhance generalizability and increase the value of future replication to industry, DoD, all Government, and all hierarchal organizations, provided all validity and construct issues found in this experiment are removed.

The value of replication can be realized in Sir Isaac Newton's statement, "If I have seen farther, it is by standing on the shoulders of giants" (Deutsch & Coleman, 2000, p. 354). This current research and potential for replication offers the researcher a chance to contribute to the body of knowledge as well as future research. Coach Jimmy Valvano once said, "A person really doesn't become whole until he becomes a part of something that's bigger than himself", (Krzyzewski & Phillips, 2004, p. 254).

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Appendix A: Introductory Email

From: Sarver, Christopher C. [mailto:xxxxxxxx@ou.edu]
Sent: Monday, August 01, 2011 8:31 PM
To: (candidates)
Subject: Request Your Participation in Survey

(Candidate Name)

I am completing my doctoral studies at the University of Oklahoma. To finish my degree requirements, I am conducting research entitled "Countering Groupthink; The Inner Circle of Influence." I am writing to request your assistance in my research. I believe you will enjoy reviewing and learning the two highly recommended decision-making techniques in this survey. Please focus on the technique used and the team players in each scenario. You may want to take some notes when reading the scenario to help you in answering the survey. The scenario's do not include any classified information and are drawn from public news sources and my personal experience. Please complete the survey prior to 25 August to allow analysis of results this summer.

This link takes you to an online survey that should take approximately an hour or less to complete.

If the link doesn't work when you click on it then cut and paste the link below into your browser.
http://oucas.qualtrics.com/SE/?SID=SV_6QMUnXXXXXXXXza
<http://oucas.qualtrics.com/SE/?SID=SV_6QMUnXXXXXXXXza>

All data collected will be anonymous in that it does not ask you for your name and will not identify you with your responses in any way. None of the research results or responses will be shared with the Department of Defense (DoD).

Also, if you have any friends who have a similar level of military experience and training, please either 1) send the attached flyer to them requesting their participation, or 2) forward this email to them directly with your request to participate. Please do not forward this email request to your entire unit, a group list, or any listserve addresses.

NOTE: To navigate back or forward in the survey, use the arrows at the bottom of the survey screen, and not the back arrow. If you use the back arrow it may exit you from the survey. If this happens, use the forward arrow on your browser to return to the survey. Please let me know if you would like a copy of the survey analysis when completed.

Thank you in advance for your help and your time.

Chris Sarver
Phone: (xxx-xxx-xxxx)
" The University of Oklahoma is an Equal Opportunity Institution. "

PS - see the flyer attached for a promotional hook, and please forward to individuals you know that are at the 05/04-Level and above who would be good candidates. Please do not forward to any "group-list". Thanks again.

Appendix B: Questionnaire & Consent

1. Good day, I am Chris Sarver, a graduate student in the Political Science Department at the University of the Oklahoma. I am requesting that you participate in a research study titled "Countering Groupthink: The Inner Circle of Influence". You were selected as a possible participant because you have military experience. Please read this information and ask me any questions that you may have before agreeing to take part in this study.

Purpose of the Research Study: The purpose of this study is to learn which decision-making method you think provides the best solution after reading fictitious scenarios about military planning efforts.

Procedures: If you agree to be in this study, you will complete a survey after reading this page.

Risks and Benefits of Being in the Study: The study has no risks or benefits.

Compensation:

You will not be compensated for your time and participation in this study.
Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not result in penalty or loss of benefits to which you are otherwise entitled. If you decide to participate, you are free not to answer any question or discontinue participation at any time without penalty or a loss of benefits to which you are otherwise entitled.

Length of Participation: Less than 45 minutes

Confidentiality: Your responses are anonymous. The records of this study will be kept private and your supervisor will not have access to your responses. In published reports, there will be no information included that will make it possible to identify you as a research participant. Research records will be stored securely. Only approved researchers and the OU-NC IRB will have access to the records.

Contacts and Questions: If you have concerns or complaints about the research, please contact me at (xxx-xxx-xxxx), or csarver@ou.edu. You can also contact my faculty supervisor, Prof. Aimee L. Franklin at(xxx-xxx-xxxx) or xxxxx@ou.edu. In the event of a research-related injury, contact the researcher(s). You are encouraged to contact the researcher(s) if you have any questions. If you have any questions, concerns, or complaints about the research or about your rights and wish to talk to someone other than the individuals on the research team, or if you cannot reach the research team, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at (405) 325-8110 or irb@ou.edu.

By completing and returning this questionnaire, I am agreeing to participate in this study. Please print this page for your records.

1 2	Agree Declin		100% 0%
	Total		100%

2. To capture your thoughts on different decision-making methods, we present two military planning scenarios, each using a decision-making technique different from the structure found in the Military Decision-making Process. After reading each scenario, you are presented with some questions about the decision-making method used in the scenario. Using your last name, please pick a category.

3. Please answer the following questions about the decision-making scenario and transcript you just read. What decision do you think was made in this situation (which alternative did they select, A1, A2, A3, etc.)?

4. Why do you think that decision was made?

5. What do you think the decision should be (which alternative do you think they should have picked A1, A2, A3, etc.)?

6. If the alternative you select above is different from the alternative you think the team selected in the scenario, why is your selected alternative better? (If you selected the same alternative, enter "same")

7. Excluding the group leader, who on the decision team had the most influence on the decision?

8. What are the strengths of the decision techniques used in this scenario?

9. What are the weaknesses of the decision techniques used in this scenario?

10. The next set of questions asks about decision-making techniques that your organization uses or that you would prefer. Thinking back on the two scenarios you read, which decision-making method (the GGPS technique, or the Delphi technique) do you think yielded the best decision?

11. Why did you select this decision-making process as the best technique used in the two scenarios?

12. Is it possible to improve the decision-making technique you selected as best, and how would you do so?

13. What is the decision-making method used by you and your colleagues?

14. Why do you and your colleagues favor this decision-making method?

15. Who in your organization is usually involved in decision-making?

16. If your organization were to start using the decision-making technique you selected as best, how would it improve the decision-making in your organization?

17. Remarks: (Include any additional thoughts on the decision-making process not included above?

18. Demographic questions. How many years of military service have you completed?

19. Which of the following best describes your race? (select more than one if appropriate)

20. How much education do you have?

21. What is your gender?

22. Grade

23. Identify your branch of military service.

24. What is your duty/position title?

25. What is your age?

Appendix C: Afghanistan Scenario

AFGHANISTAN Scenario Introduction: [SAME FOR DELPHI AND GGPS]

The President has requested the Secretary of Defense (the Secretary) to prepare a realistic schedule of withdrawal from Afghanistan beginning in the year 2014. The schedule shall accommodate current political views, the stability level within Afghanistan, and the ability of the Afghan government to rule effectively.

AFGHANISTAN Scenario Background: [SAME FOR DELPHI AND GGPS]

The Secretary has tasked the Chairman of the Joint Chiefs of Staff, Office of the Secretary of Defense (OSD), to formulate a recommended withdrawal schedule. The schedule shall address the concerns of the President as noted above, and shall consider a withdrawal schedules of both short, or immediate withdrawal (alternative A1), and a prolonged withdrawal (alternative A2). The extended schedule, if necessary, is to allow for stability within Afghanistan to insure the success of the Afghan government. Consideration of a short duration withdrawal is a new requirement. Previously, OSD had considered and recommended a prolonged schedule for withdrawal for the previous administration. A new OSD issued mission statement was provided below as guidance to the OSD Directorates now tasked to plan the withdrawal of forces.

<u>Mission Statement</u>: *Plan for withdrawal of a majority of the existing combat forces and major supporting elements from Afghanistan prior to the end of fiscal year 2014. Combat forces and related support remaining after 2014 shall be withdrawn in fiscal year 2015. Withdrawal considerations shall include support to the Afghan government to insure a prolonged stability in Afghanistan beyond the withdrawal schedule.*

The OSD Directors are responsible for advising the Secretaries on matters of National Security. The directorates comprise of eight divisions specializing in lead and support roles required for military operations. Typically, representatives from each of the directorates involved with planning and decision-making events are called to form a committee or special action group. The Directors and the Secretaries are advised through group or committee recommendations.

The OSD Directorates have received this task from the Secretary's office. Each of the primary directorates participated in drafting the previous schedule for a prolonged withdrawal. Conveniently, each of the directorates is located in the Pentagon and each has participated in previous task requiring similar joint effort by multiple directorates. A meeting date and time was established for the

directorates to meet and discuss the schedule. Each directorate was represented by a senior staff member.

The senior staff members are advised daily of public opinion and concerns reported by the press. More importantly, the senior staff has detailed status reports describing current Afghan military strength, government stability, and attempts by neighboring countries to influence stability in Afghanistan.

The OSD Planning Directorate (J5) representative was assigned as leader of the scheduling group. The three key directorates on the joint staff involved in most decisions impacting ongoing operations are the Intelligence directorate (J2), the Operations directorate (J3), and the Logistics directorate (J4). Each had a member at the scheduling meeting in addition to the Information Management directorate (J6), the Training & Exercises directorate (J7), and the Analysis & Finance directorate (J8). Typically, the J2 and J8 provide most of the intelligence on current trends and possible near term events to be anticipated in each country. The J1 directorate is routinely excluded from planning events as their function is primarily one of administrative support.

The Director, J5, provided each directorate a copy of the OSD mission statement and the following Commanders Intent statement released by the Chairman's office.

<u>Commander's Intent</u>: *Provide stability operations and support to the Afghan government necessary to insure regional security and effective governance within Afghanistan during, and beyond, the withdrawal of U.S. military combat support elements.*

Several decision-making methods were proposed to guide the scheduling team in drafting a recommended schedule for review and approval by the Directors for their submission to the Secretary. Transcripts of the decision-making discussion leading to the recommended schedule duration and the "official" summary of the decision-making process that will be made by the directorates are provided below. Please read these documents and answer the questions that follow.

AFGHANISTAN Transcript Minutes:

Preliminary Discussions: [DELPHI]

Due to travel schedules and the short time required for the J5 to recommend a withdrawal schedule, it was not possible to conduct a fact-to-face meeting with all of the directorate representatives. For this reason, the J5 Director determined it best to assemble a virtual team of representative experts from each directorate. Each representative listed below is the subject matter expert for the directorate.

To initiate the virtual process, the J5 representative, COL Boomer, conducted preliminary discussion separately with each team member on 8 Nov 2010 by telephone contact. He explained the task at hand, the mission statement and commanders intent. COL Boomer informed the team of his intent to use the Delphi technique for discussions of the proposed schedule for withdrawal from Afghanistan. The Delphi technique allowed each team member to remain anonymous while several rounds of discussion were conducted. COL Boomer facilitated each round by consolidating comments from one round, then preparing a team recommendation for review and comment by the team in the next round in an effort to both improve the recommendation and reach a general consensus or majority decision. The decision process and final recommendation required three rounds of comments during the week and concluded on 12 Nov 2011.

Meeting Date and Location: [GGPS]

The meeting was called by the J5 Director to assemble a group to resolve the schedule duration for withdrawal from Afghanistan. The meeting was conducted both 10 & 12 Nov 2010, in room 5E829 of the Pentagon. Discussions occurred for several hours with only the key points and comments captured in the notes below.

Attendees: [SAME FOR DELPHI AND GGPS]

Col. Michael Barnes, J2, Intelligence
COL. Dennis Custer, J3, Operations
CAPT. Lawrence Parker, J4, Logistics
COL. Rodney Boomer, J5, Planning
Col. Alice Chaney, J6, Information Mgt
COL. David Sorensen, J7, Training & Education
CAPT. Barbara Swanson, J8, Finance & Analysis

<u>Discussion Notes: [DELPHI]</u>

COL Boomer opened virtual discussions with each member of the team concurrently by using a summary e-mail to capture points he had emphasized previously by telephone, and then asking the team members to review the two alternatives proposed by the Directors. The first alternative (A1) calls for rapid withdrawal of all U.S. forces. The second alternative (A2) requires partial withdrawal with a peacekeeping forces remaining for a prolonged period. He included *a questionnaire* to collect individual responses on strengths, weaknesses and recommendations for possible changes to the alternatives. He also questioned each member to identify the best alternative to include proposing a new alternate solution. Team members were required to provide a justification for the alternative they selected as best. It was agreed by the team

to conduct three rounds of comment by email, one daily between the 9th and 11th of November.

Comments Received 9 Nov 2001:

Col Barnes, J2, stated he endorsed the idea of a rapid withdrawal (A 1). Intelligence reports indicate no known certainty of gaining any level of success from a prolonged withdrawal and thus A 2 is not recommended.

COL Custer, J3, recommended an immediate, rapid withdrawal (A 1) similar to the previous drawdown in Iraq in order to gain more efficiency with the forces available.

CAPT Parker, J4, proposed a new alternative and referred to it as an obvious compromise alternative (A3) by having a longer withdrawal period with less United States involvement not to include peacekeeping. This new alternative was justified by the need to continue training of the Afghan police and Afghan military.

Col Chaney, J6, stated the communications network in Afghanistan is now stable based on existing infrastructure and a commitment by the World Bank to develop a broader cellular network. Therefore, A1 is recommended.

COL Sorensen, J7, proposed a to allow gradual withdrawal of U.S. forces with a prolonged training mission until the Afghan government is prepared to operate on its own, similar to the A3 proposed by CAPT Parker.

CAPT Swanson, J8, presented her teams analysis of the Afghan government as maturing but not yet ready to lead the nation. She recommended prolonged peace keeping and training (A2/A3) for both the Afghan government and police.

COL Boomer, J5, then reviewed all the comments and informed the group through individual emails of the collective thoughts on strengths and weaknesses of the two alternatives, A1 and A2, while carefully not identifying those who made the comments. He presented the desires by many for a rapid withdrawal and presented several questions related to the ability of the Afghan government to rule effectively as it may not be mature enough to do so. He then identified a new alternative (A3) for rapid withdrawal of combat troops while U.S. military trainers would remain for a prolonged period to train Afghan police and military on effective regional security required to establish a stable government.

COL Boomer stated perhaps the best alternative would be planning for both peace keeping and training support in the near future with possible reductions in both as a mid-term target (a new alternate A4). He is now under the impression a rapid withdrawal is feasible based on comments of others. He then issued a second set of email questions requesting the team to identify the strengths and

weaknesses of A3 and A4, plus any additional issues for A1 and A2, *and to rank order the alternatives*. COL Boomer also requested the team to address recent comments by Vice President Biden who stated the United States will not abandon Afghanistan.

Comments Received 10 Nov 2011:

Col Barnes, J2, stated no change in his recommendation for a rapid withdrawal (A1). He insisted the prolonged use of U.S. military trainers in Afghanistan would not increase the effectiveness of the Afghan government.

COL Custer, J3, further explained the rapid drawdown in Iraq allowed operations to be more effective and a similar result would be expected in Afghanistan. Operations get results, and we need to focus on effectiveness of operations as the justification for A1.

CAPT Parker, J4, explained his new proposal (A 3) would be far more sustainable from a logistics viewpoint although rapid withdrawal would be best to alleviate the overtaxed supply and logistics system that we have today. He stated the Afghan logistics and infrastructure are not mature, but that he believed this was not a reason to delay withdrawal and that he could support A1 or A4.

Col Chaney, J6, replied that each alternative has its merits but that A1 meets the Commanders intent and would still offer U.S. military in support to the Afghan government in the future if needed in order to satisfy Vice President Biden's concerns. She then stated A4 was the best fit for Commander intent and the Vice Presidents guidance.

COL Sorensen, J7, stated a rapid drawdown with continuing operations to include a training mission (A4) may be feasible and would satisfy the statement by the Vice President.

CAPT Swanson, J8, stated operations and logistics are key factors but she questioned if operations should drive the decision process or outweigh other factors. Analysis by her staff indicates the Afghan government will fail without effective security from their police and military forces. This will require continued training under A4 as the best option.

COL Boomer, J5 group leader, again distributed electronically an anonymous summary of round 2 comments to identify key points of the second round. COL Boomer noted the majority now seemed to favor immediate withdrawal with a training force to remain as the best alternative (A4). He also acknowledge some members remained in firm support of A1 for total withdrawal. The team was asked to comment again by email, *with a new ranking of alternatives based on his summary*, focusing on reaching a majority decision on a recommended

withdrawal schedule. He encouraged each of them to revise or update their position based on the feedback summary he provided.

Comments Received 11 Nov 2011:

Col Barnes, J2, stated a long term withdrawal is not acceptable by today's military planning doctrine as it is not the military's role to conduct peace keeping or extensive training. These are task the joint staff is trying to avoid, although training missions (A4) are acceptable under joint doctrine.

COL Custer, J3, replied that he understood the desire for long term involvement in Afghanistan but that it just is not possible at the current levels. Peace keeping is no longer an option as it was in previous wars. The host nation must assume this role but not without United States support of one form or another, such as a training mission. He can later propose a schedule for partial drawdown after consulting his chain of command and subordinate service components but at this time he remained in support of A1.

CAPT Parker, J4, acknowledged a need for prolonged withdrawal to assist the Afghan government (A3/A4) but stated this is outweighed by the need to reduce forces and therefore A1 or A4 was the only acceptable solution.

Col Chaney stated the J6 endorses the rapid withdrawal schedule (A1) due to demand for valuable U.S. communication assets to be used elsewhere. She stated it is no longer possible to maintain communication networks for prolonged stays in a host nation.

COL Sorensen, J7, stated his endorsement of the rapid withdrawal plus long term U.S. presence to allow time necessary for training (A4) the Afghan police who are not yet as effective as the Afghan military. Peace keeping may need to be the role of the military until the police force is adequate.

CAPT Swanson, J8, replied with a reminder that although the Afghan government wants the United States out of Afghanistan, there is a need for peace keeping and training (A3/A4) that exist over time to allow for maturing of the Afghan government. This is the point Vice President Biden was making in his statement.

12 Nov 2011 - Decision point:

COL Boomer thanked the team for its input and feedback and stated they now seemed to have a majority opinion. He informed them that he would review all the replies to the final round and use them in his analysis to identify the best alternative to present the Directors. He asked each of the team members to standby for review and comment on his analysis prior to his submission to the Directors. He now faced the task of performing a final analysis and selecting

the best alternative to present to the Directors for their endorsement to the Chairman.

Discussion Notes: [GGPS]

Key Issues: 10 Nov 2010

COL Boomer, J5, opened the meeting with a quick summary of the task at hand and a reminder that the Directors, and the Chairman of the Joint Chiefs, require a summary of the analysis and conclusions drawn by the group. Col Barnes and COL Boomer will prepare the analysis and summary.

COL Boomer stated he planned to follow the group problem solving model (*GGPS*) wherein there would be an opportunity for comments in an anonymous forum prior to a final decision to allow new proposals or ideas to be explored, as well as an opportunity to challenge decisions made previously. Consultation with equivalent J5 staff officers at U.S. Central Command (CENTCOM), and NATO, would allow input from major support organizations involved in execution of the withdrawal. A final decision by the group would then be discussed. His role is to guide the group toward consensus. COL Boomer then opened discussions with a request for alternative proposals for review and analysis after he quickly listed the two basic alternatives of, A1) Rapid withdrawal), and A2) Prolonged withdrawal in the form of a peacekeeping force.

CAPT Parker, J4, proposed what he termed an obvious compromise as a third alternative (A3) to have a longer withdrawal period, but with less United States involvement, short of peacekeeping forces we had in Europe or Korea. Remaining forces would have a training and support mission. This would be far more sustainable from a logistics viewpoint although rapid withdrawal of most units would be best to alleviate a global supply chain that is overtaxed.

Col Barnes, J2, endorsed the idea of a rapid withdrawal (A 1). Intelligence reports indicate no known certainty of gaining increased security or a higher level of success from a prolonged withdrawal.

COL Custer, J3, acknowledged the Afghan desire for United States withdrawal and recommended an immediate withdrawal similar to the operation in Iraq. Operations will also be far more effective with a drawdown in both Iraq and Afghanistan under A1.

COL Sorensen, J7, voiced his concern that the Afghan military and police forces are not yet prepared to support the Afghan government's control of the country, its borders, and security. He endorsed A3 proposed by CAPT Parker for a gradual or prolonged withdrawal of the U.S. military training force.

CAPT Swanson, J8, presented her teams' analysis of the Afghan government as unstable and the resulting recommendation for prolonged peace-keeping mission as well as training mission under the second alternative (A2/A3).

COL Boomer, J5, stated his directorate believes the communication network is adequate, along with military strength projections, police force, and roadway construction to allow for a rapid withdrawal (A1).

Col Chaney, J6, confirmed the communications network in Afghanistan is now stable based on existing infrastructure and future commitments from the World Bank for additional development. A rapid withdrawal under A1 is possible.

CAPT Parker, J4, agreed the road network in Afghanistan can be at desired levels in 2011, but stated the infrastructure for the police force is totally inadequate due to construction delays. However, CAPT Parker did not believe this was a reason to delay withdrawal provided new construction progress in the rest of the country continued on schedule through 2014.

Col Barnes, J2, and COL Custer, J3, both agreed the logistics are in place and will be adequate enough to allow, and support, a short-term rapid withdrawal from Afghanistan (A1).

COL Sorenson, J7, and CAPT Swanson, J8, both disagreed and stated some sort of mid-term or perhaps even a prolonged withdrawal would be needed (A2/A3).

COL Boomer, J5, then suggested the team break for two days time to allow him to coordinate the attendance of two officers with current hands-on experience in Afghanistan, COL Abrams, CENTCOM J5 Plans Chief, and Col. Westwood, NATO Operations & Planning Directorate who is currently assigned as a Liaison Officer at the Pentagon. Both of these officers participated in the planning of the Iraq withdrawal and have many lessons learned to share. The team members all agreed this would be beneficial.

Key Issues: 12 Nov 2010

COL Boomer introduced COL Abrams and Col. Westwood, as members of the previous Iraq scheduling team.

COL Abrams and Col Westwood explained that a rapid or mid-term withdrawal for Iraq was termed acceptable due to the presence of a mature military, police, and government in place. Even then, the short schedule for withdrawal and drawdown was very difficult to execute with significant challenges and therefore would not be preferred again if it is preventable. However, they noted Vice President Biden recently stated the U.S. would not abandon Afghanistan. Afghanistan is known to be a much less mature environment than Iraq. At this point, COL Westwood placed emphasis on the NATO forces inability to

maintain security in Afghanistan and train Afghan police forces after withdrawal of significant U.S. forces.

CAPT Parker, J4, acknowledged that earlier he was trying to highlight some of the same issues for Afghan infrastructure that COL Abrams noted for Iraq, but that he (Abrams) had stated the needs much better than CAPT Parker could, and therefore he sees A3 as the only logical choice.

COL Custer, J3, thanked Col Westwood for his, openness and being frank when sharing his insights. COL Custer added that he may wish to discuss the NATO strength further with him during a break. COL Custer then acknowledged the inevitable, although he was not in favor of it, it now appears to him that the logical approach is a rapid initial drawdown to some lesser degree, but that he would need to consult his senior staff in the J3 prior to endorsing such a plan.

COL Sorensen, J7, stated his appreciation for the others now understanding the need for A3, and that he wanted to personally thank them for considering this alternative further.

COL Boomer, J5, then thanked COL Abrams and Col Westwood for their insights and recommended the team break for lunch. This would allow COL Abrams to return to CENTCOM for an afternoon strategy conference. During this break, each member of the team owed him an email recommendation identifying the preferred alternative (A1, A2, or A3), plus an approximate timeline for the withdrawal schedule, and a brief justification for same. Each of their recommendations would remain confidential. At 1400 (2pm), the team would reconvene and COL Boomer would present a summary of the recommendations for further discussion toward achieving a consensus on the withdrawal schedule. COL Boomer would make the final recommendation if consensus cannot be reached.

Anonymous Email Comments Received by COL Boomer:

Col Barnes, J2, stated he could now see that the others were learning toward alternative A3 for good reasons but the commander's intent seemed clear, A1 is their only option.

COL Custer, J3, stated a rapid and steady withdrawal of forces is required, but his directorate now understood the political significance of continuing a prolonged training mission. He could now support either A1, or A3 proposed by CAPT Parker.

CAPT Parker, J4, endorsed his proposed A3 alternative and provided a timeline for same.

Col Chaney, J6, stated A3 was tolerable and that she understood the need based on recent comments. She also noted the J6 would withdraw U.S. communications equipment rapidly as the Afghan network is now coming on line, regardless of which alternative was selected. This will allow CENTCOM and other commands to use the equipment in other locations.

COL Sorensen, J7, summarized all the salient points supporting A3 as mentioned by the team and COL Abrams or Col Westwood. He then proposed a schedule for the withdrawal and training mission (A3).

CAPT Swanson, J8, stated she endorsed A3 as the team's recommendation to the directors. She also provided a proposed schedule that was very similar to the one provided by COL Sorensen.

COL Boomer, J5, now believed he could prepare a general summary of the comments and bring the team to consensus at the 1400 Hr meeting.

Appendix D: Humanitarian Assistance Scenario

SEEBRIG Scenario Introduction: [SAME FOR DELPHI AND GGPS]

The South-Eastern European Brigade (SEEBRIG) exercise committee must decide the site for the Humanitarian Assistance (HA) project to be built as part of the Exercise Related Construction (ERC) during the annual exercise held in 2012. Two site locations are the primary candidates with emotions running high in favor of each. The first site alternative (A1), is the nation's capital city of Bucharest. The second alternative (A2), is the city of Constanza on the Black Sea coastline. The committee must select a site that benefits the local economy and serves the military's needs based on the mission statement and commanders intent below.

Mission Statement:

Maintain lines of communications open and functioning smoothly among member countries by exercising SEEBRIG capabilities annually as a part of the Seven Stars exercise in 2012, the main SEEBRIG exercise of the year, to be performed in Constanza, Romania.

Commander's Intent:

EUCOM shall assume the lead role in execution of the Seven Stars exercise to include planning, exercise related construction, humanitarian assistance (HA) construction incidental to the exercise, all operations during the exercise, and post exercise review and analysis for improved communications.

Scenario Background: [SAME FOR DELPHI AND GGPS]

The South-Eastern European Brigade (SEEBRIG) is a brigade size force (5000 personnel), formed by seven nations in the Black Sea region. The mission of the seven participating countries is to provide regional security and stability in the Euro-Atlantic area, and to open lines of communication and support for one-another among the seven participants as envisioned in the principles of the United Nations (UN) Charter. The seven participants are; Albania, Bulgaria, Greece, Italy, Macedonia, Romania, and Turkey. The SEEBRIG organization has "observer countries" including the United States, Bosnia-Herzegovina, Slovenia, Croatia, and the Ukraine. As the largest member, the United States is represented by the U.S. European Command (EUCOM) and is expected to lead the annual training exercises.

Past exercises have involved construction of various facilities for the local community such as the small schoolhouse constructed in the Constanza area of Romania in 2010. The town of Constanza is located near a major training and

exercise facility in Romania, adjacent to the Black Sea. The exercise brings many benefits to the local community in the form of economic stimulus for local vendors, hotels, and restaurants. These benefits as well as local HA projects performed by the exercise forces are a form of compensation to the local community for any adverse impacts caused during the exercise.

For the 2012 exercise, the HA project nominated by the city of Constanza is a small walk-in-type clinic to provide basic medical needs. The Romanian military has proposed construction of this clinic in the perimeter area of the nation's capital, Bucharest, six hours travel time from Constanza. This proposal is heavily favored by the Romanian government and the U.S. Ambassador who desires access to the clinic for his embassy personnel. The Romanian military insist the Bucharest location offers easy access for those exercise participants who travel to Constanza by entering Romania at the Bucharest airport. They insist Bucharest has available housing, supplies, skilled labor, and dining facilities available to U.S. forces who will construct the HA project there. Typically, the HA projects are located near the exercise locations to allow participants to assist with construction of the HA project and to construct facilities in support of the exercise. The distance from Bucharest to Constanza complicates the scheduling of construction in both locations by the same teams of construction experts. The exercise committee must decide if Constanza or Bucharest will bring the greatest benefit to the host nation and the exercise participants.

The group's decision will be announced by the U.S. representative, the European Command (EUCOM) J4-Engineer assigned as the exercise related construction (ERC) coordinator for SEEBRIG. As lead for construction, the J4-Engineer participant is responsible to validate the project location, availability of construction resources, and effectiveness of construction operations.

Several decision-making methods were proposed to guide the exercise committee in this decision. Transcripts of the decision-making discussion leading to selection of the HA site and the "official" summary of the decision-making process utilized by the SEEBRIG participants are provided for your review. Please read these documents and answer the questions that follow.

SEEBRIG Transcript Minutes:

[DELPHI INTRODUCTION]

Due to the extensive travel requirements to hold face-to-face meetings, the team conducted a series of discussions by electronic *questionnaire*, and email. CDR Evans, the U.S. lead representative from the EUCOM J4-Engineer staff, opened the discussions with an email summary of the issue to be decided (site selection of the clinic), and a short summary of discussion points for recommended site *alternatives* and reasons for selecting the site. He explained the discussions and

final site selection would be made using the Delphi technique wherein all comments would be anonymous and made via e-mail. A team of subject matter experts *(country representatives)* would be surveyed by email for their input during multiple rounds with feedback provided at the beginning of the subsequent round until the team reaches consensus. Thus, the group can respond at their convenience while avoiding the need for travel. CDR Evans would then summarize comments for the team and ask them for a second round of comments on the first round of feedback by others and how best to improve the decision or majority view presented in the previous round of comments.

The second round included comments on previous comments and questioning of intent in previous feedback. A final round of comments was collected for consideration prior to drafting a final decision paper by CDR Evans who is responsible for approving funding for the clinic and overseeing construction. The discussions were conducted September 8th, 13th, and 16th of 2010. Significant comments and nominations are described below.

[GGPS INTRODUCTION]

The meeting was called by the EUCOM J4 – Engineer lead officer, CDR Evans. The meeting was held at the Ataturk War Gaming Center, SEEBRIG Headquarters, Istanbul, Turkey on 8 Sep 2010, at 0800 hr. Discussion lasted several hours with key decision points and comments captured in the notes below.

Attendees: [SAME FOR DELPHI AND GGPS]

CDR. Ralph Evans, U.S. EUCOM J4-E
Col. Vlad Kilkis, Bulgaria
Col. Petre Zyler, Ukraine
Col. Anal Cerzy, Turkey
Col. Mirko Romosa, Romania
Col. Peter Korlu, Albania
Col. Caesar Sedano, Italy
Col. Anthony Manas, Greece

Key Discussion Points: [DELPHI]

CDR Evans, EUCOM, in a conference call to all team members on 8 Sep 2010, opened the discussions by providing background of the humanitarian assistance project criteria previously approved by the exercise committee members. The team objective is to decide the location of the clinic in coordination with need for support to the upcoming exercise in Romania next year. He reminded the team that the original SEEBRIG charter for the exercise specified any related HA projects would also be located in the local community sponsoring the exercise; in this case, Constanza would be the local community. He also noted

that each member of the team was designated as the exercise subject matter expert for the nation they represent and that he expected constructive comments to be forthcoming on the location of the clinic in response to his questionnaire.

Responses to Questionnaire Received 8 Sep 2010:

Col Romosa, the Romanian team member, replied first with comments. He stated his countrymen had put a great deal of effort into deciding the location of the clinic and it was decided at the highest level for the clinic to be located in Bucharest, the capital.

Col Kilkis, Bulgaria, sent comments indicating his government has consulted with the Romanians and agreed to locate the clinic in Bucharest (A1).

Col Zyler, Ukraine, provided an endorsement of the Bucharest (A1) location with no reasoning provided.

Col Sedano, Italy, stated a preference for the clinic to be located in Constanza (A2) to serve the soldiers who attend the exercise.

Col Manas, Greece, also commented the location should be in Constanza (A2) as his soldiers will be involved in construction and have easy access to the port of Constanza, but not Bucharest.

Col Korlu, Albania, stated he believed the clinic should be located in Constanza (A2) since he was aware of a larger medical facility already existing at the international airport in Bucharest.

Col Cerzy, Turkey, stated no preference for the clinic and that he did not see a need for a clinic to support the exercise.

CDR Evans, EUCOM, prepared a summary of all comments and distributed them to the team without identifying who had made the comments. He noted the group was equally split on the two locations, Bucharest (A1), and Constanza (A2). He made note of the existing clinic at the Bucharest airport. He also included anonymously the requirement for the HA construction to allow more practice using local construction techniques in this area where the exercise is held. This allows HA and exercise construction to be done by the same work force. *He distributed his summary to members and requested they revise or update their own comments after reviewing the comments of others. Replies with rank ordering of alternatives* were due 13 Sep 2010.

Comments received 13 Sep 2010:

Col Romosa, Romania, explained his government viewed this sort of self-serving request for a clinic in Constanza as undesirable. He acknowledged that

Bucharest already has a large hospital at the airport, yet he added that Constanza also has a mid-sized hospital as well. Surely, everyone can understand the greater good a clinic can provide the masses in Bucharest (A1).

Col Kilkis, Bulgaria, noted the Bucharest location (A1) best serves the Romanians and Bulgarians. The Bulgarian residents in the remote northern region of Ruse will be able to use the clinic. The clinic location is also convenient to the U.S. Embassy staff in Bucharest.

Col Zyler, Ukraine, emphasized the HA project is to benefit the citizens of the host nation and is therefore not intended to be a part of the exercise (implying Bucharest is acceptable, A1). Surely, none of the schoolhouses built as a part of recent exercises would be used by the military in an exercise.

Col Sedano, Italy, now voiced a desire for the clinic to be in Constanza (A2) to allow sharing of construction resources.

Col Manas, Greece, acknowledged the clinic could be located where host nation needs dictate, but the Constanza (A2) site has as much need as Bucharest. He also noted that construction by his soldiers in Bucharest would create a hardship and burden of increased travel and billeting cost. He asked who would pay this cost.

Col Korlu, Albania, stated both locations appear to be valid. He explained the same benefits would result from either location. He could now accept the Bucharest (A1) location for the clinic. He also noted the Constanza locations would allow stabilization of patients in an emergency, including any participants injured during the exercise, prior to transport to a hospital and thought the Constanza location should be discussed further.

Col Cerzy, Turkey, stated the clinic is for the host nation use and it should be located in Bucharest (A2).

CDR Evans, EUCOM, then distributed a summary email condensing these comments for the team to review and comment upon once again. He also included a reminder from the SEEBRIG charter indicating the HA project is in fact intended to benefit the exercise team if possible. He also emphasized the fact that neither Romania nor the U.S. governments had any additional funding available to cover the additional cost of building the clinic in Bucharest. He reminded them to revise their previous positions in light of the new comments and to reply prior to 16 Sep 2010.

Comments Received 16 Sep 2010:

Col Romosa, Romania, stated the exercise will use the clinic for a very short duration, and more use will be made of the location in Bucharest (A1) and thus

the additional cost was justified. He was sure the United States could find additional funding. He concluded everyone would be able to see the logic and justification for Bucharest if they had met in Bucharest to discuss the decision instead of using email discussion techniques.

Col Kilkis, Bulgaria, added a comment suggesting the team put the selection to a vote instead of CDR Evans preparing a final decision paper based on the team's discussions. He also admitted that he was not sure Bulgarian citizens would use the clinic in Bucharest. He also stated Bulgaria could not cover the additional cost of building a clinic in Bucharest and therefore he was open to the Constanza (A2) location.

Col Zyler, Ukraine, commented to remind everyone that both the United States and Ukraine are advisor nations and not members of SEEBRIG. Therefore he suggested the SEEBRIG nations decide without United States or Ukraine involvement and it will become clear that the Bucharest (A1) location is the best location.

Col Sedano, Italy, stated Italy could not cover the additional cost of construction in Bucharest and that leaves no choice other than to build the clinic in Constanza (A2)

Col Manas, Greece, reaffirmed his position that Constanza (A2) should be the location of the clinic as it was the location chosen for the exercises and therefore was the only location the budget would accommodate.

Col Korlu, Albania, claimed he must change his position back to Constanza (A2) based on funding, but that he thought it was a shame funding alone was driving the decision.

Col Cerzy, Turkey, stated he agreed with the Bucharest location (A1), but that his service members would enter Romania in the port of Constanza and could not participate in HA construction due to cost.

Decision Report:

CDR Evans collected all final comments and verified the U.S. budget could not be increased. After review of the comments, he informed the team that they now appeared to have a majority opinion and that he could now prepare a final decision report for the team and the SEEBRIG command to approve.

Key Discussion Points: [GGPS]

CDR Evans opened the discussions by explaining the need to agree on a location site for the humanitarian assistance (HA) project for the 2012 exercise. He then provided a summary of the HA project criteria previously approved by the

exercise committee members. The project shall be a small walk-in health clinic provided with standard emergency first aid equipment.

CDR Evans stated the objective behind the location is to assist the locals living in the area of the exercise and to benefit from the service members as resources sent to the exercise in Constanza, Romania next year. He identified the two alternative locations as Bucharest (A1), Constanza (A2). He agreed to allow additional locations to be nominated during discussions.

CDR Evans announced the team had available for consult, two colleagues involved with the planning of the past 2010 SEEBRIG exercise in Constanza. He would like to involve the two at various times during the discussion period. CDR Evans stated that he would facilitate the discussion and that he intended to follow a group problem solving model (*GGPS*) that would include an opportunity for anonymous comments and recommendations prior to a final decision. The team will begin discussions with a brainstorming session to identify strengths and weaknesses of the two locations, followed by recommendations or endorsements of one of the sites preferred by each member. He briefly explained there would be one or two rounds of discussion followed by consult with the two colleagues. Then, a final decision-making discussion would be held after CDR Evans received anonymous feedback from each of the members recommending the site they preferred. CDR Evans would summarize for the group the anonymous comments for their discussion prior to making the final decision. The team members agreed to follow this procedure and CDR Evans opened the floor for discussion.

Col Romosa asked that he be allowed to add to the summary and explained his countrymen had put a great deal of effort into deciding the location of the clinic and it was decided at the highest levels to build the clinic in Bucharest, the capitol (A1), where it can serve more Romanian citizens.

CDR Evans thanked Col Romosa for his remarks and then obtained agreement to begin the discussions. He asked if anyone had an alternative location to the two proposed locations. The group was in agreement that these were the only two logical locations based on availability of resources for construction and ease of access to the sites selected.

Col Kilkis, Bulgaria, then noted his government supports the Bucharest (A1) location due to proximity to Bulgaria and the future potential for Bulgarians residing in the remote region of Ruse to seek medical attention in nearby Bucharest.

Col Zyler, Ukraine, endorsed the planned site of Bucharest (A1) as proposed by the Romanians and Bulgarians.

Col Kilkis, Bulgaria, agreed enthusiastically and stated everyone should understand the Bucharest clinic would be located on the south end of the city, convenient to the U.S. Embassy staff and the Bulgarian citizens in Ruse.

Col Zyler, Ukraine, concurred and asked CDR Evans if he or any of the others opposed this location.

At that time, Col Sedano, Italy, and Col Manas, Greece, both stated their preference for the clinic to be in Constanza (A2) to serve their soldiers who will attend the exercise next year.

Col Korlu, Albania, believes the clinic should be located in Constanza (A2) since he was aware of a larger medical facility already existing at the international airport in Bucharest.

CDR Evans asked Col Cerzy, Turkey, what his preference was but Col Cerzy stated either location was acceptable.

CDR Evans then read an excerpt from the SEEBRIG charter indicating associated HA projects should benefit both the local citizens and the exercise team if possible. He then sated that he understood why this decision raised strong feelings in support of both locations. At this point, he thought it best to bring in the two consultants for discussion. The group members agreed.

After a break, COL Johnson, EUCOM J5 liaison to the Ataturk War Game Center, and his colleague, Col Erturk, Ataturk War Game Center, both of whom participated in the planning of the 2010 exercise, joined the group discussion after being provided a brief summary of the discussion above. The two colonels were in agreement on location of the HA project, that is, that it was not required to be located in the proximity of the exercise although another more distant location would be highly unusual. COL Johnson pointed out the efficiency gained by the HA and exercise projects both being in Constanza, is lost if the HA project is in Bucharest.

Col Romosa, Romania, asked COL Johnson to explain why the efficiency would be reduced with the Bucharest location and if cost was a factor.

COL Johnson explained by having the two projects close to one another, the construction crews could alternate between the two sites based on the trade skill, such as carpentry or roofers, when needed. This avoids lost time for the one trade to be waiting on the other. The first crews could prepare one site and then move to the other. A second crew would then follow the first and each would remain busy during their time on site. Everyone should understand that the HA project cost is more reasonable when the project is close to the exercise and can share resources.

Col Erturk explained the budget will be the ultimate decision factor. He explained that the budget was barely enough in 2010 when the HA project was located in Constanza.

Col Korlu, Albania, stated he understood how the cost would be more if the HA project was in Bucharest. He realized the time for travel between the two sites by the construction crews would be lost time that would have to be paid for out of the budget. He asked if anyone still believed the project should be in Bucharest instead of Constanza (A2).

Col Kilkis, Bulgaria stated the Bucharest (A1) site may be more costly but it was justified due to political reasons.

Both COL Johnson and Col Erturk, War College staff members, stated there are many political reasons for having the clinic on the south of Bucharest. However, many political factors were considered in the original SEEBRIG exercise charter calling for the HA project to be in the same town as the exercise. Of course, cost is another factor that can become political if the host nation can contribute to the project. If no host nation funds are available, then it is up to the team to decide if the political needs in this situation dictate the HA project location and if this can be done for the approved budget amount. No further discussions with COL Johnson or Col Erturk were held.

Col Romosa, Romania, waited for the two War College staff members to leave before he opened the second round of discussions by stating there is a great amount of political pressure to have the clinic located in Bucharest. The exercise will use the clinic for a very short duration and Constanza also has an existing hospital. Bucharest (A1) will get more use from the clinic and Romania should not be required to pay any additional cost.

COL Kilkis, Bulgaria, stated the Bucharest (A1) location will also serve the exercise participants as anyone associated with the exercise will be able to use the clinic on their transit out of Romania via the airport in Bucharest.

Col Korlu, Albania, stated the clinic in Constanza (A2) would allow stabilization of patients in an emergency prior to transport to the Bucharest airport hospital prior to transport by plane.

Col Cerzy stated he saw merit to both locations and still had no preference.

Col Manas, Greece, stated his preference for Constanza (A2) due to the close proximity to the exercise. He can pay the cost for his soldiers to work on both the clinic and barracks needed at the Constanza exercise site. He also stated that his crews do not enter Romania through Bucharest and to do so is an additional cost.

Col Romosa explained his government viewed this sort of self-serving as undesirable and had overruled the local government interest of Constanza for the very same type of self interest.

Col Sedano, Italy, at that time relented and stated he could see merit in both locations while the Constanza location has short term merit that may not in fact ever be needed or used by exercise participants.

CDR Evans asked for the members to respect the position of each other and remain open to discussion points. He stated that he also sees merit in the Constanza location for the experience gained through work with local Constanza contractors who will support future exercises.

Col Zyler, Ukraine, stated Bucharest (A1) must be able to serve the same purpose of the Constanza location, surely none of the schoolhouses built as a part of recent exercises would be used by the military in an exercise.

Col Romosa responded by explaining that if the meeting had been held in Bucharest, surely everyone, and not just he and Col Kilkis, and Col Zyler, would see the logic and justification for Bucharest to receive the clinic.

CDR Evans explained the meeting was held in Istanbul for two reasons, first it is the location of SEEBRIG headquarters and second, the clinic topic had become heated and emotional in the previous meeting, therefore a neutral meeting location was selected.

CDR Evans then called for a recess over lunch to be followed by a short decision meeting this afternoon at 1400 hr (2pm). He requested each representative use the computer terminals in the center during lunch break to email him their recommendation as to the final location of the HA project and their reason for same. Their comments would remain anonymous. At the meeting he would provide an overview of the anonymous site recommendations and ask the team if they could agree on a final location based on those comments. If no agreement could be reached, he would ask for a silent vote where each member would remain anonymous, and that he would announce the final decision.

The anonymous emails CDR Evans received were very short and concise. In them, Col Romosa, Romania, and Col Zyler, Ukraine stated their preference for Bucharest (A1) with the United States paying any additional cost. Col Sedano, Italy, Col Manas, Greece, and Col Korlu, Albania stated their preferences for Constanza (A2). Col Cerzy stated he could accept either location but that Constanza (A2) was in fact more convenient for Turkey. Col Kilkis stated that he could not be sure if Bulgarians would in fact use a clinic in Bucharest, or if they would be allowed, and that he could accept the Constanza (C2) site.

CDR Evans called the afternoon meeting to order and presented a summary to highlight the fact that some nations do not enter Romania through Bucharest and their cost would be higher for the HA project to be built there. Also, he summarized the funding situation by stating although it was suggested the United States pay additional cost, the United States could not agree to do so and the budget would remain unchanged. He opened the floor to further discussions and reminded the team if no decision was reached, that he would hold an anonymous vote.

Appendix E: List of Abbreviations

A1 – Scenario Alternative No.l, A2 – Alternative No.2, etc.

ABC – American Broadcasting Network

AF - Afghanistan

Afghan – Afghanistan

BBC – British Broadcasting Network

CAPT – Navy Officer Equivalent to Army/Air Force/Marine rank of Colonel

CDR – Navy Officer Equivalent to Army/Air Force/Marine rank of Lt. Col.

CENTCOM – U.S. Central Command

CEO – Chief Executive Officer

CGPS – Continuous Group Problem Solving

Ch - Chief

CMU – Carnegie Mellon University

CNN – Cable News Network

COA – Course of Action

Col/COL – Colonel

Comm - Communications

DA – Department of the Army

DoD – Department of Defense

DMps – Strengths of the Decision-Making Model

DMng – Weaknesses of the Decision-Making Model

DMused – Decision-Making Model Used at Participants Home Organization

ERC – Exercise Related Construction

EUCOM – U.S. European Command

FM – Field Manual

FtF - Face-to-Face

GGPS – General Group Problem Solving

GS – General Schedule

HA – Humanitarian Assistance

HDMID – How Decision Model Improves Decisions

HN – Host Nation

IC – Inner-Circle

Intel - Intelligence

IRB – Institutional Review Board

J2 – Joint Staff Intelligence Directorate, J3 Ops, J4 Log, J5 Plans, J6 Comm, J7 Training, and J8 Resources

JS – Joint Staff

Log - Logistics

Lt. Col. – Lieutenant Colonel

MDMP – Military Decision-Making Process

MSU – Michigan State University

N – Number of Participants or Sample Size

NATO – North American Treaty Organization

NC – Norman Campus

NGT – Nominal Group Technique

OSD – Office, Secretary of Defense

OU – Oklahoma University

O_1 - Section of Questionnaire Completed, O_2, O_3, etc.

Ops – Operations

PAge – Participants Age

PEdLvl – Participant Education Level

PGndr – Participant Gender

PImpr – Participant Recommended Improvement (to PpreDM)

PMilBr – Participants Military Branch of Service

PosDes – Participants Job Title or Position Description

PpreDM – Participant Preferred Decision-Making Model

PRace – Participants Race

PRank – Participants Military Rank or Civilian Grade

R_1 – Random Assignment of Participant Group, R_2, R_3, etc.

Res – Resources

s – Standard Deviation

SEEBRIG - South-Eastern European Brigade

SME – Subject Matter Expert

Tinf – Team Member of High Influence

Trng - Training

TSLP – Team Solution Participant Anticipated the Team Would Make

TSol – Team Solution

UN – United Nations

U.S. – United States

WhoDM – Team Members at Participants Office Involved in Decision-Making

WWII – Second World War

www – World Wide Web

X – Independent Variable

Y – Dependent Variable

YPpre – Reason Participant Preferred (Decision-Making Model)

YrsSrv – Years of Military or Government Service

YTSL – Reason Team Selected Alternative

YTSLP – Reason Participant Anticipated Team Decision is Better Than TSLP

YuseDM – Reason for Participants Home Organization to Select DMused

z – Desired Accuracy in Statistical Analysis