

SUPPORTING THE AIR MOBILITY NEEDS OF GEOGRAPHIC
COMBATANT COMMANDERS: AN EVALUATION USING
THE PRINCIPAL-AGENT CONSTRUCT

BY

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The undersigned certify that this thesis meets the master's level standards of research, argumentation, and expression.

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DISCLAIMER

The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.



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ABSTRACT

Using a principal-agent construct, this study analyzes AFTRANS apportionment of air mobility assets to meet the needs of Geographic Combatant Commanders. It seeks to determine if the principal-agent construct typifies the relationship between AFTRANS and Geographic Combatant Commanders and if rigorous application of the principal-agent theory produces insights to past practice and promises efficiencies in future operations.

The principal-agent construct represents a productive way of modeling the relationship between AFTRANS and Geographic Combatant Commanders, with some exceptions that have largely to do with the principled nature of the AFTRANS agent. In addition, the study highlights Geographic Combatant Commanders' lack a timely ability to hold AFTRANS accountable for contracted requirements. The implication is that the process, while effective, could function better. Addressing the excessive time needed to move conflicts over the apportionment of air mobility assets up the chain of command would provide decisions and the subsequent deployment of assets much more quickly. Conversely, the study demonstrates that the principal also has contractual responsibilities in the relationship, specifically the timely appointment of a Director of Mobility Forces. Such action reduces the information asymmetry between principal and agent. Upgrades in accountability and information result in a more nimble and flexible force, capable of reaching consensus and executing missions in support of national security requirements.

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Chapter 1

Introduction

Every unnecessary expenditure of time, every unnecessary detour, is a waste of power, and therefore contrary the principle of strategy.

Carl von Clausewitz

According to Clausewitz, the pursuit of effectiveness in war is a fundamental axiom requiring bold action and an unwavering commitment to eliminate waste. Drawing from Clausewitz, J.F.C. Fuller goes one step further, focusing on the economy of force or efficiency.¹ The United States (US) Armed Forces actively seek to acquire both the most effective and most efficient means of projecting military power. To improve in these categories, they tend to focus on problem areas already in existence. Based on limited resources, those matters that tend to run smoothly are often accepted as is, with little attention paid to how they might be improved. This statement is not intended as a negative critique of how the armed forces operate. On the contrary, the US military prioritizes its resources in areas with the greatest return on investment (ROI). This practice illustrates a commitment to the American people and a consciousness of the fiscally constrained environment in which all services must now operate.

The focus on projects with high ROIs notwithstanding, some missions that operate within acceptable margins may possess additional untapped efficiencies. The only way to claim the available potential is to study these areas, determining how they work and where improvements might be made. One such area, where opportunities for improvements may be available, deals with the allocation of air mobility assets to the

¹ J.F.C. Fuller, *The Foundations of the Science of War* (1926; repr., n.p.: Books Express, 2012), page 202.

Geographic Combatant Commanders (GCCs), enabling them to accomplish their missions as defined in the Unified Command Plan.²

Traditionally, mobility assets like the C-17 Globemaster, C-5 Galaxy, or C-130 Hercules have been allocated to GCCs based on annual requests and developing emergencies around the globe. These mobility assets fill ongoing mission needs in taskings such as Operation Iraqi Freedom (OIF) or Operation Enduring Freedom (OEF)³. In addition, mobility assets may be requested to fill short-notice humanitarian-aid needs such as in Operation Unified Response, the US reaction to the 2010 earthquake in Haiti, or the Lebanon Non-combatant Evacuation Operation (NEO) in 2006.

In these examples, Air Forces Transportation (AFTRANS) provided GCCs with mobility assets to accomplish their mission.⁴ These types of actions occur with regularity; and, on the surface, they appear seamless. GCCs received and used required assets, so the process worked. However, how and how well did it work? Specifically, how were mobility assets allocated to the GCCs? What is the relationship between GCCs and AFTRANS, how are shortfalls dealt with, and who has the deciding vote when AFTRANS and GCCs cannot come to a consensus on resource-allocation issues. Is there is a way to do it better? The purpose of this research is to explore the efficiency of the AFTRANS-GCC relationship.

The Problem

² The Unified Command Plan is a strategic document that establishes the missions, responsibilities, and geographic areas of responsibility for commanders of combatant commands. Every two years, the Chairman of the Joint Chiefs of Staff is required to review the missions, responsibilities, and geographical boundaries of each combatant command and recommend to the President, through the Secretary of Defense, any changes that may be necessary.

³ These operations constitute the US military's prosecution of the Global War on Terror in Afghanistan and the fight to remove Saddam Hussein from power and quell the following insurgency in the country.

⁴ Air Forces Transportation (AFTRANS) is a subset of Eighteenth Air Force's mission that is designed to present air mobility forces (airlift and air refueling) and support forces to combatant commanders as the air component of United States Transportation Command. See the Unified Command Plan for additional information about the role of TRANSCOM.

In March of 2011, United States forces participated in Operation ODYSSEY DAWN, part of the international military operation in Libya. During this operation, AFRICOM, EUCOM, TRANSCOM, and STRATCOM each played an integral role. While AFRICOM executed strategic command of the operation, AFTRANS executed operational control of mobility assets. Allegedly, this created a duplication of effort and lessened the overall efficiency of the allocated forces in accomplishing the mission. As the default position of AFTRANS is to retain operational control (OPCON) of assets apportioned to GCCs, determining whether current command-relationship guidance sufficiently addresses the needs of GCCs could inform doctrine in support of future operations.

In these types of complex operations, where resources are moved across command lines and functions, it is vital to understand how the key players work together to accomplish the mission. Far beyond the common idea of a supporting and supported relationship emerges something more complex and perhaps useful. Peter Feaver, in his book *Armed Servants*, introduces the idea of the principal-agent relationship. He surmises that a strategic interaction occurs between principals and agents. The principal decides how to monitor agents' performance and bestow either rewards or punishments based on their actions. The agents must faithfully accomplish the work required or choose to "shirk" their responsibility by doing a limited amount or none of the work assigned.⁵ Feaver's description of the principal-agent model will be used as a guide to frame the analysis.

Research Structure and Design

A qualitative methodology appears appropriate for this research project. Data collection occurred via three methods. Accomplishing a review of pertinent literature to include principal-agent relationships, joint doctrine with respect to command relationships, and AFTRANS

⁵ Peter D. Feaver, *Armed Servants: Agency, Oversight, and Civil-Military Relations* (Cambridge, MA: Harvard University Press, 2005), page 2-3.

guidance governing the allocation & distribution of mobility assets to GCCs represented the first step. The ability to diagnose the nature of the relationship between AFTRANS and the GCCs is important to the theoretical underpinnings of the principal-agent construct. Naturally, literature exploring the foundations, framework, and characteristics of the principal-agent relationship were reviewed and presented in the next chapter.

The literature review is foundational to understanding both the theory and the case studies of this project. Selected writings include principal-agent phenomenon descriptions and guidance defining the AFTRANS/GCC working relationship. Two case studies then illustrate these complex interactions. Interviews with key personnel at both AFTRANS and the GCCs informed the cases. The goal of these interviews was twofold: 1) Gathering candid insights into how relationships held together and 2) determining whether each party was content with the current paradigm. Each was scheduled for 30-45 minutes, and occurred at a time and location of the respondent's choosing. The same initial questions were presented to each of the respondents.⁶ The remainder of the interview was allowed to flow freely, enabling the respondents the flexibility to explore topics of their choosing.

Hypothesis

According to John Creswell, author of numerous articles and 22 books on mixed methods research, qualitative methodology, and general research design, a qualitative methods hypothesis should be written as a single question that limits the question researched to a single methodology.⁷ Determining the question to answer is predicated on a sound hypothesis. The following statement represents the hypothesis for this research: *"The working relationship between AFTRANS and Geographic Combatant Commanders takes the form of a principal-agent*

⁶ See Appendix A, Interview Questions

⁷ Creswell, 139.

relationship, which leads to efficient allocation of mobility assets in support of GCC needs.” Investigating this hypothesis will illuminate how AFTRANS and GCCs cooperate or conflict in accomplishing their missions. More importantly, it will help determine if the current relationship between GCCs and AFTRANS produce the most efficient allocation of mobility resources for US security and if insights derived from the principal-agent framework could help improve it.

Research and Key Questions

1. Does the principal-agent dilemma typify the relationship between AFTRANS and the GCCs, and does rigorous application of the Principal-Agent theory produce insights to past practice and promise efficiencies in future operations?
 - A. What is the relationship between AFTRANS and the GCCs?
 - B. How are shortfalls in requested resources resolved?
 - C. Who has the deciding vote when AFTRANS and GCCs cannot come to a consensus on resource-allocation issues?

Based on the answers to these questions, this thesis will recommend changes, if appropriate, to the relationship between AFTRANS and GCCs to make their operations more efficient.

Interview Questions

In addition to the literature review, the qualitative research took the form of several ten-question in-person interviews. The interview questions provided the researcher with the opportunity to ask clarifying questions which emerged as a results of the literature review. They also allowed the opportunity for respondents, who are subject-matter experts in the allocation of mobility resources to GCCs, to elaborate on matters most significant to their personal experience. Most importantly, the interviews allowed a dialogue, enabling the researcher and respondent to achieve clarity of purpose and understanding.

The design of the questions was based on a synthesis of Michael Quinn Patton's four interview types: informal conversation interview, general interview guide approach, standardized open-ended interview, and closed fixed-response interview.⁸ The researcher combined elements from the standardized open-ended interview and the informal conversation interview. This combination of styles enabled the researcher to provide the exact wording and sequence of the questions to the respondents in advance, while preserving the opportunity to allow the respondents to present information and ideas not covered in the context of the interview questions. This synthesis of styles enabled the researcher to collect and explore information not considered in the initial formulation of questions. People interviewed were subject matter experts (SMEs) from AFTRANS (18th Air Force) and GCC A5 and J5 divisions.⁹ This cohort was selected due to their extensive knowledge and experience working to meet mobility allocation requirements for GCCs. In addition, the researcher sought to understand their opinions and perceptions of the relationship between GCC and AFTRANS, specifically noting areas for improvement and procedures worth duplicating."

|

Limitations, Assumptions, and Bias

Before beginning a research project, it is important to indicate limitations, assumptions, and potential biases that may influence the study. It is also important to identify them to maintain the objectivity of the research. Most of the data collected is based on responses to interviews among those who might be considered as SMEs in the field of inquiry, and the results will reflect their candor and forthrightness.

⁸ Teddlie and Abbas, 229.

⁹ A5 and J5 are the designations the Strategic Plans and Policy divisions at GCCs, Headquarters Air Force, and Numbered Air Force staffs. Their primary roles are to assist commanders in long-range or future planning, prepare campaign and operation plans, prepare estimates of the situation, and to aid operations directorates when required for mission accomplishment.

While they were assured that their answers shall remain confidential and be used solely for the furtherance of academic exploration, their responses may reflect organizational bias. Due to these limitations, this thesis will make several key assumptions. First, it assumes the answers received from each of the interviewees are honest and forthright. The second assumption is that the sample size of the survey respondents is large enough to reflect the feelings and opinions of the larger population within a reasonable margin of error.

No research project, regardless of its rigor, can completely remove bias. In the case of this research inquiry, there is one particular bias that should be highlighted. The researcher is from the mobility community. Though this will not change the data collected or the methodology used, the experiences, opinions, and the paradigm through which the researcher views this research topic will undoubtedly color its results, but not in a way that will invalidate the research. The bias will simply provide a differing perspective than those of other services/duty positions and may, however, represent a reason for this research to be repeated by others in an effort to validate or disprove the results.

Significance

Research for the sake of gaining understanding is in and of itself a noble aim, however, this line of inquiry possesses far more value than the pure pursuit of knowledge. First, it seeks to demystify the complex interactions between AFTRANS and GCCs. Many aviators and support personnel assigned to Air Mobility Command (AMC) and Eighteenth Air Force (18 AF) lack understanding of the manner in which they are assigned to missions supporting GCCs. While this lack of understanding may not inhibit mission accomplishment, it may curb efficiency.

Aside from the creation of synergistic efficiencies that enhance overall mission accomplishment, there also exists a potential fiscal return on investment. For many years, Mobility operations have accounted for several of the largest line items in the Air Force (AF)

budget. In fact, Air Mobility Command (AMC) remains the largest user of fuel in the Department of Defense (DoD).¹⁰ By exploring the manner in which GCCs and AFTRANS determine asset requirements and allocations, methods to reduce excess lift capability, and by default fuel consumption, might be illuminated.

This research holds the potential to enhance or possibly even change the way that the mobility community views its role in supporting GCCs. If AFTRANS functions as the agent and the GCCs as principals, how then should AFTRANS balance the competing requirements of each of the GCCs? Which GCC has priority? A single agent with a limited set of resources, simultaneously serving multiple principals represents a complex and dynamic state of affairs. By gaining a clearer picture of how this relationship operates, both GCCs and AFTRANS will be better equipped to seek out efficiencies and reduce waste while still providing the necessary assets for mission accomplishment.

Summary

As mentioned above, the goal of this research is to illuminate the complex relationship between AFTRANS and GCCs, explore the value of the principal-agent relationship, and provide recommendations on potential opportunities to enhance the efficiency of mobility-resource allocation. As the AF and the DoD adjust to new fiscal constraints and force reductions, the service must capitalize on any and every opportunity to become more efficient in its mission execution. The aim of this research is to gain a greater understanding of a process that works and seek to find ways to make it work better.

The next chapter will explain the principal-agent phenomenon and explore the relationship between GCCs and AFTRANS. Chapter 3 and 4 will focus on case studies. The final chapter, Chapter 5, provides

¹⁰ Robert R. Allardice, "Saving Fuel Secures the Future -- One Gallon at a Time," *Inside AMC*, March 12, 2012, accessed January 27, 2014, <http://www.amc.af.mil/news/story.asp?id=123292555>.

conclusions and recommendations. In addition, it will present emergent themes, future challenges, and areas for further investigation.



Chapter 2

Literature Review

This chapter provides information critical to understanding the principal-agent phenomenon as well as the guidance that directs how Air Force Transportation (AFTRANS) and Geographic Combatant Commanders (GCCs) should operate together. This foundational information serves to aid in answering several of the research questions. An understating of the theoretical construct of the principal-agent relationship and legal guidance defining how AFTRANS and GCCs should cooperate is necessary in matching the theoretical framework of analysis to statutory limitations and actual practice.

Principal-Agent

This thesis focuses on determining the nature of the relationship between AFTRANS and GCCs. The hypothesis contends their working construct is akin to a principal-agent relationship. Determining whether this assumption is correct requires the exploration of principal-agent theory. A great deal of literature has been devoted to the study of this topic. Principal-agent theory originated in microeconomic analysis and was first used in the context of business.¹ Recognizing its cross-disciplinary applicability, authors such as Samuel Huntington, Peter Feaver, Jürgen Brauer, and Hubert Van Tuyll have attempted to explain the nature of working relationships using this theory. While not a panacea for predicting the actions of contractual parties, it does provide a method to evaluate the nature of some of the complex interactions within relationships. The theoretical framework is useful in describing

¹ Thomas S. Sowers "Beyond the Soldier and the State: Contemporary Operations and Variance in Principal-Agent Relationships", *Armed Forces and Society* 31, no. 3 (Spring 2005): 385-409, accessed February 9, 2014, <http://web.a.ebscohost.com/aufric.idm.oclc.org/ehost/pdfviewer/pdfviewer?sid=3cc29f01-e797-432e-a5dc-0146479b9f22%40sessionmgr4004&vid=4&hid=4214>, 385.

the nature of relationships; however, not all relationships fall neatly into the construct.²

Understanding the principal-agent relationship first requires the defining of several terms. In this typically two-party relationship, the principal is the party who gives an order or requests a service, while the agent receives the order or carries out the service.³ A few common examples of principal-agent relationships include car owners and their mechanics, patients and their doctors, and the President or Congress and the US armed forces.⁴ In each example, the former represents the principal and the latter the agent. In each case, the principal is conferred status by law or the ability to pay for service.

A defining characteristic that serves to delineate each party is the amount of information to which each has access. Both sides share common information; however, the agent generally holds the advantage with respect to information and data.⁵ Just as the car owner and mechanic both know that a problem exists with a vehicle, the mechanic's technical expertise allows him to pinpoint the problem in a specific cause (i.e. a radiator or brake system). This knowledge advantage creates an informational asymmetry and reflects a foundational component of principal-agent relations.

The unevenness of information has a direct effect on the behavior of members engaged in principal-agent relationships. When agents hold an informational advantage, they can choose to share information beneficial to them only. An example of this is a painting contractor realizing she requires only eight gallons to coat a house as opposed to the ten gallons she used to generate the price quote. Does she share the information with the homeowner and adjust the cost of the job, or does

² Sowers, 403.

³ Jürgen Brauer and Hubert Van Tuyll, *Castles, Battles, and Bombs: How Economics Explains Military History* (Chicago: University of Chicago Press, 2008), 33.

⁴ Brauer and Tuyll, 33.

⁵ Peter Feaver, *Armed Servants: Agency, Oversight, and Civil-Military Relations* (Cambridge, MA: Harvard University Press, 2003), 69.

she hold back the information to pad her profit margin? This is the essence of a problem created by asymmetric information. While a fundamental characteristic of the principal-agent dynamic is the asymmetric information advantage of the agent, it is possible at times for a principal to hold the advantage. According to Feaver, principals can tip the information balance in their favor by providing inadequate direction or uncertain guidance to the agent.⁶ This concept receives little focus in the principal-agent literature, but it could be germane in discussing the relationship between the GCCs and AFTRANS.

Asymmetric information is important because when two parties with differing interests form a cooperative unit, they each seek an advantage. Game theory is a viable method to determine the behavior of principals and agents, recognizing that each of the parties will seek the optimal solution or contract for themselves.⁷ As principals lack information parity, agents may choose to act in accordance with their own interests as opposed to those of the principals. This leads to the idea of moral hazard, the other key aspect of the principal-agent theory. Moral hazard is the term for the set of circumstances whereby the principal wants the agent to work and the agent may choose to shirk, at the same time reporting work at an acceptable level.⁸

The difficulties in these relationships are twofold. The first problem is the possible hidden actions or hidden intentions of the agent.⁹ The principal-agent relationship is balanced by a give-and-take exchange. If the agent continues to take without giving enough in return, the relationship falls out of balance. This out-of-balance condition results in the loss of overall efficiency and can diminish trust between the principal and agent. The second difficulty includes the

⁶ Feaver, 287.

⁷ Ying-Ju Chen and Xiaojian Zhao, "Solution Concepts of Principal-Agent Models with Unawareness of Actions", *Games* 4, no. 3 (September 2013): 508-31, accessed February 9, 2014, <http://dx.doi.org/10.3390/g4030508>, 528.

⁸ Feaver, 55.

⁹ Brauer and Tuyl, 35.

increased cost incurred by the principal to prevent the agent from shirking in providing the agreed-upon service or resource. To ensure shirking does not occur, the principal must be able to monitor the agent in order to verify the veracity of the information being reported.¹⁰ The tools necessary to observe the agent are dependent on how intrusive the monitoring needs to be. The more intrusive the monitoring, the more expense the principal incurs to maintain it.

A standard in principal-agent literature is the assumption that the actions of the agent are difficult, if not impossible to observe without considerable cost.¹¹ The dilemma of the principal is to find the ideal level of scrutiny that ensures the agent fulfills contractual obligations while maintaining an economically viable expenditure of resources.

Peter Feaver referred to this monitoring as oversight.¹² For principal-agent relationships to work effectively, the principal needs the ability to observe and recourse to correct the agent when shirking occurs. Again, shirking represents a range of behaviors that does not meet the principal's satisfaction.¹³ Principals must also choose to what extent they wish to involve themselves in the activities of their agents. Using the context of Civil-Military relations, Feaver illustrates how a principal might provide oversight to the agent.¹⁴ Oversight helps to mitigate the propensity of the agent to embrace the moral hazard.

**Table 1: Summary of Oversight Mechanisms in
Ascending Order of Intrusiveness**

¹⁰ Brauer and Tuyl, 84.

¹¹ Ying-Ju Chen and Xiaojian Zhao, "Solution Concepts of Principal-Agent Models with Unawareness of Actions", *Games* 4, no. 3 (September 2013): 508-31, accessed February 9, 2014, <http://dx.doi.org/10.3390/g4030508>, 509.

¹² Feaver, 73

¹³ Feaver, 60.

¹⁴ Feaver, 85.

Monitoring mechanism from principal-agent literature	Civil-military analog
Contract incentives	Offer by to use less intrusive monitoring in exchange for obedience
Screening and selection	Skill requirements for entrance into military Loyalty Oath Other Accession instruments Professionalism
Fire Alarms	The news media Defense oriented think tanks Interservice rivalry
Institutional checks	Militia systems and National Guard Interservice rivalry (sometimes) Civilian staffs in Congress Atomic Energy Commission Confirmable civilian secretariat
Police Patrols	Planning, Programming, and Budgeting Systems and the budget process Civilian Secretariat and Office of Secretary of Defense Restrictive Rules Engagement Restrictive standing or mission orders Limits on delegated authority Audits and investigations Inspector General Congressional Budget Office, General Accounting Office, Office of Technical Assessment
Revising Delegation Authority	Intervening in a military operation to make a decision that was hitherto in the scope of delegated authority (e.g., picking bombing targets from the White House)

Source: Peter Feaver, Armed Servants: Agency, Oversight, and Civil-Military Relations (Cambridge, MA: Harvard University Press, 2003), 86.

The act of oversight increases the likelihood that the agent will choose to work at completing obligations versus shirking responsibilities and commitments.¹⁵

As a rule, when the level of oversight increases, so too do the costs of the principal.¹⁶ This cost must be balanced with the overall value of the endeavor, or the principal may be forced to choose not to enter into an agreement with the agent. The linchpin of this balance is determining whether the agent will act in accordance with the contract. Principals have two additional tools at their disposal to correct or motivate working versus shirking: incentives and punishments.¹⁷ Building incentives for proper behavior into an agreement, most often in the form of bonuses or

¹⁵ Feaver, 75.

¹⁶ Feaver, 100.

¹⁷ Feaver, 55 and 94.

reduced monitoring enables the safe delegation of authority to accomplish a task without relinquishing responsibility.¹⁸ In addition, incentives lessen the need for the most intrusive types of oversights, an action that reduces the principal's costs.¹⁹ In most principal-agent interactions, the use of incentives to motivate behavior is far preferable to both parties than the use of punishment.

Punishments reflect a direct contrast to incentives in the principal-agent relationship. Punishments represent an instrument of deterrence. That is to say that their implementation is automatic and ensured in response to the shirking behavior of the agent.²⁰ By clearly outlining the consequences of shirking, principals motivate agents to conduct themselves according to the initial terms of the agreement. Examples of punishments are as varied as the principal deems necessary to deter shirking. Using a civil-military relationship for context, Feaver defines five categories of punishment.

Table 2: Military Punishment Available to the Civilian Principal

General Category	Examples
Restrictive monitoring	Audits Mandatory remedial training (as in sexual harassment training)
Material disincentives: current	Budget cuts Restricting liberty
Material disincentives: future	Discharge prior to earning benefit Retirement below grade Loss of retirement privileges Other-than-honorable discharges
Military justice system	Nonjudicial punishment Courts-martial
Extralegal action	Verbal rebukes Purges

Source: Peter Feaver, *Armed Servants: Agency, Oversight, and Civil-Military Relations* (Cambridge, MA: Harvard University Press, 2003), 94. Each of the punishments varies in severity and intrusiveness. While the selection of viable forms of punishment can be wide-ranging, the conduct

¹⁸ Brauer and Tuyl, 85.

¹⁹ Feaver, 54.

²⁰ Feaver, 87.

that triggers punishment must be explicitly stated in order for it to be an effective deterrent.

The value of punishment continues to be contested in agency theory. There are those who believe that it is imperative for a principal to be able to set punishments because it is essential to instigate and maintain cooperation.²¹ On the opposite side of the argument, there are those who see punishment as detrimental to cooperation. These individuals tend to embrace the works of Carl Friedrich, Chester Banard, and Herbert Simon. Each reacted negatively to the role of coercion or punishment to control behavior.²² No matter what side of the argument one embraces, it is important to recognize that the use of punishment as a tool in the principal-agent dynamic has unique attributes and value.

The final aspect of the principal-agent dynamic worth exploring is the assumption that the relationship is based on two discrete players working together in a mutually beneficial relationship. This is a consummate characteristic of most principal-agent literature; however, there are those who have explored the context of having multiple principals in the relationship. Situations in which multiple principals can all be affected by the actions or decisions of a single agent are referred to as instances of common agency.²³ While not always the case, the preferences of different principals typically conflict. According to Bernheim and Whinston, common agency falls into two categories: *delegated* and *intrinsic*.²⁴

Delegated common agency is characterized by the allocation of decision-making authority to a common agent on behalf of several principles.²⁵ In this scenario, the principals voluntarily cede their

²¹ Feaver, 87.

²² Feaver, 89.

²³ B. Douglas Bernheim and Michael D. Whinston, "Common Agency", *Econometrica* 54, no. 4 (July 1986): 923-42, accessed February 9, 2014, <http://www.jstor.org/stable/1912844>. 923.

²⁴ Bernheim and Michael D. Whinston, 923.

²⁵ Bernheim and Michael D. Whinston, 923.

authority based on the premise that a decision by the agent will represent the greatest good for all principals. In this way, the principals seek the outcome with the greatest absolute gains for the collective body, versus that of each individual. In intrinsic common agency, the agent still has the right to make decisions that will affect all parties involved; however, the principals are no longer constrained by submitting to the common good of the entire group.²⁶ Each principal may actively attempt to influence the decisions of the agent in order to garner the greatest benefits possible for itself. This occurs even if that gain may be detrimental to other members of the collective. Individual principals simultaneously and non-cooperatively seeking incentive schemes to secure the favor of the agent can have unique repercussions on decision-making within principal-agent relationships.²⁷ It is important to understand these categories of common agency. Though its main assumption constrains the theoretical construct of the principal-agent paradigm to two parties, there are applications of agency theory that extend beyond the two-party dynamic that can help determine the potential actions of larger groups operating under a principal-agent schema.

The purpose of this section of the literature review was to gain an understanding of the principal-agent construct. This knowledge and that of the following section are necessary in order to determine the nature of the relationships between GCCs and AFTRANS.

²⁶ Bernheim and Michael D. Whinston, 924.

²⁷ Bernheim and Michael D. Whinston, 925.

The Players

Examining the guidance that bounds GCC and AFTRANS interactions reflects another important step in deconstructing their relationship. Interactions between military organizations are grounded in legal guidance. As the collaboration between GCCs and AFTRANS extends across service lines, the guidance takes several forms. It can be service-specific as in Air Force instructions (AFIs) or Major Command (MAJCOM) guidance. Regulations may also be derived from joint directives governing inter-service cooperation. Joint doctrine represents the “fundamental principles used to guide the employment of US military forces in coordinated and integrated action toward a common objective.”²⁸ These principles encourage a collective viewpoint used to plan, train for, and conduct military operations. Based primarily on practices applicable to all services, joint doctrine provides insights and knowledge gained from the use of the military instrument of national power to achieve national objectives.²⁹

Achieving national objectives comes with its fair share of bureaucracy and complexity. The guidance bounding GCCs and AFTRANS is no different. Before understanding the intricacies of the relationship, we need a clear delineation of the parties involved. Geographic Combatant Commands (GCCs) are defined in the Unified Command Plan (UCP).³⁰ This presidentially approved document “sets forth basic guidance to all unified combatant commanders; establishes their missions, responsibilities, and force structure; delineates their general geographical area of responsibility (AOR); and specifies responsibilities for functional combatant commanders.”³¹ Unified

²⁸ “Joint Electronic Library,” Joint Electronic Library, last modified January 17, 2014, accessed February 25, 2014, http://www.dtic.mil/doctrine/new_pubs/jointpub.htm.

²⁹ “Joint Electronic Library,” Joint Electronic Library, last modified January 17, 2014, accessed February 25, 2014, http://www.dtic.mil/doctrine/new_pubs/jointpub.htm.

³⁰ Andrew Feickert, *The Unified Command Plan and Combatant Commands: Background and Issues for Congress* (Washington DC: Congressional Research Service, 2013), 1.

³¹ Feickert, 1.

combatant commanders (COCOMs), of which GCCs are a subset, are unified or specified commands with a broad enduring mission placed under a single commander established by the President, through the Secretary of Defense (SecDef) and with assistance of the Chairman of the Joint Chiefs of Staff (CJCS).³² These combatant commands are organized into two categories: geographic and functional. They exist to utilize and integrate air, land, sea, and amphibious forces to achieve US national security objectives while protecting national interests.³³ COCOM commanders work with the military forces assigned to their theaters and report directly to the President and Secretary of Defense.

GCCs work in discrete areas of operation and focus on regional military affairs. The current GCCs include US Africa Command (USAFRICOM), US Central Command (USCENTCOM), US European Command (USEUCOM), US Northern Command (USNORTHCOM), US Pacific Command (USPACOM), and US Southern Command (USSOUTHCOM). The distribution of these GCCs provides global military coverage to protect US interests both domestically and internationally. In the context of this research, these organizations will serve as principals. The service sought is the allocation of mobility assets to support their missions.

³² Feickert, 2.

³³ Feickert, 2.

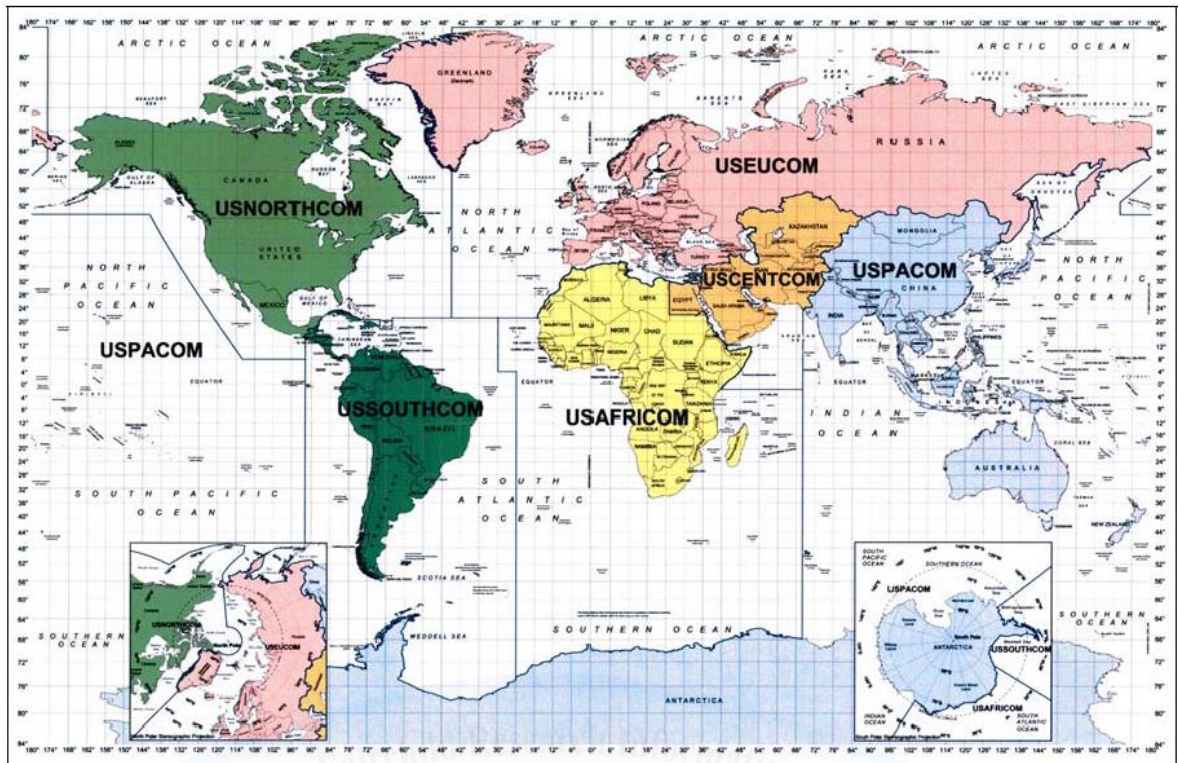


Figure 1: 2011 UCP COCOM Areas of Responsibility

Source: Andrew Feickert, *The Unified Command Plan and Combatant Commands: Background and Issues for Congress* (Washington DC: Congressional Research Service, 2013), 65.

Functional combatant commands operate worldwide across the geographic boundaries seen in the figure above. They provide unique capabilities to geographic combatant commands. The functional combatant commands include US Special Operations Command (USSOCOM), US Strategic Command (USSTRATCOM), and U.S. Transportation Command (USTRANSCOM).³⁴ For the purpose of this research, the capabilities of TRANSCOM will be explored. As will be discussed later, AFTRANS, which represents the agent in this research, is a subordinate agency to this functional command.³⁵

USTRANSCOM serves as the provider for all air, land, and sea transportation for the Department of Defense as well as multiple

³⁴ Feickert, 2-3.

³⁵ *Annex 3-17 Air Mobility Operations* (Maxwell AFB, AL: Curtis E. LeMay Center for Doctrine Development and Education, 14 February 2013), 17.

government agencies. The commander of this functional command is the manager for the Defense Transportation System (DTS), and the three-component system represented by Air Mobility Command (AMC), Surface Deployment and Distribution Command (SDDC), and Military Sealift Command (MSC).³⁶ In addition, the commander of DTS serves by designation of the Secretary of Defense (SecDef) as the global synchronization and distribution process-owner.³⁷

The focus of this thesis is mobility support to GCCs, so this line of inquiry traces the command components involved in the control of air mobility assets. AMC, the Air Force MAJCOM responsible for providing inter-theater and intra-theater airlift, air refueling, air-mobility support, and aeromedical-evacuation capability, is responsible to organize, train, equip, and operate assigned forces to meet worldwide air-mobility requirements. AMC is the air component for USTRANSCOM.³⁸ As such, it is responsible for preparing forces to meet assigned air mobility taskings in support of US national security objectives. AMC works closely with theater air component commands of each combatant command to establish procedures that facilitate smooth transitions to contingency operations.³⁹

The next level of the USTRANSCOM structure involved in the allocation and control of mobility assets to GCCs is 18th Air Force (18AF) and is referred to as AFTRANS. In its role as AFTRANS, 18 AF provides mobility assets to combatant commanders. As the provider of mobility support, AFTRANS assumes the role of an agent serving the needs of the GCCs (the principals). With a clear understanding of the players involved, the guidance that governs the relationship can be discussed.

Governing Guidance

³⁶ *Annex 3-17 Air Mobility Operations*, 16.

³⁷ *Annex 3-17 Air Mobility Operations*, 16.

³⁸ *Annex 3-17 Air Mobility Operations*, 17.

³⁹ *Annex 3-17 Air Mobility Operations*, 17.

As mentioned above, the guidance governing the relationship between AFTRANS and GCCs spans both joint and service-specific regulations. Joint Publications (JP) 3-17, 4-01, and 5-0 each contain information on the planning and allocation of resources from a functional combatant command to a geographic command.

JP 4-01, *The Defense Transportation System*, provides joint doctrine for the planning, command & control, and employment of all Department of Defense transportation.⁴⁰ JP 4-01 introduces concepts for the planning and allocation of resources to include mobility assets. It is the responsibility of the supported commander, the GCC in this thesis, to develop a concept of operations and determine the specific assets needed to meet national security objectives in his area of responsibility (AOR).⁴¹ The dynamic nature of the interrelationships between the key parties is further clarified in chapter 2 of this publication. It defines the Secretary of Defense as the office responsible for transportation planning and operation within the Department of Defense (DoD).⁴² It also specifies the elements of air mobility and the capacities they can provide to combatant commanders.⁴³ JP 4-01 also introduces the *Charter of the Chairman of the Joint Chiefs of Staff Transportation Board*. This board is important because the Chairman of the Joint Chiefs convenes it in order to ensure Presidential and Secretary of Defense requirements for common-user transportation are optimized to meet DoD objectives.⁴⁴ This committee plays a role in the allocation of mobility assets through its charge to adjudicate competing lift requirements and to provide an interface among supported and supporting commanders, the Chiefs of Services, other departments and agencies, and the CJCS on matters concerning

⁴⁰ Joint Publication 4.01, *The Defense Transportation System*, 06 June 2013, i.

⁴¹ JP 4.01, xiii.

⁴² JP 4.01, II-1.

⁴³ JP 4.01, III-1.

⁴⁴ JP 4.01, B-1.

transportation.⁴⁵ It has the ability to influence the delegation of operational control (OPCON) over mobility assets between combatant commanders.

JP 5-0 introduces joint-operation planning, which consists of planning activities associated with joint operations by combatant commanders and their subordinate joint-force commanders (JFCs) in response to emerging contingencies and crises.⁴⁶ It is the tool used to transform national strategic objectives into activities. It further directs the iterative planning process that drives mobilization, deployment, employment, sustainment, redeployment, and demobilization of joint forces.⁴⁷

Geographic Combatant Commanders are responsible for determining requirements necessary to accomplish their mission. The tool used to help design and develop campaign plans during peacetime is the strategic estimate. These estimates facilitate the employment of military forces across the range of military operations and help determine the required forces needed for the GCCs to accomplish their mission sets.⁴⁸ Using the strategic estimate as their foundation, GCCs utilize Global Force Management (GFM) to secure forces. GFM provides joint staffs and force providers a decision framework for determining force-assignment-and-allocation recommendations to the Secretary of Defense (SecDef) and apportionment recommendations to the Chairman of the Joint Chiefs of Staff (CJCS). The purpose of this process is to allow the SecDef to make proactive and risk-assessed force-management decisions.⁴⁹ The GFM exists to “align force assignment, apportionment, and allocation methodologies in support of the National Defense Strategy, joint force availability requirements, and joint force assessments. It

⁴⁵ JP 4.01, B-2.

⁴⁶ Joint Publication 5.0, *Joint Operation Planning*, 11 August 2011, ix.

⁴⁷ JP 5.0, x.

⁴⁸ JP 5.0, xiii.

⁴⁹ JP 5.0, II-4.

provides comprehensive insights into the global availability of US military resources and provides senior decision makers a process to quickly and accurately assess the impact and risk of proposed changes in force assignment, apportionment, and allocation.”⁵⁰

The complexities of GFM are streamlined by the Global Force Management Implementation Guidance (GFMIG), a source document for force planning and execution that integrates complementary assignment, apportionment, and allocation information into a single document.⁵¹ Updated every two years and approved by the SecDef, the GFMIG delivers information for aligning resources in support of military actions. In addition, it contains direction on the assignment of forces to combatant commanders, stipulates the force-allocation process that provides access to available forces (*including military, DOD, and other federal departments and agency resources*), and includes apportionment tables used by combatant commanders to source plans requiring designation of forces.⁵²

The preceding paragraphs described a macro-level synopsis illustrating the genesis of force allocation in support of GCCs. To delve into a micro-level understanding, it is helpful to explain the terms supported commander and supporting commander. Supported commanders hold responsibility for all tasks assigned in their particular area of responsibility. They prepare plans and orders as directed by the President or Secretary of Defense.⁵³ On the other hand, supporting commanders deliver forces, assistance, and other resources as required to the supported commander.⁵⁴ In the case of this thesis, consider the

⁵⁰ JP 5.0, II-6.

⁵¹ JP 5.0, II-6.

⁵² JP 5.0, II-6. The GFMIG includes the Forces for Unified Commands Memorandum (referenced as the Forces For memorandum or the Forces For assignment tables). This classified memorandum provides the SecDef’s direction to the Secretaries of the Military Departments for assigning forces to GCCs and serves as the record of force assignments.

⁵³ JP 5.0, II-12.

⁵⁴ JP 5.0, II-12.

GCCs as the supported command and TRANSCOM (to include the subordinate functions of AMC and AFTRANS) as the supporting component. This arrangement bounds the understanding of who needs mobility forces and how they are requested and approved. More importantly, it legitimizes the principle-agent framework for characterizing the relationship.

The supported commander identifies force requirements, contract requirements and management, and mobility resources while reviewing available assigned and allocated forces. Any needs not met are submitted via a request for forces (RFF) to the joint staff. The requests are presented to a joint-force provider (i.e. TRANSCOM) for a sourcing solution. Working collectively, joint force providers, Services (via their assigned Service components), and other combatant commanders provide recommended sourcing solutions to the joint staff. Upon receiving recommendations, the joint staff provides solutions to the SecDef for approval.⁵⁵ Once sanctioned, the force requests are allocated in the CJCS Global Force Management Allocation Plan (GFMAP) annex, and the joint force provider publishes the GFMAP Annex Schedule completing the process for allocation of resources.⁵⁶

The process discussed thus far deals with all military forces. As this thesis focuses on the allocation of mobility assets, *Joint Publication 3-17, Air Mobility Operations* deserves a thorough review. The characteristics of mobility assets differ, as does their allocation to GCCs. According to JP 3-17, “The value of air mobility forces lies in their ability to exploit and enhance the speed, range, flexibility, and versatility inherent in air power.”⁵⁷ The unique features of air mobility allow it to be viewed as a global system with the ability to conduct both inter-theater

⁵⁵ JP 5.0, II-32.

⁵⁶ JP 5.0, II-17.

⁵⁷ Joint Publication 3.17, *Air Mobility Operations*, 30 September 2013, viii.

and intra-theater missions. For this reason, it may not be necessary for a single entity to control all air mobility assets.⁵⁸

Inter-theater mobility assets under the control of USTRANSCOM serve the continental United States (CONUS)-to-theater and theater-to-theater air mobility needs of the GCCs. On the other side of the coin are intra-theater air mobility operations. They are characterized by their allocation of operational and tactical control to GCCs and the geographic boundaries in which they operate.⁵⁹ This division of forces allows the functional combatant command, USTRANSCOM, to direct the preponderance of air mobility assets through AMC and AFTRANS. GCCs are allocated sufficient assets to achieve their regionally based objectives.⁶⁰ The command relationship between GCCs and USTRANSCOM determines the nature and number of allocated resources.⁶¹ As each air mobility asset has the ability to respond to national strategic imperatives as well as specific regional concerns as directed by the GCC, it is critical that the lines of communication between GCCs and AFTRANS, in support of air mobility command and control, are well defined. Figure 1 below illustrates the coordination woven into the command hierarchy that ensures mobility assets can respond to emerging concerns, regardless of which organization has operational or tactical control at a given moment. Even though this coordination exists, a concern about asset allocation still remains. GCCs must request needed forces through AFTRANS, and ensuring that their needs are met is a priority.

⁵⁸ JP 3-17, viii-ix.

⁵⁹ JP 3-17, ix.

⁶⁰ JP 3-17, xv.

⁶¹ JP 3.17, II-3. When intratheater air mobility requirements exceed the capability of assigned/attached forces, other mobility forces can support intratheater airlift using a support relationship. The supported commander may also request augmentation from SecDef through the request for forces process (*For more information on request for forces/capabilities, see Enclosure R of the Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3122.01A, Joint Operation Planning and Execution System (JOPES) Volume I: (Planning Policies and Procedures)*

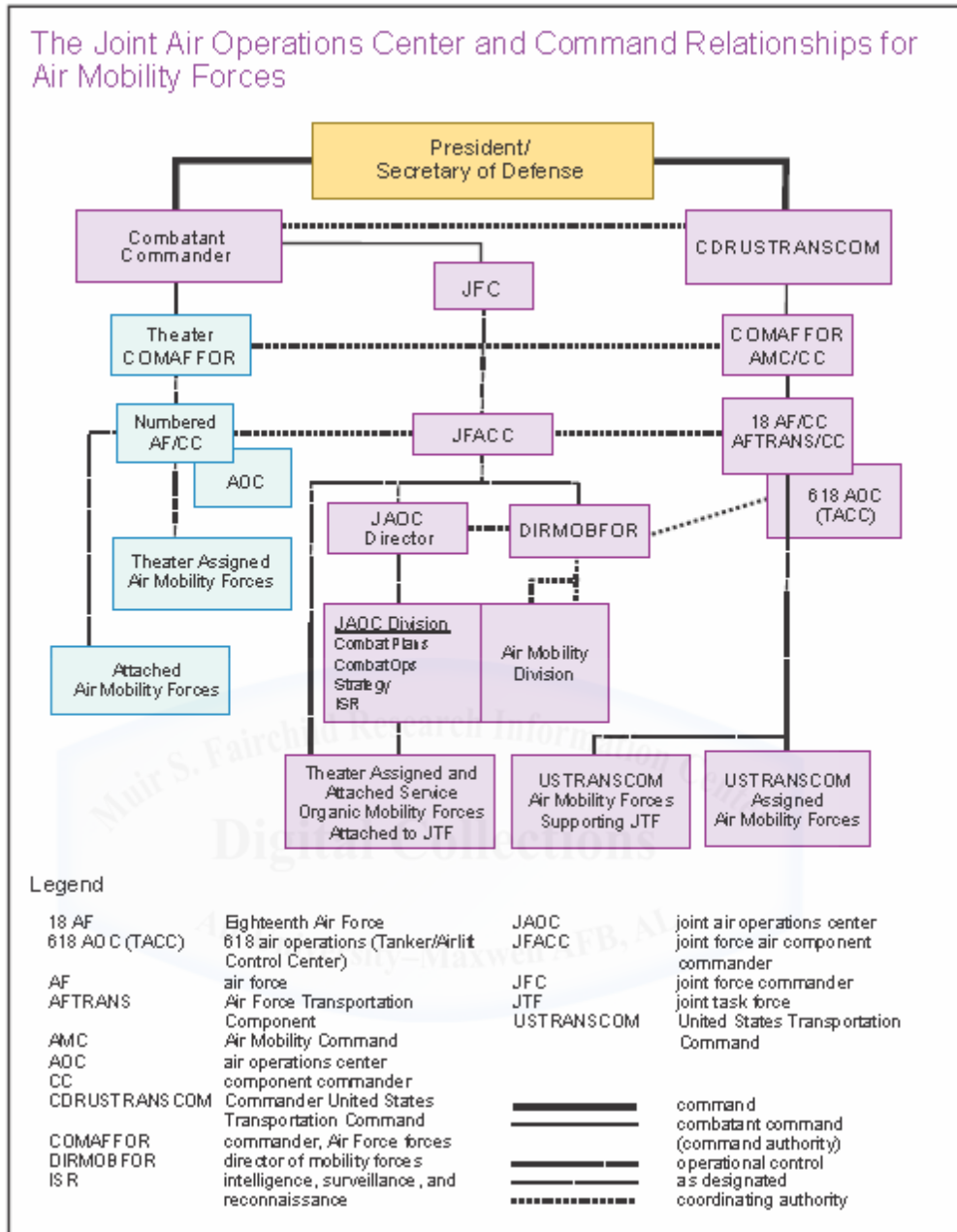


Figure 2: The Joint Air Operations Center and Command Relationships for Air Mobility Forces

Source: Joint Publication 3.17, Air Mobility Operations, 30 September 2013, II-7.

After this delineation of the guidance stemming from joint publications to determine how mobility assets are allocated to GCCs, it is necessary to delve into service-specific documents. Perhaps the most robust and efficient information is derived from the Curtis LeMay Center

for Doctrine Development and Education's *Annex 3-17 Air Mobility Operations*. It clearly articulates the desire of GCCs and AFTRANS to control mobility assets.

There will usually be a tension between regionally-organized forces and functionally-organized forces. The former seeks effectiveness at the point of their operation, while the latter seeks effectiveness and efficiency across several regions. At critical times, the requirement for effectiveness may trump efficiency, and additional functional forces may be transferred to the regional command and organized accordingly. These situations require careful and continuing dialogue between competing senior commanders and their common superior commander.⁶²

— Volume 1, Basic Doctrine

What this quotation describes is the delicate balance that must exist with respect to the distribution of mobility assets. Air Force doctrine indicates that the global nature of air-mobility operations lends itself best to centralized control by the functional unit, AFTRANS.⁶³ Rationale to transfer operational control of mobility assets is predicated on three considerations:

1. Will the GCC use the forces at or near 100 percent of their capability with little or no residual capability for other global missions?
2. Will the forces be used regularly and frequently over a period of time, not just for a single mission employment?
3. Does the geographic commander have the ability to effectively command and control the forces?⁶⁴

If these three considerations are met, then a valid need exists to allocate air mobility assets to the control of a GCC.

⁶² *Annex 3-17 Air Mobility Operations*, 19.

⁶³ *Annex 3-17 Air Mobility Operations*, 24.

⁶⁴ *Annex 3-17 Air Mobility Operations*, 25.

In the event that a GCC requests additional functional forces beyond those initially allocated in deliberate or crisis-action planning, the competing needs across multiple AORs should be considered. There are a finite number of air-mobility assets. Adding to one AORs asset allocation generally requires a reduction in an alternate one. For this reason, the allocation of assets between combatant commands, both geographic and functional, is governed under the authority of the SecDef as vested to him by the President in Title 10 U.S.C., Section 162.⁶⁵

To make request-for-forces (RFF) determinations, the SecDef established a Global Force Management Board (GFMB). This organization resides as the arbiter of force allocations generated outside of the annual GFM process. The GFMB is a flag-officer-level body supported by the Joint Staff to provide senior DOD decision-makers the means to assess operational impacts of force-management decisions and recommend strategic-planning guidance. Additionally, it serves as a strategic-level review panel to consider and address contentious issues on recommended GFM actions prior to forwarding to the SecDef for decision.⁶⁶ It facilitates participation in a structured process to expedite proactive assessments of worldwide combatant-commander requirements and global risk.

The GFMB meets quarterly in order to provide executive-level direction and oversight for the development of the Global Force Management Allocation Plan.⁶⁷ To ensure the interests of parties are represented appropriately, the GFMB is comprised of the Director of the Joint Staff, who acts as the board's chair, and members from the J3, J5, and J8 staffs. In addition, flag-officer or equivalent representation from the Office of the Secretary of Defense, all combatant commands, the joint

⁶⁵ 10 U.S.C. 162 (a), 154.

⁶⁶ Joint Publication 1.0, *Joint Personnel Support*, 24 October 2011, III-5.

⁶⁷ JP 1.0, III-5.

staff, and individual services round out the board.⁶⁸ With its requisite expertise, the GFMB makes recommendations to the Secretary of Defense on force allocation that the CJCS in turn implements through an additional iteration of the GFMAP. Figure 2 represents a graphical depiction of the RFF process. It traces the process and demonstrates how GCCs may request and gain the allocation of the additional mobility assets in support of missions located within their geographic AORs. The GFMB ensures the interests of geographic and functional combatant commanders are addressed, all while balancing the risk to competing national-level objectives.



⁶⁸ Joint Staff J-3 DDRO-JOD-GFM, GFM 101.ppt, March 05, 2014.



Source: Joint Staff J-3 DDRO-JOD-GFM, GFM 101.ppt, March 05, 2014.

The principal-agent literature provides a clear foundation of participating parties' interactions and offers a lens by which to evaluate the relations of GCCs and AFTRANS with respect to mobility-asset

allocation. While informative, the literature does not and cannot tell the full story. The literature is designed in a theoretical construct of how a process should operate; however, in “real-world” application, theory often gives way to practicality and operational need. For this reason, the next chapter will explore the AFTRANS and GCC relationship through the prism of real-world operations and interviews with those action officers and critical players involved in the process. This will provide a more robust understanding of the relationship and yield clearer determinations on where the process might be improved, if at all.

The literature does confirm that the relationship between GCCs and AFTRANS can be examined using the principal-agent paradigm as its model. In order to make this determination, the relationship needed to display several factors gleaned from the principal-agent literature. Those factors include discernable parties to play the role principal and agent, a contract, oversight, and the ability to reward or punish as a means to correct shirking. AFTRANS and GCCs represent parties engaged in a principal-agent relationship, but the concern of common agency requires some measure of recognition. AFTRANS serves as the sole provider of mobility assets for each GCC. With the coordination and direction of the Secretary of Defense, AFTRANS seeks to ensure the most efficient apportionment of mobility assets in accomplishing this goal. As the demand for mobility assets far exceeds the availability, AFTRANS must employ a holistic approach to allocate assets in a manner that ensures the greatest good as dictated by national security objectives. The lack of availability ties directly to the desire of the GCCs to transport their resources in the fastest manner possible. Air mobility assets exist in sufficient capacity to meet national security needs; however, they are not so plentiful as to resource all air transportation a GCC may desire. This creates the demand that exceeds capability. In essence, this represents an occurrence of delegated common agency. For the sake of this research, examination of GCC and AFTRANS interactions occurs in

isolation. Common agency may have a different effect on the relationship than it would on one between two unitary actors; however, explaining that interaction is work for another research project. Isolating the individual actors enables the distillation of the efficiencies that might not otherwise rise to the surface in a more complex environment.

The existence of a contract characterizes another of the defining requirements of principal-agent interaction. Identified in the earlier discussion, the supported commander (GCC) determines force, contract, and management requirements to include needed mobility resources. It is the responsibility of the supporting commander (AFTRANS) to provide the service requested to the best of his ability.⁶⁹ This arrangement represents a contractual agreement. The contract is the vehicle by which the agent delegates authority to act on its behalf to the agent. A fundamental principal-agent contract premise is the notion that agents assume an obligation to follow the principal's instructions without shirking or embracing the moral hazard. This contract is a cornerstone of the governance guiding AFTRANS and GCC interaction.

In order to monitor the action and authority delegated to the agent, the principal must have the ability to monitor agent-related activities. Oversight is necessary and occurs through the command-and-control structure of the military organizations. The Director of Mobility Forces (DIRMOBFOR) and Air Movement Division (AMD) create an information intersection enabling the GCC to determine whether stated requirements are being met. The AMD plans and executes intra-theater air mobility operations. When required it can also plan and execute inter-theater operations to meet GCC needs.⁷⁰

⁶⁹ JP 5.0, II-32.

⁷⁰ *Annex 3-17 Air Mobility Operations*, 19.

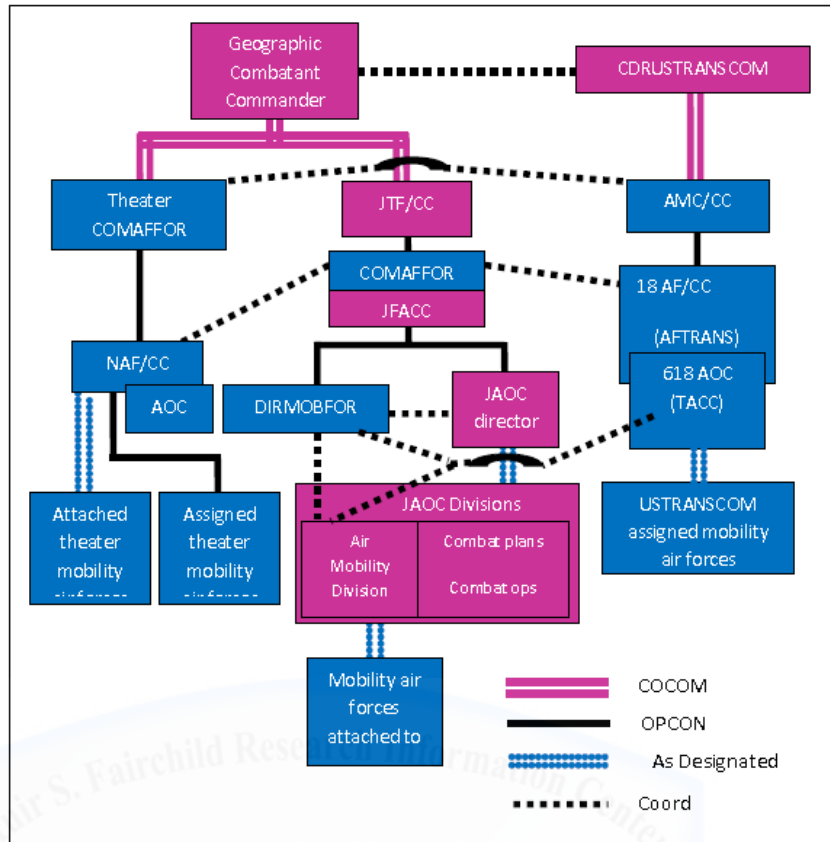


Figure 4: Sample Command Arrangement for Mobility Forces

Source: Annex 3.17, *Air Mobility Operations*, 14 February 2013, 15.

The AMD's assigned responsibilities place it at an ideal vantage to observe AFTRANS mission execution. The DIRMObFOR acts as the coordinating authority between the 618 Air Operations Center (AOC), AMD, and additional agencies to meet all validated air mobility requirements. He coordinates the integration of USTRANS COM-provided air mobility assets and coordinates with AFTRANS ensuring air-mobility requirements are met.⁷¹ The DIRMObFOR's placement as the theater's air mobility expert provides the necessary access and integration with AFTRANS to monitor its activities and supplied resources. The monitoring that occurs, a characteristic of principal-agent interactions, is inherent in the command-and-control structure of the organizations.

⁷¹ Annex 3-17 *Air Mobility Operations*, 22

The final representative factor that must be present for the AFTRANS/GCC relationship to fit into the principal-agent paradigm is the ability of the principal to reward or punish the agent as a means to correct shirking. It is in this area that the principal-agent model must be stretched to meet the needs of this thesis. Feaver, in his discussion on punishment as it related to civil-military affairs, lists restrictive monitoring, material disincentives both current and future, military justice, and extralegal actions as viable options.⁷² Each of these is indeed a viable option to punish AFTRANS if it fails to meet contractual obligations; however, material disincentives and extralegal actions are most applicable. A question arises when determining if GCCs have the authority to punish. Based on Title 10 U.S.C., Section 162., the Geographic and Functional Combatant Commanders are equivalent and are bestowed their authority at the behest of the President and Secretary of Defense.⁷³ The command and control of the organization is vertical, vesting authority to punish up and down, as opposed to across to other combatant commands. The intersection for authority rises to the level of the Secretary of Defense. This fact notwithstanding, a GCC still has the power to punish. The nature of most military organizations seeks to solve problems at the lowest level possible. With coordination authority and the ability to function as the liaison between AFTRANS and GCCs, the DIRMOBFOR's monitoring informs the principal and the agent of contractual deficiencies as described by the GCC. Those reports are distributed up the functional combatant commands' chain of command. Those in the hierarchy who hold authority, the AMC and TRANSCOM Commanders, possess the ability to levy punishment onto AFTRANS. GCCs can illicit this punishment by publicizing inadequacies in contract fulfillment. Most often, the punishment levied appears as material disincentives or extralegal actions. Remember that these categories of

⁷² Feaver, 94.

⁷³ 10 U.S.C. 162 (a), 154.

punishment include verbal rebukes, purges or firings, and non-promotion.⁷⁴ If a lowest-level approach does not work, GCCs may raise the contractual dispute to the Secretary of Defense, who mediates the issue.

Punishment between the GCCs and AFTRANS does not present itself as simply as the other factors indicative of principal-agent relationships. Though a bit more complex, there is a means by which GCCs can incite punishment to encourage compliance.

An encapsulation of the factors inherent in principal-agent relationships--discernable parties, a contract, oversight, and the ability to reward or punish--reveals that GCCs and AFTRANS can be categorized and evaluated using this construct. AFTRANS and GCCs further exemplify principal-agent dynamics in the area of asymmetric information and the propensity for moral hazard. AFTRANS holds a decided advantage in matters concerning the availability of mobility assets for allocation to GCCs based on its access to and control of maintenance measures and the acceptance of additional movement requests. In addition, AFTRANS, as director of global air mobility operations, retains its own priorities and responsibilities. The distribution of air mobility assets to other combatant commanders represents a zero-sum-gain; and, as such, assets that are recallable at a moment's notice may still influence AFTRANS' ability to support its priority missions (i.e. Presidential support). This presents an opportunity for AFTRANS to shirk by holding assets in reserve far beyond those necessary to meet normal attrition-related losses. The effect could be activities that favor the agent at a detriment to the principal. This is not a declaration that such activities occur, rather recognition of possible moral hazard stemming from information asymmetry. Exposing this possibility further

⁷⁴ Feaver, 94.

cements the categorization of the AFTRANS/GCC relationship as a principal-agent construct.

This chapter reviewed the relevant material responsible for bounding the relationship between GCCs and AFTRANS and the nature of the principal-agent phenomenon. With respect to GCC and AFTRANS relationships, it explored the statutory guidance from both joint and service-specific regulations and doctrine. What this review revealed is a comprehensive system that clearly provides for the redress of differences in opinion over the allocation of air mobility assets. It identified the key players involved in the process and the roles that each plays in the GFM and GFMIG. The next chapters will provide real-world context.



Chapter 3

Operation ODYSSEY DAWN

Operation ODYSSEY DAWN was the US-led military operation in Libya conducted from March 19 to March 29, 2011.¹ This effort was the US contribution to a multilateral military effort to enforce a no-fly zone and protect civilians in Libya. In response to the ongoing uprising in Libya against the government of Muammar al Gaddafi, on March 17, 2011, the United Nations Security Council ratified Resolution 1973 (UNSCR 1973). This measure established a no-fly zone in Libyan airspace, authorized arms-embargo-enforcement measures, and sanctioned member states “to take all necessary measures ... to protect civilians and civilian populated areas under threat of attack in the Libyan Arab Jamahiriya, including Benghazi, while excluding a foreign occupation force of any form on any part of Libyan territory.”² The operations conducted during ODYSSEY DAWN included strikes on “mechanized forces, artillery...those mobile surface-to-air missile sites, interdicting their lines of communications which supply their beans and their bullets, their command and control and any opportunities for sustainment of that activity” when forces were “attacking civilian populations and cities.”³ To support these operations, the US armed forces provided a myriad of assets:

B-2 stealth bombers from the 509th Bomb Wing at Whiteman Air Force Base, MO

F-15E fighter-bombers from the 492nd and 494th Fighter Squadron at RAF Lakenheath, Britain,

F-16CJ fighters from the 480th Fighter Squadron at Spangdahlem Air Base, Germany

¹ Jeremiah Gertler, *Operation Odyssey Dawn (Libya): Background and Issues for Congress* (Washington DC: Congressional Research Service, March 30, 2011), ii.

² Gertler, 1.

³ Gertler, 11.

EC-130 electronic surveillance aircraft from the 193rd Special Ops Wing, Pennsylvania ANG, Middletown, PA

KC-135 tankers from the 100th Air Refueling Wing at RAF Mildenhall, Britain/92nd Air Refueling Wing, Fairchild AFB, WA

C-130J medium range transports from the 37th Airlift Squadron at Ramstein Air Base, Germany

A-10 attack fighters from the 81st Fighter Squadron at Spangdahlem Air Base, Germany

AC-130 gunships from the 1st Special Operations Wing Hurlburt Field, Florida⁴

The B-2s were used to strike combat aircraft shelters at Ghardabiya Airfield in the opening hours the operation, while the F-15Es and F-16CJs attacked Gaddafi's ground forces advancing on the opposition forces in Benghazi and threatening civilians. The KC-135s served as the air-bridge, refueling strike aircraft, and the C-130Js transported ground equipment and personnel to a forward-operating base. Theater-based C-17 transports were also used to support this operation.⁵

Army General Carter F. Ham, the commander of U.S. Africa Command (AFRICOM), served as theater commander for the operation. AFRICOM, which reached full operational capability in October of 2008, is the US Geographic Combatant Command (GCC) responsible to "promote U.S. strategic objectives by working with African states and regional organizations to help strengthen regional stability and security through improved security capability and military professionalization. If directed by national command authorities, its military operations would aim to deter aggression and respond to crises."⁶

The emergent nature of this operation presents the perfect opportunity to explore the premise of this thesis. Within this operation,

⁴ Gertler, 11-12.

⁵ Gertler, 12.

⁶ Gertler, 14.

a GCC, AFRICOM, requested and received mobility assets from AFTRANS, the KC-135s from Mildenhall and Fairchild AFB. During the period of 19-28 March, the KC-135s flew 812 hours and 350 sorties while offloading more than 4.5 million pounds of fuel to fighters and bombers in support of the Operation ODYSSEY DAWN.⁷ Thirty-four tankers from myriad active, Guard, and Reserve units were patched together into what became known as the "Calico Wing."⁸ These air-mobility assets and their allocation to the AFRICOM Commander require assessment.

Although the efforts of the Calico Wing contributed greatly to the success of Operation Odyssey Dawn, they did not meet the entirety of the GCC needs. In the lead-up to the operation, initial planning and requests for forces were submitted from the GCC not later than the first two weeks of February.⁹ According to the Combined Forces Air Component Commander, when operations commenced in March the request for forces (RFF) had yet to be approved and fulfilled. This had a twofold effect. First, it limited the amount of airpower resources available to the CFACC at the beginning of the operation. The availability of fewer tankers, ISR platforms, and fighters influenced the nature and execution of the initial stages of the Operation ODYSSEY DAWN.¹⁰ Though this affected the operation, it did not prevent its successful execution. Next, the lack of resource allocation induced a shortfall of apportioned air mobility assets. The CFACC used the available resources to fill the air tasking order (ATO). Because the lack of resources

⁷ Gertler, 14 and Justin Brockhoff, "Total Force Airmen Simultaneously Support Operations in Libya, Japan, Afghanistan, Iraq and More," *Air Force Print News Today*, March 25, 2011, accessed March 03, 2014, http://www.618tacc.amc.af.mil/news/story_print.asp?id=123248655.

⁸ Justin Brockhoff, "Total Force Airmen Simultaneously Support Operations in Libya, Japan, Afghanistan, Iraq and More," *Air Force Print News Today*, March 25, 2011, accessed March 03, 2014, http://www.618tacc.amc.af.mil/news/story_print.asp?id=123248655.

⁹ Operation Odyssey Dawn CFACC, interview by author, 17 April 2014.

¹⁰ Operation Odyssey Dawn CFACC, interview by author, 17 April 2014.

extended across the entire spectrum of air assets, the shortage of tankers matched the deficiency of receivers; an action that effectively concealed the limited tanker availability.¹¹ Though the lack of tanker support was obscured by other challenges, the CFACC perceived the inability of AFTRANS to provide the requested tankers as shirking.

As there are two sides to every story, the AFTRANS perspective requires consideration. Investigating the tanker deficiencies in Operation ODYSSEY DAWN led this research to AMC. The answer from AMC on this issue opened areas of inquiry not previously considered. According to the AMC Commander, the entirety of AMC was focused on the supporting the needs of the AFRICOM Commander.¹² That being said, he also brought to the surface several factors impacting his ability to support the AFRICOM request for air mobility forces. First, there were the political considerations of the operation. The national intent was that this would be a coalition-led operation. International partners like the French, British, and Canadians would take the lead. The US role would focus largely on providing support through intelligence and logistics.¹³ What this meant for AMC was that its mission to provide air-mobility assets had to balance political constraints. The balancing of those limitations included using international partners' tanker assets; resources that do not always match the GCCs idea of the most effective or efficient support for his operational plans.

An additional constraint limiting AMC's ability to support the GCC in this instance was the President's requirement that mobilization not be used to support the AFRICOM operation.¹⁴ Unable to mobilize and deploy the tanker force using conventional means, AMC leveraged the reserve component to provide air-refueling options. Unfortunately, those

¹¹ Operation Odyssey Dawn CFACC, interview by author, 17 April 2014.

¹² AMC Commander, interview by author, 20 April 2014.

¹³ Mark Thompson, "Target Libya: Operation 'Odyssey Dawn' Begins," *TIME*, March 19, 2011, 1, accessed April 23, 2014, <http://nation.time.com/2011/03/19/the-balloon-goes-up-in-libya-with-u-s-in-the-back-seat/>.

¹⁴ AMC Commander, interview by author, 20 April 2014.

options came with additional limitations. The President's decision not to mobilize troops meant that the volunteer tanker force had a limited availability window once they were in place. The time required to change over these assets at the end of their availability window with new volunteers severely impacted tanker support to the AFRICOM Commander.¹⁵ In AMC's opinion, all available resources that could be offered, within the political context of this situation, were provided to support Operation ODYSSEY DAWN.

How does the principal-agent framework illuminate this case? AFRICOM represents the principal and AFTRANS the agent with respect to this operation. AFTRANS had what the GCC needed; a supply of air mobility assets (i.e. the KC-135s) needed to meet the mission objectives of Operation ODYSSEY DAWN. With the exception of organic airlift capabilities, mobility resources already allocated in theater, the GCC had only one recourse for securing additional air mobility resources. That was AFTRANS.

A difference of perspective exists between the principal and agent in this situation. The disconnect ties to the idea of information asymmetry; however, that concept does not exactly describe this situation. Of greater concern is the level of analysis involved for both the principal and the agent. AFRICOM's view focused on the operational level of war. The focus of AFTRANS was tailored to balance both operational and strategic-level constraints. Each participant's point of view affected perceptions. What appeared to be shirking behavior by AFTRANS was in fact a simple lack of communication. No matter what the cause, this interaction created a point of tension between the principal and agent and created a situation in which either punishment or increased monitoring was needed to correct the behavior of the agent.

¹⁵ AMC Commander, interview by author, 20 April 2014.

The contract between AFRICOM and AFTRANS was not clear-cut and changed based on the emerging situation and national-command-authority requirements. In the case of Operation ODYSSEY DAWN, the contract would have had to provide forces necessary to enforce a no-fly zone and attack pro-Gaddafi forces deemed to pose a threat to Libyan civilian populations.¹⁶ The majority of the assets needed were fighter and ISR platforms; however, based on the distances the fighters needed to traverse, an ample supply of tankers was also needed. It was the responsibility of the GCC or his delegated subordinate commander to determine and request the forces necessary to accomplish their mission. AFTRANS, as the sole provider and subject matter expert for air mobility forces, was responsible for reviewing the request and determining the assets to be allotted. At times, the requested assets and the forces allocated differed based on the AFTRANS determination. For example, the GCC requested the use of a wide array of KC-10s, KC-135s, and C-17s to support the upcoming operation. AFTRANS reviewed that request, balanced it against other competing national interests, and instead provided a mixture of resources that matched the capacity needs of the GCC as they as the joint mobility command saw them while endeavoring to operate within the constraints of the national command authority. While the GCC and his staff had requested the assets they felt best supported their mission, AFTRANS was concerned about the capability required and the most efficient mixture of assets that would provide that capability. AFTRANS concerned itself with the required amount of fuel to be delivered and the pallet space & lift capability required and available. The contract, and the manner it was fulfilled were a source of tension.¹⁷ Nonetheless, a contract existed.

The monitoring occurred through the interconnected command-and-control (C2) system. Operation ODYSSEY DAWN had a dynamic and

¹⁶ Gertler, ii.

¹⁷ *Annex 3-17 Air Mobility Operations*, 19.

complicated C2 hierarchy due to the participation of multiple commands. AFRICOM was the GCC with geographic priority; however, EUCOM, CENTCOM, STRATCOM, and TRANSCOM were all tasked by the Secretary of Defense to provide support and/or resources for this operation.¹⁸ The interplay between commands complicated the C2 structure, but it did not affect the ability of AFRICOM to provide oversight of its assigned air mobility assets. According to the Unified Command Plan:

Geographic AORs provide a basis for coordination by Combatant Commanders. These geographic AORs do not restrict accomplishment of the assigned missions. Combatant commanders may operate forces wherever required to accomplish their missions.¹⁹

The standard paradigm for organizing and controlling air-mobility assets through a CFACC, DIRMOBFOR, and AMD, were the same fixtures that enabled monitoring of these forces. Operation ODYSSEY DAWN utilized the standard joint-force architecture, enabling in-depth and timely oversight for all assigned air-mobility assets.

Rewards and punishments are even more elusive in this case. Anecdotal evidence gleaned from interviews with subject matter experts is somewhat inconclusive; however, it does provide contextual clues that bring the opinions of the principal and agent into focus. This anecdotal information makes it clear that the GCC felt its needs were not being met. After exploring after action reports, lessons learned investigations, and historical accounts from the Historical Research Agency, it becomes clear that the codified history does little to illuminate this question. For that reason, this research must depend on evidence from alternate sources.

¹⁸ *Libya: Operation Odyssey Dawn (OOD): A Case Study In Command and Control*. Suffolk, VA: Joint and Coalition Operational Analysis, 2011, 2.

¹⁹ 2008 Unified Command Plan, 4.

With respect to Operation ODYSSEY DAWN, interviews begin to reveal a pervasive opinion about AFTRANS. This is based on what some considered to be competing concerns.²⁰ AFTRANS, in addition to supporting the needs of GCCs, had a multitude of commitments that required attention and resources. For example, in 2011 AFTRANS concurrently supported operations in Japan, Libya, Southern Command with presidential lift requirements, and ongoing support to Central Command.²¹ While AFTRANS is charged with managing the trade-offs between priorities and resources, there are those who believe that a level of bias typified its decision-making.²² AFTRANS, just like every other enterprise has organizational priorities. That being said, there are those in AFRICOM who believe that in a trade-off between competing AFTRANS and GCC priorities, AFTRANS can and does select courses of action beneficial to its cause when conflicts arise.²³ Though not considered an overt abuse of the system as it currently exists, AFRICOM staff officers, experienced in planning and requesting mobility forces from AFTRANS, believe their requests often take a back seat to other requirements. When interviewed for this research, an AFRICOM J5 staff officer provided an example that relates to presidential support missions. In his opinion, during Operation ODYSSEY DAWN, those high-priority taskings, ones deemed as Air Mobility Commands' number one priority, were seen as competition to the GCC planners' and strategists' requests and needs.²⁴ The belief was that shirking occurred with respect to the allocation air-mobility forces when a rivalry exists between GCC needs and the fulfillment of the AFTRANS "higher-priority" missions.

²⁰ AFRICOM J5 Officer, interview by author, 10 March 2014.

²¹ *Second Line of Defense*, Tanker Airlift Control Center (TACC): Shaping Global Con-Ops, 11 March 2011, 1, accessed March 30, 2014, <http://www.sldinfo.com/shaping-global-con-ops-2/>.

²² *Second Line of Defense*, Tanker Airlift Control Center (TACC): Shaping Global Con-Ops, 11 March 2011, 1, accessed March 30, 2014, <http://www.sldinfo.com/shaping-global-con-ops-2/>.

²³ AFRICOM J5 Officer, interview by author, 10 March 2014.

²⁴ AFRICOM J5 Officer, interview by author, 10 March 2014.

These opinions stem from the asymmetric information advantage AFTRANS holds over GCCs. When clarifying his position, an AFRICOM staff officer stated, “They know exactly what they have, but I am not convinced they share the full story with us all the time. I get the impression they always make sure they keep a little [*i.e. air mobility assets*] in reserve to make sure they can accomplish the missions that might make them look bad if they had to say no because they allocated those assets to support the warfighter.”²⁵ His opinion, though anecdotal, suggests that AFRICOM perceived a failure on the part of AFTRANS to meet all of its needs. In the context of the principal-agent paradigm, this breach, or shirking, would merit punishment or increased monitoring.

The ability to punish AFTRANS, revealed earlier in this research, does exist. However, there is debate about the timeliness and effectiveness of the punishment. The recognition of shirking, if in fact it did exist, occurred at the operational level of the engagement. For the operations in Libya, there was a belief that the allocation of tanker support was insufficient to meet the needs of the air component commander.²⁶ When asked, a member of the planning staff said, “Based on the numbers, I think we could have done a better job if we had more tankers and more tanker crews. We got good support from the AMC guys, but it could have been better for sure.”²⁷ This was the sentiment echoed across the board. When asked about a way to resolve this perceived shortcoming, those interviewed surmised that, while they could take up their concerns with AFTRANS, the only way to force the issue was to elevate the problem up the chain of command, a process that takes too much time if AFTRANS really wants to “dig their heels in.” GCC members felt that the ability to punish AFTRANS for not providing

²⁵ AFRICOM J5 Officer, interview by author, 10 March 2014.

²⁶ AFRICOM J5 Officer, interview by author, 10 March 2014.

²⁷ AFRICOM J5 Officer, interview by author, 10 March 2014.

desired resources was held at a level that far exceeded their ability to ensure a timely resolution of the contract dispute.

The US-led share of Operation ODYSSEY DAWN lasted only 2-weeks and held the attention of the nation and the world. When everyone is watching, it is difficult for any organization to say it cannot get the mission done. The Air Force is about doing more with less.²⁸ It seems that rather than delve into parochial battles, GCC forces simply made do with what was available. Concerns about the lack of resources were pushed up the chain of command; however, the transfer of operational control to NATO forces effectively muted these concerns. The result was a mission achieving high levels of success and praise, coupled with the absence of closure relating to resource allocation. The contract was fulfilled enough to accomplish ODYSSEY DAWN's strategic goal in an effective manner, but additional air mobility resources might have made the operation more efficient.

To reach a fair conclusion, it is important to weigh the perspectives of both the principal and the agent. The viewpoints expressed thus far have centered on the beliefs of the principal. Unsurprisingly, the views of AFTRANS differ slightly.²⁹ During Operation ODYSSEY DAWN, AFTRANS received requests for air refueling tankers to support the enforcement of the no-fly zone. When asked about the AFRICOM perception of shirking, the AFTRANS staff responded that GCCs tend to be quite particular about the resources they request. As the subject matter experts on air mobility capabilities, AFTRANS much prefers that their customer request support in terms of capacity. "What we need is for our customers to tell us what they need, not what they want. It is our responsibility to select the best combination of resources to meet their needs."³⁰ In the opinion of AFTRANS staffers, the preponderance of resource allocation conflicts

²⁸ AFRICOM J5 Officer, interview by author, 10 March 2014.

²⁹ 18 AF/A3O Staffer, interview by author, 01 April 2014.

³⁰ 18 AF/A3O Staffer, interview by author, 01 April 2014.

stemmed from disagreements over the resources selected to meet the needs of the GCC. When asked about Libya, AFTRANS acknowledged that there were initially concerns about the total number of tanker assets that could be brought to bear in the region. The AFTRANS response was to balance the location and mixture of resources to meet the GCC's needs.³¹ In the case of Operation ODYSSEY DAWN, the AFTRANS staff believed it provided AFRICOM the assets it needed to achieve mission success, while balancing additional constraints levied by the national command authority.

Conclusion

Throughout the engagement, the relationship between AFTRANS and AFRICOM conformed to the characteristics of the principal-agent paradigm. The roles, contractual obligations, and oversight mechanisms develop clearly during the deconstruction of Operation ODYSSEY DAWN. What emerges is a concern surrounding the ability to hold AFTRANS accountable for its allocation of air mobility resources to the GCC when a disagreement ensues. The path for punishment, or conflict resolution, is clear; however, it is time-consuming and may not be suitable for operations of short duration. The AFTRANS opinion, though different, mirrors this finding. Its personnel understand the process for the adjudication of conflicts concerning air mobility assets, but offer that it was not needed based on the short duration of the operation and their ability to meet the needs of the GCC. Operation ODYSSEY DAWN's mission objectives were accomplished, so it is clear that AFTRANS and AFRICOM were able to work together effectively. The air mobility assets allocated were sufficient to meet the needs of the engagement.

Emergent from this case study is the idea that perceptual dissonance affects a GCC's belief that his agent is engaged in shirking behavior. In Operation ODYSSEY DAWN, both the principal and agent

³¹ 18 AF/A3O Staffer, interview by author, 01 April 2014.

believed they were operating under the same guidance and limitations, while in actuality they were working under different guiding principles. The agent, AFTRANS, attempted to meet the contractual needs of both the GCC and the national command authority. This task influenced the manner in which the agent supported the needs of the GCC. While these goals were similar in most cases, they were not always parallel. The result was a set of divergent contractual demands. Those demands forced AFTRANS to balance simultaneously the needs of AFRICOM, the other combatant commanders, and the national command authority. In meeting the needs of all, AFTRANS made decisions that were perceived by AFRICOM as shirking. The premise of the research was to study the relationship in the context of principal-agent, making allowance for common agency. It now appears that the ability of AFTRANS to support the needs of GCCs may be overridden by a higher-priority principal, in this case represented as the President, the Secretary of Defense, and their executive agents. This case study provides one example illustrating the interaction of AFTRANS and GCCs in real-world operations. Before drawing any tangible conclusions, it is necessary to consider an additional case.

Chapter 4

Operation TOMODACHI

On 11 March 2011, an earthquake with a 9.0 magnitude impacted the eastern coast of Japan. The resultant tsunami, with waves in excess of 49 feet, caused untold damages and significant loss of life. The areas along Japan's northeastern coast were the worst affected: 129,500 houses destroyed and 265,324 severely damaged by the earthquake, tsunami, or ensuing fires.¹

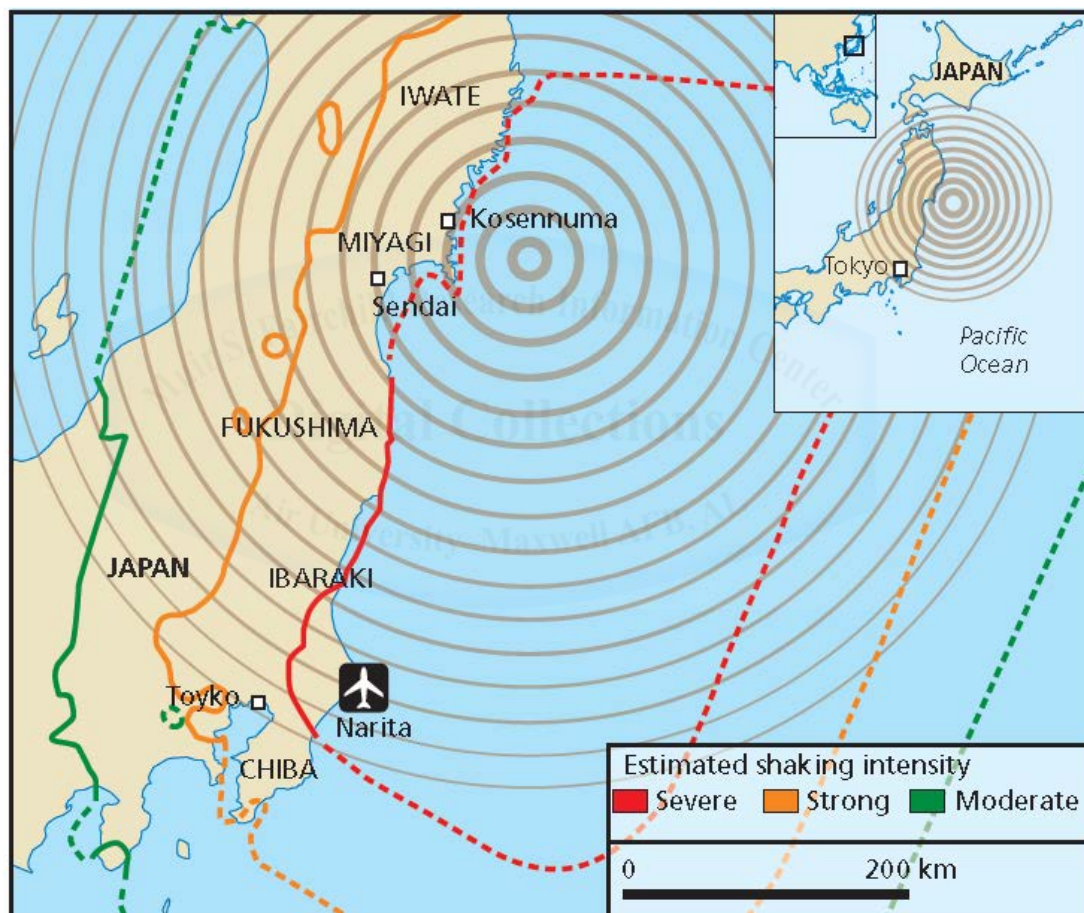


Figure 5: Map of Areas Affected by the Great East Japan Earthquake and Tsunami

Source: Jennifer D. P. Moroney, Report, vol. RR-146-OSD, *Lessons from Department of Defense Disaster Relief Efforts in the Asia-Pacific Region* (Santa Monica, CA: RAND Corporation, 2013), 85.

¹ Jennifer D. P. Moroney, Report, vol. RR-146-OSD, *Lessons from Department of Defense Disaster Relief Efforts in the Asia-Pacific Region* (Santa Monica, CA: RAND Corporation, 2013), 85.

Approximately 1.4 million households across the country had no access to water and an additional 1.25 million were without electricity.² In less than a week, the number of displaced Japanese citizens had reached over 500,000. Another important aspect of this disaster was the damage sustained by several Fukushima Daiichi Nuclear plant reactors.³ The damage, resulting from the constant battering of tsunami waves, affected the cooling systems of the nuclear plant and resulted in several explosions that caused additional damage. Based on the overall damage to the facility and the possibility of radiological contamination and emissions, the Japanese government began evacuating in excess of 177,000 people living within a 20-kilometer radius of the nuclear facility.⁴ The efforts to aid the Japanese people would result in one of the largest and most comprehensive humanitarian and disaster responses in history.

The day following the earthquake the US Secretary of Defense approved \$35 million in funding for disaster-relief operations. The preponderance of resources and support requested by the Japanese government centered on search-and-rescue teams, US airlift capability for supply and personnel movement, and DoD Nuclear Regulatory Commission & DoE nuclear expertise to help with the emerging Fukushima crisis. All branches of the US armed forces actively participated in Operation TOMODACHI. Forces included 19 ships, 140 aircraft, and more than 18,000 personnel. Japan falls into Pacific Command's area of responsibility. Under this authority, Pacific Air Forces (PACAF) conducted 444 sorties and carried almost 6 million pounds of cargo by 1 April in support of the operation.⁵ An extension of this operation was the humanitarian-relief airlift coded named Pacific Passage in which the US Northern Command led voluntary return of

² Moroney, 87.

³ Moroney, 88.

⁴ Moroney, 88.

⁵ Moroney, 91.

military family members from Japan to the U.S. in the aftermath of the earthquake and tsunami.

A surface review of Operation TOMODACHI reveals that PACOM and AFTRANS worked together to meet the needs stemming for the Japanese national disaster. Digging deeper reveals something that runs counter to expectation. The principal-agent construct indicates that agents tend to use the asymmetric information advantage to shirk their responsibilities. In this case, that did not happen. Moreover, the agent's desire to meet the needs of the PACOM commander caused an altogether different type problem.⁶

A review of the Operation TOMODACHI/PACIFIC PASSAGE After Action Report (AAR), which is stored on the Joint Lessons Learned Information System, lists several issues. According to an AMC input, guidance from multiple agencies to include Air Force A3, A4, and A7 lacked synchronization with PACOM/PACAF guidance. The result of the divergent directives led to confusion with respect to aircrew procedures during Operation TOMODACHI.⁷ According to the report, the "failure to adopt a consolidated document would result in confusion and misdirection for IRT [incident response teams] items such as unacceptable decontamination levels, flight restrictions, and medical countermeasures."⁸ Overzealousness by AMC to support the needs of PACOM resulted in less than ideal support. The principal-agent construct accounts for the failure of an agent to meet the needs of a principal due to self-interest. In this case, however, the cause appears more aligned with inadequate planning and poor executional prowess on the part of AFTRANS.

⁶ (U/FOUO) Joint Lessons Learned Information System, *Operation TOMODACHI/PACIFIC PASSAGE After Action Report*, accessed April 8, 2014, <https://www.jllis.mil>. Information extracted is not critical in nature and does not affect national security or foreign relations.

⁷ U/FOUO) Joint Lessons Learned Information System

⁸ U/FOUO) Joint Lessons Learned Information System

An additional concern, one that falls more readily into the principal-agent framework, centers on the appointment of a Director of Mobility Forces (DIRMOBFOR) for Operation TOMODACHI. As mentioned earlier in this research, the “DIRMOBFOR exercises coordinating authority between the air operations center (AOC), Tanker Airlift Control Center (TACC), and the joint movement center to facilitate resolution of air mobility issues.” A position sourced from the GCC's organizations or from within USTRANSCOM, the DIRMOBFOR is a critical element to support the mobility needs of the GCC.⁹ Interviews with AFTRANS and PACOM staff indicate that failure to appoint a DIRMOBFOR was an issue that hindered AFTRANS support to the GCC; however, they do not concur on who was at fault for the position going unfilled for the first 9 days of the operation.¹⁰

The lack of an identified senior leader to guide CONOPS development at the earliest stages of the disaster resulted in an ad hoc initiation of daily airlift coordination meetings to address the day's business and occasional breaches of procedural discipline.¹¹ In addition, the absence of a DIRMOBFOR allowed planners to be influenced by senior leaders' requirements, causing process disconnects, wasted crew days, and mission cancellations due to load changes and limits on crew duty days.¹² As the principal, PACOM fully expected AMC to take charge of the DIRMOBFOR issue. According to staff interviews, PACOM had its hands full with the initial response to the disaster and turned to AMC to fill the void. “Generally, our organic airlift is sufficient for any task, but TOMODACHI was different. We needed AFTRANS to step up with resources and leadership, but that leadership was delayed.”¹³ The result

⁹ *Annex 3-17 Air Mobility Operations* (Maxwell AFB, AL: Curtis E. LeMay Center for Doctrine Development and Education, 14 February 2013), 14.

¹⁰ 18 AF/A3O Staffer, interview by author, 01 April 2014 and JCS J5 PACOM Staffer, interview by author, 10 April 2014.

¹¹ (U/FOUO) Joint Lessons Learned Information System

¹² (U/FOUO) Joint Lessons Learned Information System

¹³ JCS J5 PACOM Staffer, interview by author, 10 April 2014.

of that delay was the mismanagement of the initial planning and execution of the air-mobility assets and crews.¹⁴

AFTRANS personnel, of course, view this situation all together differently. In their opinion, they did everything in their power to support the needs of PACOM and more. To their belief, AFTRANS recognized the void of a senior airlift advisor early in the planning process and made overtures to fill the vacant position on numerous occasions and at escalating command levels in the first days of the operation--an offer that AFTRANS believes went unaccepted until 9 days after operations were undertaken.¹⁵ According to the AMC Commander, AFTRANS is about more than providing assets, it is about a capability.¹⁶ With this sentiment in mind, the AFTRANS response to filling the DIRMOBFOR position should have been to provide a suitable candidate as quickly as possible in order to prevent uncoordinated and ineffective air mobility operations during disaster-relief operations.

This research illustrates that, even in a successful operation such as TOMODACHI, tension exists and reduces its efficiency. Does the principal-agent construct suggest how the tension might be relieved? AFTRANS was clearly the agent. It was the sole repository for worldwide air mobility assets and was directed to distribute those assets in order to support GCC requirements. PACOM, based on its need to secure air mobility assets to support its mission, was the principal. There is a minute difference between the makeup of PACOM and AFRICOM that should be noted. AFRICOM was designed to “promote US strategic objectives by working with African states and regional organizations to help strengthen regional stability and security through improved security

¹⁴ (U/FOUO) Joint Lessons Learned Information System

¹⁵ (U/FOUO) Joint Lessons Learned Information System

¹⁶ AMC Commander, interview by author, 20 April 2014.

capability and military professionalization.”¹⁷ PACOM, on the other hand, is primarily a war-fighting command, whose commitment is to maintaining superiority across the range of military operations in all domains.¹⁸ Based on its mission and area of responsibility, the quantity of organic air mobility assets allotted to PACOM is significantly greater than that allotted to AFRICOM. That being said, the air mobility assets allotted to PACOM are still generated by AFTRANS. The spirit of the principal-agent two-party concept is met.

The contract, although emergent, is nonetheless present and based on GCC and national-command-authority requirements. In the Pacific, the earthquake and the resultant tsunami generated air mobility requirements that exceeded PACOM’s organic capability. The requirements generated by the PACOM planning cell to respond to the humanitarian crisis in Japan set the foundation for the contract. This contract included the allocation of resources for the transportation of supplies and personnel to support area operations. In fact, less than 24 hours after the earthquake and tsunami affected the island of Japan, AFTRANS officials deployed over 700 total-force personnel and 15 aircraft including C-12 Hurons, C-17 Globemaster IIIs, C-130 Hercules, and KC-135 Stratotankers.¹⁹ AFTRANS supplied the requested forces to meet the operational requirements of Joint Support Force Japan, the organization stood up to support the Government of Japan with disaster response.

Oversight, as mentioned in relation to Operation ODYSSEY DAWN, occurred through the existing command-and-control systems. As operations began, the air mobility forces were aligned under a common hierarchy. Joint Support Force Japan (JSF-J) guidance appointed the

¹⁷ Jeremiah Gertler, *Operation Odyssey Dawn (Libya): Background and Issues for Congress* (Washington DC: Congressional Research Service, March 30, 2011), 14.

¹⁸ “USPACOM Strategy,” United States Pacific Command, April 2, 2014, accessed April 2, 2014, <http://www.pacom.mil/about-uspacom/2013-uspacom-strategy.shtml>.

¹⁹ Kerry Jackson, “Total Force Team Supports Operation Tomodachi,” *AF News*, March 28, 2011, accessed April 8, 2014, <http://www.amc.af.mil/news/story.asp?id=123248900>.

commander of US Pacific Air Forces (PACAF) as the Joint Forces Air Component Commander (JFACC). The guidance further clarified that he would have tactical control of air force and sister-service air assets in his AOR.²⁰

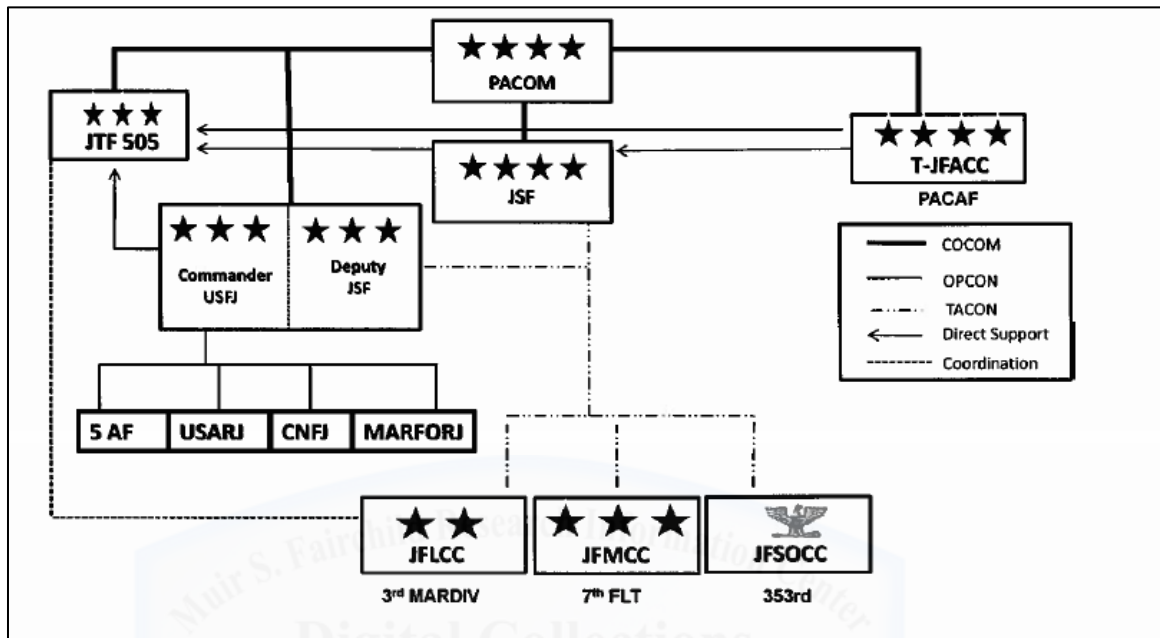


Figure 6: Operation TOMODACHI Command and Control

Source: *Operation Tomodachi and Pacific Passage: Air and Space Operations Directive* (Combined Air Operation Center, April 19, 2011), 6.

Monitoring again occurs by way of the interconnected command-and-control network. Though not fully depicted in this diagram, the standard organizational controls, to include the DIRMBOFOR and AMD, exist underneath the JFACC. As in the previous examples, these fixtures enable monitoring of the forces by the principal. By exploiting the standard joint-force architecture, in-depth and timely oversight for all assigned air mobility assets was ensured.

The ability to reward and punish appears irrelevant in this case. Few opportunities exist where the United States can engage its instruments of national power resulting in near universal praise. The

²⁰ *Operation Tomodachi and Pacific Passage: Air and Space Operations Directive* (Combined Air Operation Center, April 19, 2011), 6.

humanitarian operations in Japan presented one such occasion. Though AFTRANS resources were stretched thin supporting GCC requirements across the globe, the opportunity to support an ally and help minimize a potential nuclear disaster would merit the highest levels of support. It is for this reason that punishment was never a concern. According to PACAF historians, the communication, compromise, and cooperation that occurred during Operation TOMODACHI were unprecedented.²¹ Though the command has a large amount of organic airlift, anything JSF-J needed, it was afforded. In fact, it was reported that before requests for forces were submitted that AFTRANS had notified Airlift Wings of potential tasking so that when asked, they could respond more quickly to any requests.²²

As illustrated above, the DIRMOBFOR vacancy caused tension for both AFTRANS and PACOM. PACOM's perception is that AFTRANS shirked; but that is a false assumption. According to Joint Publication 3-17, Air Mobility Operations, the commander Air Force forces (COMAFOR) "may appoint a DIRMOBFOR to function as coordinating authority for air mobility with all commands and agencies, both internal and external to the JTF, including the JAOC, the 618 AOC (TACC), and the JDDOC and/or the JMC."²³ The responsibility for appointing the DIRMOBFOR is in fact a responsibility of the GCC and his staff. PACOM failing to appoint the DIRMOBFOR in the first days of Operation TOMODACHI is an example of a principal failing to uphold its contractual requirements. Though principal-agent theory focuses on agent shirking, Peter Feaver speaks to occurrences in which a principal is responsible for failing to meet contractual obligations. Based on his research, this occurs when the principal overcomes the asymmetric

²¹ PACAF/ HO, interview by author, 08 April 2014.

²² *Second Line of Defense*, Tanker Airlift Control Center (TACC): Shaping Global Con-Ops, 11 March 2011, 1, accessed March 30, 2014, <http://www.sldinfo.com/shaping-global-con-ops-2/>.

²³ JP 3.17, II-3.

information gap.²⁴ The failure to appoint the DIRMOBFOR allowed PACOM to withhold directive information that reduced the ability of AFTRANS to respond efficiently and effectively to contractual obligations.²⁵ Again, the AMC after-action report on Operation TOMODACHI cited process disconnects, wasted crew days, and mission cancellations caused by load changes and limits on crew duty days as the direct result.²⁶

Conclusion

The two examples of tension explored in this chapter focus on AFTRANS over-supporting PACOM to a detrimental outcome and the failure of PACOM with respect to the appointment of a DIRMOBFOR. These distractions did not prevent operational success. Shirking in this example, with respect to the DIRMOBFOR position, was remedied without the need to resort to the GFMB process.

Operation TOMODACHI was the epitome of cooperation and communication. Both AFTRANS and PACOM revealed that their relationship during this operation could not have run more smoothly. The priorities placed on meeting the needs of the personnel affected by the earthquake and tsunami seemed to overcome any would-be shirking that the agent might attempt.

Although some of the necessary characteristics of the principal-agent paradigm can be seen in the interaction between AFTRANS and PACOM, the apparent lack of a preference gap between the two in responding to the disaster, leaves little for the theory to explain or resolve. Perhaps more important is how proper application of the principal-agent relationship might improve future operations.

²⁴ Feaver, 69.

²⁵ (U/FOUO) Joint Lessons Learned Information System.

²⁶ (U/FOUO) Joint Lessons Learned Information System.

Chapter 5

Recommendations and Conclusions

This thesis sought to accomplish two things. First, it wanted to determine the viability of using the principal-agent model to analyze the relationship between AFTRANS and the Geographic Combatant Commanders. Next, it pursued opportunities to improve the working relationship between the two by reviewing the conduct of the parties in real-world interactions.

Determining if the relationship between GCCs and AFTRANS fit the principal-agent construct contended on four separate questions. First, was the issue of discernable parties to play the role the principal and agent. As illustrated in the research, the parties studied during this research easily met this criteria. Of note was the idea of common agency discussed briefly in the research. AFTRANS as the sole supplier of air mobility assets has been afforded the responsibility of the distributing assets to support the needs of GCCs. This is the perfect example of delegated common agency.¹ GCCs, by order of law, ceded their authority with respect to air-mobility asset-allocation. AFTRANS has been delegated the power to determine asset distribution based on the premise that its decisions will represent the greatest good for all principals. AFTRANS' focus is the security of the nation. Based on guidance from the National Command Authority, AFTRANS distributes air mobility assets as it sees fit to maximize the efficiency of the limited resources available. The principals, in this case each of the GCCs, seek the outcome with the greatest absolute gain for their regional organization. This delegated common agency is similar to those seen in economic circles, but the fact that it is a military endeavor complicates agency theory.

¹ Bernheim and Michael D. Whinston, 923.

Agency theory sprang from economic circles, so it makes sense that it will not fit perfectly when applied to military endeavors. At issue is the motivation of the parties involved in principal-agent relations. When reviewing the AFTRANS and GCC relationships in the case studies presented, the appearance of shirking behavior was far less than anticipated. Peter Feaver alludes to this possibility in his work on civil-military relations. There are barriers to military agents shirking their responsibility because of the professional nature of the armed forces.² Though services must operate within an increasingly bleak fiscal landscape, the desire to shirk is limited by the culture of the armed forces. The vertical hierarchy and highly professionalized nature of the military lends itself to the fulfillment of commitments and obligations. In both Operations TOMODACHI and ODYSSEY DAWN, the required air-mobility assets were allocated to the GCCs to accomplish their stated mission objectives. According to AFTRANS personnel, their main focus was to provide “the GCCs exactly what was needed to execute the mission.”³ For example, “During TOMODACHI we employed contingency response forces, and airlift (organic and commercial) to support PACOM requests. We also offered solutions to help with manifesting passengers (PAX visibility) and ensure commercial follow-on support.”⁴ In this instance, not only was there a lack of shirking, the AFTRANS team provided support and services not specifically required under their contract with PACOM. The lack of shirking appears to be counter to traditional agency theory. But as noted above, Feaver recognized that the culture of professional military organizations could mitigate shirking.

Though shirking was diminished, to say that it was completely negated is a stretch. If it exists in even the smallest quantity, GCCs will require a tool with which to combat it. A major concern in these

² Peter Feaver, *Armed Servants: Agency, Oversight, and Civil-Military Relations* (Cambridge, MA: Harvard University Press, 2003), 18.

³ 18 AF/A3O Staffer, interview by author, 01 April 2014.

⁴ 18 AF/A3O Staffer, interview by author, 01 April 2014.

relationships centers on whether principals possess the appropriate tools to hold the agent accountable for failing to meet their obligations.⁵ When asked specifically about the relationship and the punishment component, AFTRANS acknowledged the existing Global Force Management Board (GFMB) structure is sufficient to meet the needs of the combatant commanders.⁶ Not surprisingly, those GCC staffers interviewed had a slightly different perspective. The primary issue of concern is the ability of the GCC to influence directly the behavior of AFTRANS. Most issues concerning air-mobility asset-allocation have been solved with a conversation at the action officer level. Though not seen in the selected cases, the research suggests that in instances where a resolution is not reached, the conflict would be reported up the chain of command for resolution at the GFMB--a process that takes time and appears separated from the key players.

In order to close the punishment gap, whether real or imagined, and provide a tangible ability for GCCs to influence the behavior of AFTRANS, changes will be necessary. These changes, at a minimum, must enable GCCs a modicum of advantage over AFTRANS that does not require elevation to the Joint Staff and SecDef levels. Based on delegated common agency, requests for forces are approved based on AFTRANS' balancing of national security priorities: "the greater good." There is unified agreement that the current GFMB process works, but it might work better with the ability to resolve these issues at a lower level.

One measure to accomplish this would be to set a threshold, one that must be met in order for disagreements over force allocations to be elevated to the GFMB. This threshold could be based on many factors. Establishing it on the number of resources to be apportioned or the resultant force posture that the move will generate are viable options.

⁵ Jurgen Brauer and Hubert Van Tuyll, *Castles, Battles, and Bombs: How Economics Explains Military History* (Chicago: University of Chicago Press, 2008), 84.

⁶ 18 AF/A3O Staffer, interview by author, 01 April 2014.

What is most important is that GCCs be provided a controlling interest in low-level conflict resolution. In addition, the current system appears to place the burden on the GCC to validate its need for resources. If that burden shifted to AFTRANS, requiring it to validate the rare refusal of resources, two things would be accomplished. First, it would provide leverage to GCCs. If the explanation for resource refusal holds sway, GCCs could accept the justification and close the matter. If not, GCCs could then elevate the issue to the GFMB for resolution. In this way, a GCC would have the ability to influence AFTRANS. The ability to force the elevation of the issue to a higher authority gives some measure of punishment control to the GCC. Though not a major change to the current operational construct, this modification could provide the principals the necessary leverage to insure that their needs are met.

Implications and Conclusions

This research began by presenting several questions. The first was “Does the principal-agent construct typify the relationship between AFTRANS and the GCCs, and does rigorous application of the principal-agent theory promise insights to past practice and promise efficiencies in future operations?” The answer to these questions is yes. This conclusion is based on an analysis of case studies and attainment of the four criteria necessary to fit the principal-agent model. The military application of this primarily economic model did affect its applicability; however, and the explanation Peter Feaver provides indicates that the professional nature of the military service does not exclude military organizations from the principal-agent construct. The next questions include, “What is the relationship between AFTRANS and the GCCs, how are shortfalls in requested resources resolved, and who has the deciding vote when AFTRANS and GCCs cannot come to a consensus on resource-allocation issues? This research has answered all three. Both GCCs and AFTRANS indicate that the working relationship between the two

organizations is “excellent!”⁷ Though they may occasionally reach an impasse concerning the apportionment of air mobility resources, the system in place to resolve such issues continues to function effectively. AFTRANS supports the GCCs; if they cannot reach consensus on allocation of resources, the matter rises to the Chairmen of the Joint Chiefs and the Secretary of Defense to resolve the issue. The unfortunate by-product of this process is loss of time.

Additionally, this research revealed that when facing a challenge that garners the attention of the United States and the world, AFTRANS and GCCs can overcome the temptation to shirk their responsibilities. On the world stage, the value gained by shirking is far exceeded by the possibility to garner prestige and credibility upon achieving success. To shirk while under such a high level of scrutiny is tantamount to demanding punishment for failure to perform. The harshest punishments are generally levied for such visible failures. In these instances, it is in the best interest of the agent and principal to exceed contractual obligations.

This research seems to indicate that the current operational paradigm of assigning air mobility resources to Geographic Combatant Commands functions sufficiently well to meet national security objectives. The implication is that the process, while effective, could function better. This research reveals that the GCC’s ability to punish as a means to leverage contractual compliance is lacking. The efficiencies to be gained from this enterprise center on solving allocation-of-resource conflicts at the lowest level possible. By avoiding the excessive time needed to move these conflicts up the chain of command, decisions and the subsequent deployment of assets can occur more quickly. The net result is a more nimble and flexible force, capable of reaching consensus and executing accordingly. By allowing GCCs to threaten or levy

⁷ 18 AF/A3O Staffer, interview by author, 01 April 2014.

punishment at a lower level, the efficiency and effectiveness of the enterprise can be improved.

One possible avenue for enabling GCCs to levy punishment in response to shirking by AFTRANS is the creation of a “report card” system. Enabling GCC’s to rate the support received, detailing specific shortfalls and the impact on mission accomplishment directly to the USTRANSCOM Commander would provide a method to influence AFTRANS behavior. As mentioned earlier, in the hierarchal structure of the military, AFTRANS (i.e. Air Mobility Command) is directly accountable to the TRANSCOM Commander. Under the current paradigm, a formal process does not exist to address GCC concerns directly to an entity below the Global Force Management Board that is capable of influencing the behavior of AFTRANS. The proposed “report card” system would not require the TRANSCOM Commander to take action based on an unsatisfactory report from a GCC. It would, however, ensure the reported issue received visibility by a body that could require a change in direction by AFTRANS. By formally adopting such a system, the time needed to identify and overcome shirking behaviors could be radically reduced. The key point of the program is to provide an avenue to influence the behavior of AFTRANS by GCCs. The potential for reporting infractions directly to an individual capable of reprimanding AFTRANS for shirking provides an implicit threat of punishment, while not infringing upon the command structure currently in place. An idea like the proposed “report card” system would enable GCCs to influence punishment for AFTRANS at a level below the Global Force Management Board, a result that would reduce the time needed to resolve conflicts over the allocation of air-mobility assets.

Future Challenges and Areas for Study

Exploring areas that function properly in search of efficiencies presents a challenge to any organization. In fact, the larger the organization, the more difficult it can be to implement institutional

changes. This research offers that an additional step is need in the conflict resolution of the Global Force Management Board. What that step should be and how best to implement it represents a problem for more research. As the armed forces continue to downsize, the requests for mobility forces to facilitate rapid global mobility through air movements will inevitably rise. Discovering efficiencies within the air-mobility-allocation enterprise would provide a return on investment well worth the time and energies invested.

An additional area of valuable inquiry lies in the analysis of the expected results when agency theory, as framed by intrinsic common agency, is at play. The revelation that AFTRANS operated in a manner to meet the needs of the national command authority, which included constraints on mobilization and the use of coalition forces, while balancing the competing requirement to support the needs of the AFRICOM Commander, reveals an interesting dynamic that falls outside the scope of this research project. Delving into the effect this might have on national security could prove worthwhile.

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Appendix A

INTERVIEW QUESTIONS

Purpose:

The purpose of this research project is to review relationship between AFTRANS and geographic Combatant Commander. Research of this type is important because it may present possible options and alternatives to better manage the process air mobility resource allocation.

You have been invited to participate in this research because of your position and experiences in the realm of the air mobility operations and resource allocation.

If you agree to voluntarily participate in this academic research, your participation will include a 15-30 minute interview. The purpose of this interview is to gauge your general understanding of and feelings about air mobility operations and resource allocation programs. To protect your anonymity, no personally identifiable information will be collected. If you do not wish to answer a question, you may skip it and continue with the remainder of the interview. All data collected will remain anonymous.

1. At your level, how does the allocation of air mobility assets get resolved when there is a conflict? Does one side (AFTRANS/GCC) have a decided advantage in the negotiation?
2. What measures do GCC's have to hold AFTRANS accountable for support requests and are those measure sufficient (without escalating to the GFMB)?
3. How would you characterizes the AFTRANS /GCC relationship? Is it a cooperative engagement or does its supply and demand aspect make it adversarial?
4. Are there areas for improving the air mobility allocation process, and if so what would you recommend (lower level control over to resolve conflicts, etc.)?
5. This research uses Operations TOMODACHI and ODYSSEY DAWN as case studies to explore the working relationship of AFTRANS/GCC. In those instances, were their unresolved issues over air mobility asset allocation? Did the GCCs get what they requested (exact assets) or did AFTRANS provide what they needed lift/refuel capability)?
6. There is a pervasive opinion that AFTRANS holds assets in reserve (beyond normal attrition) in order to ensure it can meet non-GCC emergent requirements (i.e. DV airlift support, etc.). How does AFTRANS balance external customer needs while meeting its internal air mobility obligations?
7. What is the level of transparency of available air mobility assets to GCCs? Should there be more/less?
8. What should GCCs do differently to ensure their requests for air mobility assets are understood by AFTRANS?

9. Based on your experience and expertise, what opinions can you offer about the relationship between AFTRANS/GCCs with respect to the allocation of mobility assets? Do you think the rules, guidance, and structures to support this process are adequate?

10. These questions are focused on AFTRANS/GCC interactions. Would you like to offer any additional insights, ideas, or recommendation about this relationship and ways to improve it.

