BOUNDARY-SPANNING BEHAVIORS OF INDIVIDUALS ENGAGED WITH THE U.S. MILITARY COMMUNITY

by

CASEY DOWNS MULL

(Under the Direction of Lorilee R. Sandmann)

ABSTRACT

The public sector's use of networked governance reflects a similar orientation of U.S. higher education institutions to engaged scholarship and community-university partnerships. These and other forms of adult education now have greater reliance on networked governance methods for their delivery and administration. Individuals at the nexus of networked governance and community engagement often take on boundary spanning roles for their organizations. This study examined the behaviors of boundary spanners currently involved in the partnership of U.S. higher education institutions and the U.S. military to support military family services through educational programming in a networked governance model. A research team created a selected response instrument for use with multiple audiences and contexts based on a qualitative study of higher education community engagement boundary spanning individuals. This study found that work/organizational characteristics were significant predictors of boundary-spanning behaviors while personal characteristics were not as influential as thought. Boundary-spanning behavior can be encouraged by the organization in a variety of ways. Communications remain an important influence on boundary spanning behaviors. The study reconceptualizes a prior qualitative study through exploratory factor analysis. The

reconceptualization found that the data mirrors the original, qualitative study on which the quantitative instrument was based. The selected response instrument has applicability to other contexts where individuals cross boundaries in order to complete work in a community. Several individual, organizational, and societal implications and opportunities for replication and expanded research in the realm of boundary spanning are discussed.

INDEX WORDS: boundary spanning, community engagement, university-community partnerships, military community, quantitative

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DEDICATION

To my Dad, my greatest cheerleader:

Many people have contributed to my understanding that an education does not lead to wisdom, and education does not make a man. But no one has more than my Dad.

You taught me to value education, but value people and practice more.

—Remember the Golden Rule.

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John Steinbeck shared in *Travels with Charley: In Search of America,* "A journey is a person in itself; no two are alike. And all plans, safeguards, policing, and coercion are fruitless. We find that after years of struggle that we do not take a trip; a trip takes us." Thank you for traveling this road with me. It has been a trip worth taking.

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CHAPTER I

INTRODUCTION

Background of the Problem

The growth of social media outlets such as Facebook and LinkedIn has made connections among friends, acquaintances, coworkers, and other individuals visible and available. As the world continues to *flatten* (T. L. Friedman, 2006), the strength of our personal and professional networks may continue to become more interconnected. Individuals pass many things throughout their networks including "friendship, love, money, power, ideas, and even disease" (Kadushin, 2012, p. 4). They also pass knowledge through these networks. Identifying reliable, valid, and useful knowledge through the cacophony of individuals, groups, and organizations will become ever more important as society continues to move more quickly, and as the depth and breadth of our collective knowledge expands exponentially. Specific individuals serve an important role in breaking through the noise. Individual boundary spanners protect, connect, and transform information and work across borders of groups and organizations. Boundary spanners support networks as communicators, protectors, innovators, and relationships managers (Tushman, 1977; Tushman & Scanlan, 1981a; Williams, 2011). Within groups and organizations, boundary spanners play essential roles in solving individual, group, and organizational problems (Ernst & Chrobot-Mason, 2011).

These boundary spanning individuals are particularly important within networked governance (Ring & Van De Ven, 1994). Networked governance is using third party individuals and entities to assist in achieving the goals of an organization (Goldsmith & Eggers, 2004). The

government has adopted many policies supporting networked governance in the past three decades. The historical view is that government should be the producer of public goods and services. However, within a more complex society, one central entity cannot address the diverse problems in society. As a result, public agencies have turned to other non-governmental organizations for assistance. In these cases, the government does not manage the supply of goods and services; rather, the government manages a complex network of suppliers of goods and services (Cohen & Eimicke, 2008; Goldsmith & Eggers, 2004).

The Growth of Networked Governance

The growth of networked governance has connected numerous organizations to solve the difficult challenges of society and government (Goldsmith & Eggers, 2004). The involvement of private, for-profit, and not-for-profit organizations as well as other public agencies in developing comprehensive solutions to social issues is well documented (Brown & Potoski, 2004; Brown, Potoski, & Van Slyke, 2010; Cohen, 2001; Cohen & Eimicke, 2008). These governmental networks include individuals located on an organization's periphery, interfacing with actors internally and also externally with other organizations. Even colleges and universities use networked governance to fulfill their organizational missions. Their networked governance model includes auxiliary services privatization (Gupta, Herath, & Mikouiza, 2005), contract credit courses and training programs (Dill, 1997), joint research ventures (Tarant, 2004) and the growing area of community engagement (Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2012). Delivery and administration of community-based educational partnerships and other adult education programs often occur through networked governance. This networked governance phenomenon occurs not only in the government and educational sectors, but also in the private sector. Other organizations use outsourcing to accomplish organizational goals. The private

sector assigns names such as outsourcing, contracting out, and just-in-time management among others to describe using external groups and organizations to fulfill organizational missions in an integrative, networked manner.

Outsourcing, however, is not new to some agencies of the government. Historically, the United States military has contracted significant components of production to external individuals and organizations (Nagle, 1999). From weapons systems to research, the military-industrial complex, the government, industry, and political system supporting the national security infrastructure in the United States, stimulates vast sectors of the national economy. The large investment of public funds to support the military-industrial complex encourages conflict with the interests of the government as Eisenhower (1961) warned. These organizations, often private and for-profit, may not share the same interests of the government agency providing them funding, except without receiving appropriate incentives or oversight (Eisenhardt, 1989; Williamson, 1975). In military contracting, most research examines the contract itself rather than the relationship between the military and the external organization or the military and the organization's employee, a relationship that is implicit within the contract.

The relationship between contractor and the public agency is often described as a principal-agent relationship (Van Slyke, 2007). The principal-agent relationship examines a contract "under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision making authority to the agent" (Jensen & Meckling, 1976, p. 308). Various ways to align the values of the principal and the agent exist. Financial incentives can align the interests of the contractors to those of the military, especially through outcome-based contracts. The military, or any public institution, can require additional reporting to balance the information asymmetry between the

principal and the agent when using behavior-based contracts. These forms of external contracts can be ineffective, as contractors falsify documents, overstate results, and request reimbursement for goods and services not provided (Dicke, 2002).

Relational contracting provides a different view of the traditional contracting relationship. In relational contracting, the government and the provider accept a trusting relationship rather than a relationship based on the economic incentives held by traditional contracts. Bennett and Ferlie (1996) outlined personal trust, interorganizational trust, informal business customs, contractual solidarity, and reciprocity as key contributors in successful relational contracts. Trust becomes an essential, binding power between contracting organizations.

The Role of Higher Education in Networked Governance

Parallel to this growth of networked governance in the Department of Defense and other public agencies, higher education institutions have reemerged as participants in public governance and societal improvement. The recommitment of higher education's role to societal improvement parallels the growth of networked governance in the public sector and contracting out in the private sector. With this view, community engagement, or higher education partnering with communities to solve local issues, is simply another example of networked governance. The university serves alongside other entities—profit, not for profit, and other public—to identify, plan, and solve complex issues. Postsecondary institutions in the United States have a historic connection to solving the immediate challenges of society (Boyer, 1996). After decades of moving resources away from a societal improvement-focused mission and focusing on specialized research, many colleges and universities have revisited this connection and become more actively engaged in serving their communities through the scholarship of engagement.

During the middle half of the twentieth century, higher education's role shifted to a one-way service delivery for communities. The interests of colleges and universities supported the academy with faculty assuming greater specialization and expertise-based models (Cox, 2010; O'Meara, 2011; Saltmarsh & Hartley, 2011; L. Sandmann, Saltmarsh, & O'Meara, 2008). As society advanced and the creation of knowledge grew more abstract, the academy became entrenched in an expert-based model. Society grew more separated from those in the academy and the public aims of higher education became more abstract from the general population (Roper & Hirth, 2005).

More recently, the role of higher education is returning to a more reciprocal relationship with communities, defined as community engagement (Fitzgerald et al., 2012). Community engagement is the "collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Carnegie Foundation for the Advancement of Teaching, 2014). Such engagement can take many forms. Among them, students learn through curriculum-related service to the community alongside faculty, or faculty members partner with community members in applying or co-creating knowledge to problematic community-related issues. Essential to community engagement are the tenets of reciprocity, trust, knowledge co-creation, and mutuality. Yet barriers exist. The funding mechanisms for higher education sometimes do not value community engagement (Cox, 2010; Roper & Hirth, 2005). Faculty face challenges in promotion and tenure as community engagement is not always viewed as rigorous scholarship within the structure of academic reward systems (Cox, 2010; L. Sandmann, 2006). Higher education is difficult to approach, particularly to those without a direct understanding of how these institutions operate. As universities once again institutionalize

this fundamental role in society, they rely on individuals. The champions of community engagement encourage community partners to join in the planning process, to demonstrate the strengths and weakness of collaboration, and to offer possibilities for community improvement. At the same time, they build interpersonal trust between the individuals leading the community partnership and organizational trust between their institution and the organizations of the community.

Boundary Spanners in Networked Governance

The individuals working in networked governance, particularly those engaging with communities in adult and higher education, operate at the periphery of their organizations (Courtenay, 1993). They span the boundaries both within and between their organizations. In the military and in the higher education contexts, research has examined the degree to which systems in place support or inhibit the respective activities of these individuals. For the military, the examination is primarily on the contract itself. For higher education, scholars focus on the system more broadly, such as the systematic barriers limiting community engagement. Both the military and higher education have commonalities with program delivery by network. As government continues shifting to service delivery through a network, so does higher education move towards partnering with communities and relating the networks of the campus to serving the communities. Given the mission and tasks of these systems, they uniquely include individuals who have distinct boundary spanning roles.

Boundary spanning emerged from open systems research, particularly as organizations interact with their environment (D. Katz & Kahn, 1966; von Bertalanffy, 1969). Boundary spanning individuals operate within networks and have several roles and functions. Some boundary spanners act as communicators; others focus efforts on building capacity, while still

others centrally manage information held in the collective network. Scholars have documented several behaviors of boundary spanners. Communication across the boundaries is often the primary function (Tushman & Scanlan, 1981a). Other secondary functions boundary spanners perform include protecting the organization (Williams, 2002), innovating within the organization (Tushman, 1977), and managing the relationships of the organization (Williams, 2002).

Weerts and Sandmann (2010) classified four boundary spanning roles within community engagement at high research activity universities. These roles describe the responsibilities of university employees working in community-engaged programming. Individuals may focus on the community itself or sustain the institutional support for community engagement. Additionally, these roles may be more technically focused or may be more socio-emotionally focused. Weerts and Sandmann identified these individuals as community-based problem solvers, technical experts, engagement champions, and internal engagement advocates. The problem solvers and technical experts complete technical, practical tasks while the champions and advocates focus efforts on socio-emotional and leadership tasks. Within the type of task orientation, the roles are separated into a community focus or an institutional focus. How individuals align with these four boundary-spanning roles deserves additional study. Weerts and Sandmann presumed one's formal position in the organization influences the boundary-spanning activities. Other sources including experience, knowledge, and relationships also influence boundary-spanning behaviors (Ernst & Chrobot-Mason, 2011; Tushman & Scanlan, 1981a). Individuals facilitating community engagement between a university and a military community bring their formal role, all their experience, knowledge, and relationships—personal and professional—to leverage in their network. To date, other scholars have not examined how the

boundary-spanning behaviors align with community engagement outside the specific higher education system of research universities.

Problem Statement

Almost 60% of the Department of Defense (DoD) budget supports government contractors (Wilson, 2010). These contractors span boundaries between the DoD and the organization by which they are employed. A multitude of individuals, groups, and organizations complete the work of the DoD in a networked governance model that Eisenhower (1961) first called the military-industrial complex. Networked governance assumes the solutions to society cannot be solved by one organization or government agency (Goldsmith & Eggers, 2004). In this new form of governance, solutions can be identified and implemented with a network of producers and providers collaborating. These individual providers can be called contractors. Evidence is limited that networked governance effectively serves the community. Milward and Provan (2000) conceded that when good things happen at the community level, it may not "be traced back to any particular approach to solving community problems" (p. 361). Some approaches may succeed based on the individuals, their experiences, personalities, and relationships that make up the approach. This study focuses on these individuals in their boundary spanning educator behaviors and roles.

Individuals have an important role in facilitating relationships in networked governance. In all levels of government—federal, state, and local—contractors fill a variety of roles and have responsibilities to both the government and their organization. While some research has explored the allegiance of contractors as agents of the government, research has not explored the roles and behaviors of contractors in spanning boundaries. The roles boundary spanners fill addresses a void in the research related to the effectiveness of networked governance. These

localized boundary spanners create their own individual networks inside and outside of the formal structure of networked governance in order to be effective. The boundary spanners bridge different agencies and buffer threats through communication, while building trust and understanding to mobilize the network for influence and action.

University-community partnerships can be viewed as one type of contributing entity in networked governance. Weerts and Sandmann (2010) offered a broad perspective of the roles in which boundary spanners engage in university-community partnerships. Research is needed for an application of their model to additional segments of university-community partnerships. Networked governance characterizes the operations of both government and higher education systems. As such, in both systems there are individuals who serve in the role of boundary spanners. This study examined this phenomenon where these two systems come together in boundary spanning and in the delivery of adult educational efforts. The partnerships that exist between universities and the military community serve a specific, yet cross-disciplinary, example.

Purpose of the Study

The purpose of this study is to investigate boundary-spanning activities and behaviors of contractors who are employed by higher education institutions, working as adult educators with military families and the Department of Defense. The study examined four research questions

1) What specific boundary-spanning behaviors are prevalent in the population of university-military contractors?
2) To what extent are boundary-spanning behaviors explained *individually* by personal or work/organizational characteristics in the population of university-military contractors?

3) To what extent are boundary-spanning behaviors explained *jointly* by personal or work/organizational characteristics in the population of university-military contractors?

4) Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions?

Significance of the Study

This study aimed to contribute to the theoretical understanding of boundary spanners within community engagement. First, using a selected response instrument to measure the degrees of boundary-spanning behaviors and activities in which individuals partake operationalized the constructs and determine the reliability and validity of the Weerts and Sandmann (2010) model of boundary spanning roles in community engagement. Second, this study informed network formation by individuals in workplace settings. This information can inform future studies in the growth of networked governance within the government and education as well as the use of outsourcing within the private sector. Specifically, it explored roles leading to how interpersonal networks form within an organization and with individuals in external organizations.

Further, this study advanced the scholarship of community-located adult educators. These educators face a challenging environment, negotiating organizational policies and missions with demonstrated community needs in an ever increasingly networked world. Yet the adult education literature gives scant attention to these roles and organizational arrangements. Studying these phenomena illuminates the specificity and complexity of these contemporary roles. Understanding these roles may assist future practitioners in designing and facilitating

applicable learning environments given the complexity. The field of adult education benefits from additional research about those engaged in the profession, particularly those decentralized from what is typically included in the discipline (Knox & Fleming, 2010). Expanding the *fence* to absorb and embrace these community-located adult educators allows the adult education profession and its professionals to strengthen as "adult education is stronger when the various contexts are communicating and collaborating, and [adult educators] are extending ourselves beyond adult education or our various subsets to expand knowledge and practice" (Bierema, 2010, p. 142).

Additionally, the study offers a study of military contractors that contrasts from many traditional studies of contracting. The study of behaviors and activities of military contractors typically rely on agency theory and the principal-agent relationship. This study offers a perspective examining the types of rational and irrational behaviors, but not necessarily the motivation supporting these behaviors as agency theory provides.

From a practical perspective, this study offers a distinctive understanding of military contractors and may inform government employees and the employers of contractors how to train and develop government contractors to serve the interests of the government. Goldsmith and Eggers (2004) called for a new definition of a government employee, one who connects and manages suppliers rather than managing supplies. These individuals have the skills of boundary spanners. Greater depth and understanding of boundary spanners across the network assists government and contracting organizations in nurturing boundary-spanning behaviors. Long term, boundary-spanning competencies assist government agencies, higher education institutions, and other organizations in accountability and responsiveness to the citizenry.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The purpose of this study was to investigate key boundary-spanning behaviors of educational contractors, specifically those employees in higher education institutions working with the military or the Department of Defense. The study's central questions included:

1) What specific boundary-spanning behaviors are prevalent in the population of university-military contractors?
2) To what extent are boundary-spanning behaviors explained *individually* by personal or work/organizational characteristics in the population of university-military contractors?
3) To what extent are boundary-spanning behaviors explained *jointly* by personal or work/organizational characteristics in the population of university-military contractors?
4) Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions?

This review of the literature sets the context for the study by exploring interorganizational relationships and their connection to university partnerships with the military community. This initial introduction establishes how contracting relationships create a system for organizations to collaborate. Then the review examines how individuals operate within this system using a lens

of agency and stewardship theories. The review will then overlay the emerging theory of boundary spanning to offer a way to align and bridge the collection of individuals working within the system of interorganizational relationships. Finally, the review will examine a specific role that individuals play in connecting and sharing between and across these multiple organizations.

Interorganizational Relationships

Before examining the individuals operating between and among organizations, one must first understand the context of how organizations have developed a process of working together through interorganizational relationships. Organizations are complex and interconnected social systems made up of individuals (D. Katz & Kahn, 1966). Examining interorganizational partnerships is especially challenging because the field is broad and encompasses numerous disciplines. Because I assert that community engagement, or universities partnering with communities, is an extension of the networked governance or new public management movement, the literature of interorganizational relationships I cite originated primarily from public administration fields. This section begins with an overview of organizations and governance, and progresses to an overview of networks and networked governance with the growth of the new public management. Then, I explore a specific tool used to form interorganizational relationships, contracts. The section concludes by aligning community engagement as universities' contribution to networked governance.

Talcott Parsons (1951) and other scholars (Loyal & Barnes, 2001; Parsons & Shils, 1951; Zaret, 1980) in the social sciences have long examined humankind's ability to control their actions. As individuals create organizations, they give up some control in an effort to move toward collective action. In creating them, these organizations and institutions exert some power

and control over those who create and interact with them. These institutions are involved in governance over a specific domain or area. Governance is "concerned with creating the conditions for ordered rule and collective action" (Milward & Provan, 2000, p. 360) and includes the "processes of coordinating multiple actors in order to work towards a shared goal" (Potvin & Clavier, 2013, pp. 82-83). Governance applies not only to government, but also to organizations and groups.

Each organization influences or directs action by those individuals comprising the organization. The specific roles of these institutions depend on what the individuals creating them yield in an effort to direct the action of the group (Ostrom, 2010). This is collective action. Just as in individuals, organizations have competing interests. A challenge of collective action is balancing competing interests to result in shared mission, goals, and values—all leading to action in harmony. Expansion of networked governance has exacerbated this challenge, for instead of getting multiple individuals acting in concert, multiple organizations comprising many individuals must act collectively with shared vision but often with competing interests.

Networks

The components of networks assist in comprehending networked governance. Individuals and organizations both form many types of networks in society. These networks serve as one mechanism to accomplish tasks, share information, and align goals. Networks include "a set of actors connected by a set of ties" (Borgatti & Foster, 2003, p. 992). These ties "connect pairs of actors and can be directed or undirected and can be dichotomous or valued" (Borgatti & Foster, 2003, p. 992). Valued in this context means measurable on a scale using quantitative methods such as social network analysis. Dichotomous means present or not present. Individuals maintain both formal and informal networks. Formal networks bind

together nodes through intentional ties while informal networks do not force a relationship and may occur ad hoc (Isett, Mergel, LeRoux, Mischen, & Rethemeyer, 2011). Networks are important tools from which individuals share information, gather resources, and call others to collective action. Networks begin with a simple connection, or tie, between two individuals, or nodes. Networks can be analyzed at many levels with individuals or organizations being the nodes for analysis.

Social network analysis is one way in which to measure these social relationships. A strength of social network analysis is the visualization of the networks. In social network analysis, a researcher typically collects data on the communications, relationships, and interactions with different actors. Centrality is "the degree to which an actor is in a central role in the network" (Fredericks & Durland, 2005, p. 18). While this study will not explicitly use social network analysis in the methodology, previous studies recognized the importance of individuals in networks (Adkins, 2011). When visualized, an actor with higher centrality in a network has numerous connections and is depicted physically closer to others in a network. These individuals are able to share quickly information and resources through their social network (Burt, 2004; Long, Cunningham, & Braithwaite, 2013; Rangachari, 2008). Organizations, like individuals, share information, perform tasks, and leverage resources through their networks. Having an understanding of how individuals maintain their networks may assist in understanding how these individuals remain important in networked governance. In networked governance, the organizations are linked together for a common purpose through formal and informal ties, often facilitated by these individuals.

Networked Governance

The term networked governance applies to the provision of government services. But, as shared above, issues of governance apply to all groups and organizations, public and private. In the production of many goods, just-in-time manufacturing, horizontal integration, and outsourcing, production of components is similar to networked governance. This type of manufacturing allows organizations to specialize and provide higher quality goods more efficiently and effectively by completing fewer activities exceptionally well. Networked governance uses a similar assumption in the production of governmental services. Networked governance assumes that one entity cannot solve all the complex issues of society. Like the private sector, a foundation of networked governance is contracting out. Contracting out or outsourcing uses specialized individuals and organizations to complete work. It is a horizontal model of production where one entity does not produce a good or service wholly on its own. Vertically integrated organizations control most or all aspects of production internally.

Since the Reagan and Thatcher movements of the late 1980s, public management has moved further towards external production (Isett et al., 2011) from simple outsourcing of subcomponents to the extreme of privatization of entire organizational or government functions (Soloway & Chvotkin, 2009). Using external entities to provide for the public good offers flexibility and opportunities "outside the scope of direct bureaucratic control" (Isett et al., 2011, p. 159). As the environment changes, external entities operating with the interests of the government can revise plans for implementation at the same time as specializing in their specific task without interference. In using third party organizations, however, an external entity does not always act as one would expect; this is the principal-agent problem (Lyons, 1996; Williamson, 1979, 1996). A challenge of networked governance occurs when external entities act against the

interests of the public from where the authority to govern originates. In the American form of government, power is derived vertically, from the citizenry through the legal instruments such as the Constitution to those who lead and direct government. Accountability, too, is aligned vertically. Networked governance delegates power and decision-making horizontally across the network to numerous providers and entities. A challenge of this dispersed power and decision-making is the institution of government must remain accountable to the citizens yet it relinquishes some control to the network of providers.

Many tools exist to support this revised form of governance, or new public management. Salamon (2002b) called the change in public governance "a revolution that no one noticed" (p. 1). Rather than focusing on programs and agencies, public managers oversee tools of governance in a network model rather than a hierarchical model. Instead of the public sector standing opposed and separate from the private sector, the public sector entangled with the private sector, from competition to collaboration. Some of the tools public managers use include tort liability, loan guarantees, vouchers, social regulation, direct loans, and contracting, among others (Salamon, 2002b). While some of these tools are new to governance, contracting for goods and services in the United States has existed since before the American Revolution (Nagle, 1999). Contracting's use has changed in the past few decades with the government contracting for more complex services rather than commercial, off-the-shelf products (Salamon, 2002a).

Contracting as a Tool of Interorganizational Relationships

Both public and private organizations contract for goods and services to provide for efficiency and effectiveness. Contracting occurs between two organizations, two individuals or any combination. A contract is "a legal instrument, an agreement by particular parties [who]

accept a set of rules to govern their relationships, whether it is for the purchase of services or for a cooperative working agreement" (Brown, Potoski, & Van Slyke, 2006, p. 325).

Sclar (2002) identified three types of contracts: complete, incomplete, and relational. Complete contracts describe every possible contingency to prevent the contractor, or agent, from acting only in his or her interests. Contracts cannot express each possible scenario of how to complete the task and, thus, are incomplete to varying degrees based on the type, quality, and quantity of product (Brown et al., 2010) or service (Sharma, 1997). Relational contracts are contracts partially based on mutual trust and reciprocity between the parties, aiming for a long term relationship rather than a short term, transaction (Sclar, 2000).

Before executing a contract, an entity resolves the make or buy decision. Public agencies must contract out the right things. It is an important decision to make internally or to buy goods or services from others. When one organization purchases from another entity, it loses control of aspects of production. Ferris (1986) found supply, fiscal, and political issues all restrain public agencies from contracting out. The supply issues, consistent with other scholars, include variables related to the cost of production and the supply, or the competitive landscape. The number of suppliers, or the robustness of the competitive landscape, emerges as one of the strongest contributors to social service contracting (Hefetz & Warner, 2011). But in practice, the competitive robustness does not describe fully the decision to contract out. Ferris (1986) found governments facing fiscal constraints and fewer constituency groups use contracting more often. In some areas, public agencies may contract out to a small pool of potential service providers, leaving a small pool of providers to navigate and provide a complex service (Zheng, Roehrich, & Lewis, 2008).

Scholars have also examined other aspects of the make or buy decision. Theory and empirical studies stated that asset specificity affects the decision to contract out (Ferris, 1986; Hefetz & Warner, 2011; Provan & Gassenheimer, 1994). Asset specificity is "the need for physical infrastructure, technology, or knowledge, skills, and abilities that can only be acquired through on-the-job experience or highly specialized investments" (Brown et al., 2006). The greater the asset specificity, the less likely an organization would contract for the good or service. Research is mixed on the relationship between asset specificity and the contracting decision. Entities may choose to outsource based on the type of asset specificity such as human, physical, or technological. More recently, Hefetz and Warner (2011) found that the type of service also affects the decision to contract out. Fire, police, and water coverage requires a high level of physical assets, making contracting unwieldy. But other human services such as culture and art facilities are contracted out to nonprofits even though these also have high asset specificity. Thus, the type of service provider affects the quality of the contracting relationship. DeHoog and Salamon (2002) segregated a part of contracting for services, human social services, as purchase-of-service contracting, a subset of the larger contracting movement. They (2002) did so because social services are not only asset specific, but also require individualized service, such as mental health. Asset specificity theoretically has influenced the contracting out decision, but with appropriate safeguards, a balanced relationship can occur between contracting parties.

Contracting also assumes there is a market for production and an adequate supply of providers. Contracting works best when there is competition to enable the most efficient and effective result. Thus, place influences contracting. In early studies, metropolitan areas contracted out more because rural and suburban areas had greater barriers to entry for competition, metropolitan areas had more organizations competing to provide services due to

their size (Van Slyke, 2003). More recent scholars found metropolitan areas have greater economies of scale and more efficiently produce internally, although they more often outsource to nonprofits than suburban areas (Hefetz & Warner, 2011). For profit firms find contracts in rural areas more often than even metropolitan areas (Hefetz & Warner, 2011). These assumptions, when segmenting the types of organizations (intergovernmental, for-profit, nonprofit, and directly by the public) providing the service, shifted the previously held theory (Hefetz & Warner, 2011), complicating the make or buy decision. Individual contracting decisions remain a challenge for government entities based on numerous factors. Perhaps as a result of these numerous challenges, government has grown in their use of relational contracts.

Relational Contracting as a Case of Contracting

Networked governance in particular has increased interest in relational contracting. Relational contracts are based on reciprocity with "managers work[ing] beyond the boundaries of their organization to nurture relationships based on trust and cooperation" (Bertelli & Smith, 2010, p. 26). The greatest challenge of relational contracting is power. The political process creates a vertical chain of authority connecting the interests of citizens to legal organs such as the Constitution in decisions to contract and administer those contracts. Public agencies act on these interests within the framework provided by the Constitution and laws; contracting in the private sector, however, negotiates horizontally, through negotiation and mutual consent (Cooper, 2003). Public employees finds themselves in challenging situations by negotiating across these horizontal interests without releasing the control or accountability the public requires from the vertical authority chain (Cooper, 2003).

Marchington and Vincent (2004) noted relational contracts are characterized by power asymmetries. The competing vertical and horizontal interests place public sector employees in

the center of power imbalance highlighted by the political-administrative dichotomy. Power in a relational contract derives from the desire to continue the relationship; therefore it is self-enforcing between parties.

Strengths of relational contracting include opportunities of scale, scope, and mutual learning, particularly if both the contractor and the contractee learn throughout the process (Cooper, 2003). But in order to move towards a relational contract, both the public agency and the service provider must accept a trusting relationship rather than a relationship based on the economic incentives or disincentives held by traditional contracts. The fundamental criterion for relational contracts "is whether the transaction costs of detailed specification-based contracts outweigh the likely benefits of such an approach" (Bovaird, 2004, p. 206). Bennett and Ferlie (1996) outlined personal trust, interorganizational trust, informal business customs, contractual solidarity, and reciprocity as additional key contributors to successful relational contracts.

Building trust between organizations is an essential, binding power. Developing mutual assurance between parties, partly through trust, helps continue the relationship where "the motivation to renege on the contract in the short-run is overpowered by potential future gains" (Bertelli & Smith, 2010, p. 206). Experiences where the possibility for opportunism, "the seeking of self-interest with guile" (Ghoshal & Moran, 1996, p. 17), exist contribute to developing trust when an entity does not act solely self-interested. Thus, relational contracts can work when vendors view opportunities for long-term growth and when trust develops between parties as vendors do not take advantage of short-term gains. Williamson (1979) shared relational contracting fits best when investments are mixed or idiosyncratic and activities are recurrent. Social services lack an identical product, so they are often managed through relational contracts resulting in greater performance (Brown & Potoski, 2004; Desrieux, Chong, &

Saussier, 2013; Romzek & Johnston, 2005; Van Slyke, 2007). Social services situations are unique, depending on circumstances of family, geography, and other available services. Thus, relational contracting may more closely align with Ghoshal and Moran's (1996) view that opportunistic behaviors occur because of environmental and strategic context instead of the human condition (Williamson, 1979, 1996).

Just as an individual's circumstances vary, the contracting relationship qualities vary too. Neither service providers nor public employees recommend a specific plan for relational contracting. No universally applicable theoretical model exists across studies in relational or traditional contracting (Bennett & Ferlie, 1996). Therefore, in practice, building an understanding for the concepts of relational contracting and developing skillsets across public employees and service providers bodes well to improve effectiveness of quality contracts in the public sector. Scholars and practitioners offer recommendations to both public agencies and service providers. Many reflect each other regardless of which side of the contract one is positioned. A gap exists in examining universities within this contracting arena. Universities rely on over $46 billion in federal, state, and local government funding through contracts and grants supporting operating revenue based on data from the Digest of Education Statistics (Snyder & Hoffman, 2003). Some university units, like the Carl Vinson Institute of Government at the University of Georgia, heavily rely on contracts of appropriated funding in addition to the state supported instructional funds contributing to universities roles in networked governance.

The use of contracting and the importance of networked governance are of vital interest to public administration scholars. Models predict and ascertain when the environmental situation encourages contracting out of certain functions. In these situations, there can be cost savings. There can be greater efficiency. But simple contracting does not account for all environmental

constraints when there is not an adequate marketplace to provide a low cost at a high quality. Some products, both goods and services, require an approach with a longer term.

Mutual consent and learning from multiple parties is a strength of networked governance through relational contracting. Cooper (2003) as well as Cohen and Eimicke (2008) cited the need for additional development of public managers in developing and overseeing contracts. Part of this need is to understand better situations when a relational contract is more desired than an economically based complete or incomplete contract and the actors involved in the oversight, support, and performance of a contract.

In a relational contract, additional actors in the relationship help build the individual and organizational trust that continues the relationship between and among organizations in networked governance. Ferguson, Paulin, and Bergeron (1997) identified relational governance increased performance when individuals between organizations are behaviorally and affectively close. Thus, knowing and understanding more about the individuals operating within networked governance will provide insight to practitioners in overseeing, supporting, and continuing long term, learning relationships to provide better performance.

An accepted limitation of networked governance is that government employees managing networked governance lack training, development, and formal education in needed skills to create and maintain a high functioning network (Cohen & Eimicke, 2008; Cooper, 2003; Goldsmith & Eggers, 2004). The historical perception of a government employee is direct service provision. Recently, only 5% of the activity of federal government is direct provision by civil servants (Salamon, 2002b). The number of government employees has not increased at the same rate as these external entities completing more of the direct service in networked governance (Light, 1999, 2003). Thus, fewer individuals remain to manage a network growing

in complexity, and sometimes, a network with competing interests among the different nodes (Cooper, 2003). By including these government contractors into the size of the federal government workforce, over a decade ago 12.1 million individuals fulfilled federal government responsibilities with over 5.1 million having contractor jobs (Light, 1999, 2003). Fewer civil servants oversee this network of contractors and their employing organizations.

The research in networked governance from a relational contracting lens to date has not leveraged the scholarship of adult education to inform building strong, cohesive relationships. Relational contracting scholarship has been limited primarily to the federal, state, and local government levels collaborating with private and not-for-profit service providers. Higher education has recommitted itself to its commitment to society and has placed itself within networked governance. Public higher education institutions, simultaneously, are arms of the state government, yet they too have not been examined within the frame of networked governance. Over the past few decades, many higher education institutions have reexamined their roles in the community and operated not only as a network manager in governance but also as a piece of the network supporting networked governance.

Community Engagement as Networked Governance

American colleges and universities have historically had a strong connection to the people of each respective state. Boyer (1996) shared, "for more than 350 years higher learning and the larger purposes of American society have been inextricably interlocked" (p. 19). This intermingling of democracy building and education has evolved. Currently, it is experiencing resurgence in higher education. This intermingling resulted in universities, like the broader government entities previously discussed, engaging in interorganizational relationships. These relationships between and among communities, students, faculty, and staff result in stronger

communities, more effective learning, and fulfillment of university missions (Miron & Moely, 2006; Sandy & Holland, 2006; Weerts, 2005a).

History of Community Engagement

American universities have always played an important role in communities whether it has been preparing the country's clergy and elite to serve the growing country to mapping the human genome to resolving today's obesity epidemic. Nevertheless, the direct involvement of universities within communities has ebbed and flowed through the country's development.

One contemporary purpose of higher education is "the pursuit (in the form of teaching, learning, inquiry, and service beyond the institution) of knowledge and truth within an ethical and democratic institution" (Budd, 2009, p. 5). At the turn of the twentieth century, it was not uncommon to hear words such as *practicality, reality, and serviceability* from the professoriate as part of the mission of universities (Boyer, 1996). From the time the first modern research university, Johns Hopkins, was founded until the 1980s, changes in the faculty, students, and society shifted universities away from discussing the practicality, reality, and serviceability of scholarship. Instead, from the German model of higher education, faculty members formed themselves into specialized disciplines, focusing inward to their autonomy and academic freedom (Cox, 2010; O'Meara, 2011). The National Science Foundation and most federal granting agencies followed in minimizing the judgments of the public and their political leaders as the expert, peer review process strengthened (Roper & Hirth, 2005). This further elevated faculty into the heights of the "ivory tower." As time progressed, "audiences for the disciplines became, more and more, other academics, rather than members of the public" (Roper & Hirth, 2005, p. 7) and promotion and tenure systems rewarded knowledge production rather than the impact of knowledge. Following the adage of you get what you measure, only faculty

determined what was measured for impact through the tenure system and scholarship and its impact was veiled from public scrutiny.

Students, too, caused some of the changes. As universities became more accessible and affordable for first generation and low-income Americans, in part due to the GI Bill (Polson, 2010), society as a whole became more educated. As society became more educated, the academy moved further into the abstract and less practical to the public with their direct issues. Better students led to higher academic standards. At the same time, society was growing more complex and advancing more quickly. The feeling that expertise resided in our institutions contributed to these changes in higher education (Cox, 2010). The federal government funded basic research in larger amounts to advance the military-industrial complex and the space race. Public agencies, rather than higher education, influenced societal issues between Roosevelt's New Deal and Johnson's Great Society (Mawby, 1996).

Women and minorities entering the academy in a critical mass combined with social unrest and economic turmoil during the 1970s and 1980s led higher education to reexamine its historical missions of progressing democratic society (Roper & Hirth, 2005). Mawby, longtime president of the W. K. Kellogg Foundation, (1996) noted this shifting of society since the 1980s back to local responsibility and control rather than an institutional expertise model. This shift explains how universities and colleges have returned to missions with similar words of practicality, reality, and serviceability. As higher education has returned to community engagement, it became an important link in networked governance.

Community Engagement as a Form of Networked Governance

Higher education has utilized networked governance to solve complex issues of society without direct provision by one level of government since Lincoln signed the Morrill Act of 1862

creating land-grant colleges. The Act attempted to solve the complex issue of a developing country with greater agrarian needs and a higher education system closed to only the elite and wealthy. The Act was to "provide a broad segment of the population with a practical education that had direct relevance to their daily lives" (Association of Public and Land-grant Universities, 2012, p. 2). The Morrill Act, in essence, was the federal government's way to contract with the states to provide for a land-grant college to educate the public in agriculture, mechanical, and military arts in order for working classes to obtain a liberal education. In return for this provision, states received federal lands from which the proceeds of their sale would provide payment.

Similarly, the Cooperative Extension System imitates another form of networked governance and interorganizational relationships. When Woodrow Wilson signed the Smith-Lever Act in 1914, a formal network emerged to diffuse information from the universities to America's communities. This network "is truly a cooperative undertaking, with the county, state, and federal partners interdependent, yet with each having considerable independence in funding, staffing, and programming" (Ramussen, 1989, p. 4). The role of higher education matured in solving the complex issues of society. Higher education institutions serve not only as organizational providers in networked governance but also as an additional, essential arm of government in the provision of federal, state, and local government services.

Higher education institutions provide subject matter expertise to communities. They receive information form the communities in which they serve. They also serve as the conveners of networked governance, bringing together internal and external groups and organizations to tackle complex issues.

The return of universities to their roots: to the scholarship of engagement, to the betterment of society, to democratic ideals has paralleled the new public management or new governance ideas. Community engagement is not restricted to only public colleges and universities; however, these public universities offer a unique contribution to the idea of new public management. Public universities are arms of the state. In this sense, they are not only fulfilling their mission by using community engagement as a tool but also contributing to the larger networked governance model as an arm of the state using external partners to improve their own product, lifelong quality education.

Universities, like public agencies, weigh options in their make or buy decision. The recommitment to community engagement recognizes the potential for higher quality product results in external production, or collaborating with communities as laboratories for their students and research.

Summary of Network Governance

The literature of networked governance (as overviewed in Table 1) has examined the predictors of the make or buy decision, effective network performance and organizational constraints to networked governance. The lack of research from a network analysis perspective remains (Lecy, Mergel, & Schmitz, 2013). Determining whether the network as a whole is effective is rarely examined. New methodologies of examining a larger network for performance rather than dyadic relationships between two organizations could enable and encourage additional collaboration horizontally across various entities in the network. But the individuals in a networked governance model need closer examination also.

Having reviewed the associations that government creates with external entities to provide for goods and services, the role of higher education institutions historically and presently

Table 1

Selected Networked Governance Empirical Studies

Study	Date	Purpose of Study	Sample	Methodology	Results
Ferris	1986	To examine the actual decisions of local governments to contract out	n = 433	Merging of production choices from a International City Management Association survey of city managers with city characteristics from other sources	Found that supply, fiscal and political pressures all influence the decision to contract out government services
Proven & Gassenheimer	1994	To examine the relationship between dependence and power in vertical interorganizational relations	n = 324	In-depth interviews of dealers in 6 different cities of office systems/furniture dealers	Found relational contracting is different from market-based transactions and suppliers are less inclined to exploit their position to exert pressure over buyer decisions
Zaheer & Ventkatraman	1995	To explore relational governance as a form of interorganizational strategy	n = 329	Hierarchical regression modeling from independent insurance agencies	Found a model of governance including trust explains relational governance better than a model with traditional economic explanations
Paulin, Perrien & Ferguson	1997	To measure the importance of relational norms in a business-to-business service context	n = 122	Structured interviews of 61 matched dyads of account managers and representatives of client-companies from greater Montreal area	Found a clear link between the client's perception of the relationship to the intention to continue and increase new services, satisfaction and quality
Boyne	1998	To evaluate evidence that compares local government agencies and external contracts as producers of public services		Meta-analysis	Service contracting has mixed reviews at best
Poppo & Zenger	2002	To offer and test an alternative, ,formal contracts and relational governance function as complements	n = 285	Survey of key informants in IS fields	Found that formal contracts and relational governance function as complements. Customized contracts and high levels of relational governance lead to the ability to increase performance
Brown & Potoski	2003	To examine investments in contract-management capacity that municipal and county governments have made	n = 586	Data from ICMA surveys of municipal and county governments on alternative service delivery undertake in 1992 & 1997 and from the 1997 Census of Governments	Governments generally invest in contract-management capacity when previous contracting experience supports higher investments, when contracting transaction costs are high, and when internal and external factors favor such investments. However smaller governments face challenges

Table 1 (continued)

Selected Networked Governance Empirical Studies

Van Slyke	2003	To determine if social services contracting exists in a competitive environment and to determine if county governments have enough public-management capacity to effectively contract for social services	n = 35	Purposive sampling strategy using a 15 questions semi-structured interview instrument	Networks and relationships between nonprofits and agency and elected officials are costly barriers to creating meaningful competition; 67% suggested the relationships between state managers and providers bordered on incestuous, implying that agency managers were so connected with nonprofit personnel that the contracting relationships were anything but competitive and objective
Brown & Potoski	2004	To examine how public managers manage the service-delivery market, both through unilateral and network activities	n = 9	Case-studies including semi structured interviews with mainly public service directors combined with publicly available documents	Even in the case of refuse collection, where nonspecific asset investments and easily measured service outputs and outcomes enhance contracting success, public managers looking to improve service delivery must still manage the market and the network supporting it.
Ferguson, Paulin & Bergeron	2005	To determine relative influence of relational and contractual governance mechanisms on the customer-based evaluation of the performance and to determine the extent their closeness to the client company was associated with the implementation of relational and contractual governance mechanisms	n = 160	Used in-depth interviews between 160 business clients and their account managers at commercial banks; created dyads	Found that the boundary spanner's closeness to the client company mediates the performance of midmarket commercial banking exchanges through the implementation of both relational and contractual governance. The account manager gather information willingly transferred from the business client in a climate of trust cooperation and commitment.
Van Slyke	2007	To examine the manner in which the government-nonprofit social services contracting relationship is managed	n =35	Purposive sampling strategy in a cross-site analysis including 15 question semi-structured interview	Found that the manner in which non-profits are managed evolves over time from a principal-agent to a principal-steward relationship but with less variance than the theories would suggest
Zheng, Roehrich, & Lewis	2008	To investigate the detail and dynamics of how contractual and relational governance mechanisms are deployed in managing complex, long-term public-private supply arrangements	n = 1	Exploratory case study of a hospital versus emerging service training	Two key boundary spanning individuals with trust in their counterparty led to success

in serving communities, attention is turned to the individuals within these organizations. Within the nested effect of interorganizational relationships, the assumptions, relationships, and motivations of individuals reflects the collection of individuals called organizations. Their motivations, their values, and their beliefs offer a lens in which to analyze the interorganizational relationships.

Agency and Stewardship

Issues of agency offer a view for examining the individuals who operate within interorganizational relationships such as networked governance and community engagement. Agency theory has been applied in the fields of management and contracting, but recent calls have encouraged human resources and organizational development scholars to apply agency theory to their field as well as to the broader field of adult education (Azevedo & Akdere, 2011). This section will describe agency theory, the related stewardship theory, and finally discuss their application to networked governance and community engagement.

Agency Theory

Scholars use agency theory as a fundamental theory to explain human behavior (Jensen & Meckling, 1994). It has its basis in transaction cost economics with the influence of Adam Smith's invisible hand, but Williamson (1975, 1979) helped the theory mature. Agency theory explains the principal-agent relationship, or when an individual enters into a contract with another individual or organization to perform work. In the principal-agent relationship, a contract "under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (Jensen & Meckling, 1976, p. 308). Conflicts of interest between the principal and agent are a basic assumption of agency (Caers et al., 2006). When a principal

delegates certain decisions to an agent, the agent will desire a course of action in his or her best interests, not in the interests of the principal. The principal must create incentives or disincentives for behaviors not aligned with the principal. In agency theory, the unit of analysis is the contract outlining the relationship between the principal and the agent. Contracts are explicit between two parties or may be implicit, psychological contracts, between parties. For example, many cases of traditional employment do not have a formal, signed contract, but rather an implicit psychological one where the agent, the employee, completes tasks under appropriate supervision in return for financial compensation. The employer, the principal, provides compensation, training, and supervision in return for task accomplishment. Other contracts may be more explicit, detailing requirements for performance and offering financial incentives for early completion of deliverables or imposing penalties for delays.

Scholars have studied agency theory several ways. One of the most closely examined ways has been through available documentation in publicly held firms. Though it can be applied in any situation when one operates as an agent of another individual or firm, it has been quantitatively examined by measuring the interests of chief executive officers (agents) compared to the shareholders (principals), typically by examining stock prices and decisions made by CEOs (Fama & Jensen, 1983; Westphal & Zajac, 1994, 1998). Agency theory shows agents operate in their own self-interests, maximizing their own financial benefits without concern to the financial concerns of the principal. More simply, agency theory posits that humans are rational maximizers. In the principal-agent framework, an agent receives work from a principal and completes it (Eisenhardt, 1989). Either a written or understood contract exists between a principal and an agent.

Problems occur when information asymmetry leads to the agent holding more information, and thus power, than their principal. When contracts are incomplete, agents can deviate from the expectations of the principal, maximizing their own financial interests. Williamson used opportunism, "the seeking of self-interest with guile" (Ghoshal & Moran, 1996, p. 17) as a key component to his views of transaction cost economics stating agents actively seek out opportunities to maximize their self-interests. Ghoshal and Moran (1996) criticized Williamson's concept of opportunism as inaccurately portraying activities in practice. Opposed to Williamson's work that opportunistic behaviors occur because of the human condition, Ghoshal and Moran (1996) argued the environment and strategic contexts in which individuals find themselves lead to individuals acting in their own self-interests. Williamson's (1979) definition of opportunism stated all agents act self-interested, finding cunning ways to maximize their self-interests even when faced with complete contracts.

Two streams of literature assess agency theory. In the positivist stream, theorists examine situations where principals and agents have goal conflict and explore the control and governance mechanisms to regulate an agent's self-centered behavior (Eisenhardt, 1989). This approach uses theory to solve practical problems of agency. With two primary implications, positivist research describes how outcome based contracts limit self-serving behavior opposed to behavior based contracts, and information systems balance the information asymmetry between principal and agent. The other stream of research focuses on the general theory of principal-agent relationships. This line of research is mathematically focused, using logical deduction and mathematical proofs to determine the optimal contract (Eisenhardt, 1989).

As the positivist stream of agency theory developed, scholars examined the goal conflict between shareholders and managers within the private sector. These scholars measured the

effect of long-term incentive plans and their role in aligning the goals of principal and agent (Donaldson & Davis, 1991; Fama & Jensen, 1983; Sundaram & Inkpen, 2004a, 2004b; Westphal & Zajac, 1998).

Issues of agency exist outside the private sector, too. Principals and agents can be found throughout the public sphere. In the government arena, a principal-agent relationship exists between a community's citizens and its elected officials. Elected officials serve as agents of the citizens as chief executive officers represent the shareholders of publicly held companies. In the public sphere, the relationship between citizen and elected official is not the only principal-agent relationship. Elected officials hire civil servants to conduct the day-to-day work of the government entity, creating a cascading principal-agent relationship from the citizenry to the government employee. Azevedo and Akdere (2008, 2011) described this cascading relationship in the form of employment across many types of organizations, public and private.

But also commonly studied, a strong principal-agent relationship exists between the government and its contractors where government managers delegate work to external agents. Government agencies develop contracts with for-profit firms, not-for-profit firms, other levels of government and even other agencies within the same level of government. The phenomena of networked governance occurs as the government becomes a "hollow state" (Milward & Provan, 2000) where government employees contract out more functions to more contractors becoming the principal for many different agents. A challenge of this structure is the numerous competing interests and the many individual contractors balancing the collective interests of the citizenry. The effects of agency theory apply even to faculty members in higher education institutions. O'Meara (2005) examined faculty reward systems and discovered institutions which reward engaged scholarship have faculty who are more likely to include multiple types of scholarship in

their promotion and tenure packages. This indicates faculty members, too, act in their own self-interests rather than in the interest of their employing organization unless appropriate incentives encourage organization-serving behaviors or precautions prevent self-maximizing behaviors.

Agency theory can be applied to a number of contexts in a variety of organizations. The responses of both principals and agents to agency theory are fairly similar when conflicts of interest exist. Mechanisms to counteract the conflicts of interest exist for principals as they execute contracts. Principals can control the balance of risk, shifting risk to the agent charged with performing a task. To remove risk in a contract, the principal may create an outcome-based contract (Eisenhardt, 1989). Outcome-based contracts utilize performance measures for payment; in the public sector, examples include payment on arrival of the good, satisfaction surveys, and other outcome-based measures to force the agent to align their performance with the specific goals of the principal. Outcome-based contracts differ from the complete and incomplete contracts. Brown et. al. (2010) described outcome-based contracts as measuring performance or outputs of the contractor. Complete and incomplete contracts describe the flexibility agents and principals have in regard to the inputs and outputs.

Behavior-based contracts, however, examine the inputs, rather than the outputs, of the contractor through information systems (Eisenhardt, 1989). The principal's role in behavior-based contracts includes overseeing the actions taken by the agent. These behaviors-based and outcome-based contracts differ in cost and the amount of oversight required by the principal. For example, universities have begun supporting the new Affordable Healthcare Act marketplace and received federal funds to do so. A behavior-based contract may require a set number of public training sessions or a certain number of program participants. Behavior-based contracts could ignore the quality or the effectiveness of a program or may cause another unintended outcome.

An outcome-based contract, however, may require a specific level of effectiveness in order to receive payment. In the healthcare example, the outcome may be a percentage of individuals who obtained quality healthcare in a specific number of days after attending the training session. The challenge for both types of contracts is ensuring what is measured is the best indicator to achieve the principal's objectives.

With behavior-based contracts, the principal assumes greater risk, as well as the possibility of higher returns. Behavior-based contracts allow for moral hazards; moral hazards occur when a firm acts differently than it would if it assumed the entire risk (Lambright, 2009). For example, an agent paid by the hour to perform a task may take longer to perform a task. Agents can overstate their qualifications, overestimate the cost of a product, or otherwise misrepresent their firm in the bidding process, too. Principals may select these agents due to adverse selection. Adverse selection occurs when "the principal cannot completely verify these skills or abilities either at the time of hiring or while the agent is working" (Eisenhardt, 1989, p. 158). Information asymmetry causes both moral hazards and adverse selection (Eisenhardt, 1989).

Principals have mechanisms to balance the information asymmetry. Principals can use outcomes based measures to balance the information asymmetry within the public sector contracting, yet as described below, accountability remains challenging. Mitchell and Meacheam (2011) posited that knowledge workers involved in contracting act as an example for agency theory because "specialized knowledge is the reason for employment in the first place, and continue[s] to evolve as the process of knowledge work constructs further specialized and tacit knowledge" (p. 152). Higher education faculty and staff, as types of knowledge workers, continue to specialize the longer they practice in their field. As they become more specialized,

the principal, the higher education institution, may find it more difficult to oversee adequately faculty members' production quality. The peer review system is one way that faculty members provide oversight to their profession, but the peer review may not follow the same goals of the specific higher education institution.

This oversight in managing accountability is a challenge in the principal-agent relationship, but is documented comprehensively in the government-contracting realm (Bardach & Lesser, 1996; Blasi, 2002; Dicke, 2002; Page, 2004; Romzek & Johnston, 2005). Agency theory attributes issues of accountability and performance with information asymmetry. Principals lack information related to evaluating contract performance and create reporting mechanisms. These reporting and oversight mechanisms serve dual roles, to evaluate outcomes and to minimize opportunism. However, these forms of external control are ineffective. Contractors falsify documents, overstate results, and request reimbursement for goods and services not yet provided (Dicke, 2002), showcasing opportunism (Williamson, 1975). While it has not been fully studied in an agency theory framework, in higher education institutions, faculty members have some internal controls in the form of peer review for accountability.

Table 2 summarizes a portion of the empirical research of agency and stewardship theories. Such empirical work points out that agency theory has its limitations. The general theory of principal-agent relationships requires knowledge of the contract. Many contracts may not be publicly available or may be psychological contracts that do not exist in written, mathematically verifiable form. The specific terms of a contract are not as important in the positivist stream, as researchers can study the control and governance mechanisms in order to assess the principal-agent relationship. The presence of control and governance mechanisms assumes conflicts of interest exist.

But what if control or governance mechanisms do not exist? Logically, a principal-agent conflict of interest would not exist or, at the least, the principal ignored the conflict of interest. But there are times when principals and agents may have common interests. Stewardship theory emerged due to this limitation—a basic assumption of agency theory.

Stewardship Theory

Stewardship theory explains the principal-agent relationship by examining how principals and agents may have parallel goals. Stewardship theory emerged from scholars critical of transaction cost economics (Ghoshal & Moran, 1996) and agency theory (Davis, Schoorman, & Donaldson, 1997; Donaldson & Davis, 1991). Stewardship theory utilizes a different model of humankind because "exclusive reliance upon agency theory…[ignores] the complexities of organizational life" (Davis et al., 1997, p. 20). Davis, Schoorman, and Donaldson (1997) coined stewardship theory to offer a contribution when the interests of a principal and an agent are aligned. Stewardship theory uses sociology and psychology as a fundamental support and assists researchers examining when and why agents act in the self-interests of their principals, rather than themselves. A steward places greater value on the cooperative behavior than competitive or self-serving behavior. Within Davis, Schoorman, and Donaldson's (1997) model of stewardship theory, psychological and situational differences separated agency from stewardship. Even at times where the principal and steward do not share the same goals, a steward chooses the values of the principal over his or her own because a steward values cooperation (Davis et al., 1997). Stewardship resulted in maximized performance and an "internal sense of responsibility" (Dicke, 2002, p. 456). As it originally developed, stewardship theory stood in opposition to agency theory (Donaldson & Davis, 1991). Davis, Schoorman and Donaldson (1997), in examining the

Table 2

Selected Agency and Stewardship Theory Empirical Studies

Study	Date	Purpose of Study	Sample	Methodology	Results
Donaldson & Davis	1991	To examine the effects of CEO duality on shareholder returns	n = 321	Convenience sample of US Corporations of publicly available data	Found no support for agency theory and some support for stewardship theory
Westphal & Zajac	1994	To examine how long-term incentive compensation, the aspect of CEO pay that has been least researched in the organizational literature, lends itself best to a study of symbolic action	n = 570	Regression analysis of publicly available proxy statements, Standard & Poor's Register of Corporations, Directors, and Executives, COMPUSTAT and the Center for Research in Security Prices	Found that a large number of firms are likely to adopt, but not actually use--or only limitedly use--long term incentive plans, suggesting a potential separation of substance and symbol in CEO compensation contracts; this is particularly true in cases with powerful CEOs and poor performance
Westphal & Zajac	1998	To examine the consequences of symbolic action in corporate governance	n = 408	Regression analysis of publicly available proxy statements, Standard & Poor's Register of Corporations, Directors, and Executives	A symbolic corporate action can engender significant positive stockholder reactions and deter other more substantive governance reforms, thus perpetuating power imbalances in organizations
Blasi	2002	To review the method so accountability and performance measurement in government contracts and determine if what we measure for performance is relevant to the nature and quality of services or even an accurate reflection of what should be measured for the social problem	n = 46	Contract analysis for Dicke and Ott's 10 techniques for verifying accountability and interviews with program administrators	Findings do not verify movement toward the goals of the program, rather they more often measure only the provision of the required number of units of service. Outcomes rarely speak to the long-term goals; outcomes listed in the contracts are not the same as in the reporting forms
Dicke	2002	To identify accountability gaps and limitations in using external control methods in human service contracting and what methods from stewardship theory could be useful for minimizing or eliminating these limitations and gaps	n = 12	Purposive sampling, mixed methods approach; two survey instruments and a follow up structured telephone interview in the 12 different providers	Many of the accountability gaps identified in this study result from environmental conditions that affect the staffing of provider organizations and the assurance of competent and caring behaviors.
Page	2004	To examine two types of innovations in public administration, accountability for results and interagency collaboration	n = 10	170 semi structured interviews with the practitioners and analysts responsible for 10 state initiatives combined with content analyses	Collaborations tend to use the four approaches for accountability: external authorization, internal inclusion, results measurement and managing for results

Table 2 (continued)

Selected Agency and Stewardship Theory Empirical Studies

George and Chattopadhyay	2005	To predict identification between organizations in information technology industries	n = 307	Questionnaire to 4 different IT companies with various types of contract employees; semi-structure interview of 30 to gain understanding of industry and contract workers	Contract workers identify with both the employing and client organizations based on perceived characteristics of the organization as well as social relations within the org. Perceived characteristics are more closely related with identification with the employer, and social relations variables are more closely related with identification with the client. When key attributes are similar, likely to identify with both.
O'Meara	2005	To examine who changing policies and procedures have encouraged multiple forms of scholarship	n = 729	Purposive sampling strategy of the 1,452 not-for-profit 4-year colleges and universities identified by the 2000 Carnegie classification system	Found institutions that instituted policy reforms to encourage multiple forms of scholarship were significantly more likely than their counterparts to report that teaching scholarship and engagement counted more for faculty evaluation, to report a broader set of criteria use to assess scholarship and report a higher percentage of tenure and promotion cases that emphasized work in these areas
Johnson and Ashforth	2008	Investigate impact of employment externalization on customer-oriented service behavior and how identification processes may help to resolve the paradox of externalization	n = 369	3 versions of a written survey at 3 different site locations	Negative effect of employment status (contract vs. permanent) on service agents' customer-oriented service behavior, as mediated by identification with the org and with customers; relationship between employment status and each form of identification was moderated by the visibility of one's affiliation and by the perceived external image of the org (but not by involuntary choice of one's employment status)
Lambright	2008	To explain different motivations for contracted providers to properly use service monitoring tools	n = 7	Case studies which included 57 semi structured interviews, content analysis of key documents relating to reporting form completion and attendance at meets between gov't agencies and contracted providers	Agency and stewardship theories should be considered in order to understand the complexities of ensuring contracted provider accountability

Table 2 (continued)

Selected Agency and Stewardship Theory Empirical Studies

Cross, Dickmann, Newman-Gonchar, & Fagan	2009	To evaluate changes in interagency relationships between a local school district, law enforcement, mental health, and human service agencies working together…to prevent violence	n = 2	mixed methods; numeric ratings of the strength of interagency collaborations, narrative descriptions of interagency relationships, and interviews with key leaders in community agencies; social network analysis	Intraproject collaboration peaked in the middle of the grant and began to decline during the last year, interagency collaborations continued to grow during the last year of the grant
Isbell	2009	To investigate the ways in which members of interorganizational collaborations create and maintain the processes and structures of collaborative organizing	n = 6	Interview and observational data to examine communication as it occurs among boundary spanning	Found protectors and developers as part of the in-group and out-group in interorganizational collaborations
Lapalme, Stamper, Simard, and Tremblay	2009	Test viability of externalization by examining the possibility that agency workers can experience perceived insider status despite their assumed "outsider" category; add to literature on agency workers by providing a more detailed understanding of the potential antecedents and consequences of insider/outsider perceptions	n = 191	265 questionnaires sent to agency workers; follow up sent to workers' immediate supervisors at their assigned place of work to create agency worker-supervisor dyads	1) Agency workers can experience perceived insider status regardless of the objective classification as outsiders 2) perceived support from supervisor and the client firms' permanent workers contribute to agency worker perceptions of insider status 3) perceptions of insider status are associated with higher levels of both affective commitment and interpersonal facilitation
George, Levenson, Finegold and Chattopadhyay	2010	To examine extra-role behaviors towards clients and employers, if they vary with mortification for being temporary, whether affected by firms' relationship management practices and wither the behaviors aimed at the client and the employer affect subsequent outcomes	n = 4,500	Survey to 27,098 individuals in two large staffing firms; follow up phones calls to subset of non-respondents; Pilot test in focus group clarified wording	Confirmatory factor analyses confirmed that those voluntarily in the work arrangement (doing short term work for the long term) are more likely to engage in extra role behaviors; Temp workers display more extra-role behaviors towards the organization with which it had more intense contact; the more opportunities a temp worker has for skill development, the greater the levels of extra-role behaviors they display toward both orgs; extra-role behaviors aimed at the client had more types of payoffs for the temporary workers than did extra-role behaviors aimed at the agency

Table 2 (continued)

Selected Agency and Stewardship Theory Empirical Studies

Slattery, Selvarajan, Anderson, & Sardessai	2010	To examine whether previous found associations between job characteristics and work-related attitudes in studies using permanent employees will be replicated in the context of temporary employees using the Hackman and Oldham 1976 model	n = 1257	15,000 surveys to franchised temp locations	Measured job characteristics, job satisfaction, organizational commitment, turnover intention, and controls; all five job characteristics positively related to satisfaction and commitment toward client and agent; relationship stronger with client org than agent organization
van Hulst, de Graaf & van den Brink	2012	To identify the contribution exemplary practitioners might make in the task of mediating and at times redesigning the multidimensional interface between people policies and systems	n = 43	Phase 1 scouted for exemplary practitioners; phase 2 involved following actors and interviewing for 1-3 hours	Found the traditional social worker and civil servant both operate as exemplary practitioners, yet they complete the tasks and responsibilities differently
Wallenburg & Schaffler	2013	To explore an alliance relationship in preventing opportunism and achieving higher performance	n = 197	Survey of German logistics service providers and using structural equation modeling	Found that if formal control mechanisms are legitimized by underlying agreements through relational governances, the governance forms complement each other
Van Slyke	2005	To examine how public administrators manage contracting relationships with nonprofit organizations using agency and stewardship theories	n = 35	Purposive sampling strategy using a 15 questions semi-structured interview instrument	Found that trust, reputation and monitoring are used with some variance and that the effects of other variables, specifically level of market competition and administrative capacity, have a significant impact on how the contract relationship is managed; over time, public managers do appear to develop relationships that are more relaxed version of a classic principal-agent relationships

psychological and situational underpinnings, clarified stewardship theory as a limiting case of agency theory rather than contrary to it.

Donaldson and Davis (1991) used some of the same methodologies to discredit agency theory as others used to support it. They used shareholder returns and board chair incentives data to conclude that agency and stewardship theories "each may be valid for some phenomena but not for others…[based on] situational contingencies" (Donaldson & Davis, 1991, p. 60). More recently, stewardship theory is used as a limiting case for agency (Caers et al., 2006). Caers and his peers (2006) expanded agency and stewardship by placing the two not as opposed theories, but on a continuum. This expanded view of a steward-agent continuum helps inform behaviors and actions of the workforce like those in interorganizational relationships and community engagement. At the individual level of measurement, those with a public service motivation (Perry, 1997, 2000) or other shared identity may act similarly regardless of their employing organization. Whether paid by a government entity or a for-profit organization, a social worker has ethical standards and a profession in which membership may align interests (Mitchell & Meacheam, 2011).

Psychologically, there are four contributions to stewardship: motivation, social comparison, identification, and power (Davis et al., 1997). Stewards are motivated not by the external, extrinsic rewards such as bonuses, paid time off, and gifts, but rather are motivated by the collective efforts of a team, feelings of purpose, and equity (Davis et al., 1997). Stewards compare themselves to their principal rather than in competition to other peers. Stewards feel empowered and respond to personal power. Personal power "is a function of the personal characteristics of the individual and the prevailing organizational culture" (Davis et al., 1997, p.

31). Finally, stewards more readily identify with their organization and imbue the organization's goals, mission, and vision.

Stewards choose to cooperate with their principals. They choose to cooperate because they perceive greater utility through cooperation. Thus, "his or her behavior can be considered rational" (Davis et al., 1997, p. 24). Even in this situation, the steward may make a self-serving decision, but in the long-run the decision may be aligned with the long-term mission and goals of the principal. In order to manage long-term payoffs, agents mimic the goals of their principals in the short-term. Internalizing or mimicking the principal's motive is seen through long-term incentive plans within the private sector to align the goals of shareholders and managers (Westphal & Zajac, 1994, 1998). It follows, in public sector contracting, if agents perceive opportunities for long-term benefits through contract renewal, the agents will mimic the goals of the principal. As this occurs naturally through the government contracting process, the principal does not necessarily have to implement provisions to force the agent to align their goals with the principal. In other words, this cooperation occurs to build trust between principal and agent and to build a long-term relationship for continuation of the contract. This contracting relationship becomes more relational as trust and reciprocity develops. Interestingly in higher education, tenure track faculty may not follow this same stewardship theory mentality. The tenure system provides a short-term incentive—tenure—that does not necessarily align an individual's long term interests with the interests of the institution. Tenure's intent is to protect an individual's academic freedom from colleagues as well as the employing institution should an individual explore dissenting opinions or questionable topics. At the same time, tenure serves as a disincentive for faculty members to act in the interests of their institutions. With tenure, a faculty member can act as a self-serving agent, shirking responsibility to the institution and its

stakeholders without some type of post-tenure review or other mechanisms to align personal action with institutional goals and mission.

Individual situations also influence stewardship behaviors. Cultural differences may not accept the individual-focused behaviors espoused by agency theory. Some cultures accept collectivism more easily than the United States-centric individualistic behaviors. Additionally, the power distance between principal and steward may be lower than between principal and agent. Agents are more likely to accept the power inequality between one and one's principals, but in stewardship, a steward likely sees oneself closer in power to a principal. The philosophies of management also inform the situation encouraging stewardship. Under stewardship theory, the risk orientation of the principal is towards trust; the principal has a long-term outlook and performance enhancement too.

Other stewardship theorists posited that an agent might fundamentally have similar or matching goals to their principal (Caers et al., 2006; Sundaramurthy & Lewis, 2003). This more recent distinction of stewardship aligns with public service motivation. Within an individual organization, these agents accept positions from their principal due to true goal alignment based on their commitment and loyalty to the mission of the organization (Caers et al., 2006). Or in the case of government contracting, an agent-contractor may seek contracts from government agencies which match his or her own personal beliefs or those of the organization for which he or she works. Along this reasoning, faculty members may choose to work for a higher education institution aligned with their core values of higher education's democratic ideals.

Stewardship theory has not been fully developed and tested in the realm of contracting. While a few studies exist (Lambright, 2009; Van Slyke, 2007), most researchers still examine contractors from the viewpoint of pure agents acting in their own self-interests. Anecdotal

evidence, though, exists of contractors putting the public good ahead of their contractual interest from whistleblowing to over-performing without contract incentives. Particularly within the public sector, agents serve multiple principals. An agency head such as the Secretary of Defense acts as the agent of the President as the chief of the executive level branch while also serving as an agent of the legislative branch through the budget and legislation empowering the agency. And arguably most important, the Secretary serves as an agent of the voting public through our representative form of government. Though this line of thought encroaches on stakeholder theory, civil servants must remain cognizant they serve multiple masters and goal alignment sometimes cannot be possible with each principal. For simplicity in examining the contracting relationship in this study, the principal is the government agency contracting for products (DoD) and the agent/steward is the contractor, or the higher education provider.

Agency theory and stewardship theory have not been closely examined within the higher education, and specifically the community engagement, realm. It is not difficult, however, to identify parallels between community engagement and interorganizational collaboration. Few studies exist examining the allegiance or goals of faculty and staff between the university and the community in engaged scholarship projects. This study bridges this gap by examining the variables correlated to a community and institutional orientation.

Fortunately, potential solutions exist when facing the problems of agency and stewardship theories. Mitchell and Meacheam (2011) hypothesized that knowledge workers are less likely to behave in a self-interested manner when engaged in a professional community, when their immediate supervisor is a member of the same occupation, when shared organizational values and goals are present, when their work is perceived to contribute to valued outcomes, and when their organization (the principal) supports their professional development.

Mitchell and Meacheam (2011) arrived at this hypothesis, in part, because knowledge workers "control and own the means of production" (p. 152) and knowledge workers are motivated by different things and assume a professional membership unrelated to their firm. The proposed subjects within this dissertation study are knowledge workers of the higher education system working with the Department of Defense community. Therefore, these subjects will contribute to understanding of agency and stewardship within community engagement.

Boundary Spanning

Having reviewed the literature of interorganizational relationships and theories of agency and stewardship, boundary spanning theory connects the literature to community engagement. Just as boundary spanners connect different organizations, boundary spanning theory can be used to explain how and why individuals act in inter-organizational relationships.

Research in boundary spanning has ebbed and flowed in the past thirty-five years. Several streams of research encompassing multiple disciplines have used boundary spanning to explain the actions of both individuals and organizations. The behaviors in which these boundary spanners engage depend on the situation of the organization and its environmental context (Ernst & Chrobot-Mason, 2011). What follows is a depiction of the roles that boundary spanners have in organizations, the skillsets boundary spanners maintain, and the current research of boundary spanners in interorganizational relationships and community engagement.

Boundary spanning research emerged from open systems theory. Organizations, as open systems, interact with the environment around them accepting information and resources, sometimes transforming that information and those resources, and exporting them back into the environment (D. Katz & Kahn, 1966; von Bertalanffy, 1969). Boundary spanning investigates those individuals within organizations who have a unique skillset or role to work between and

among groups and organizations and also who can leverage the internal functions and boundaries of an organization. These individuals often experience role conflict as they assume the interests of their own organization and those of the clientele, particularly boundary spanners in the service industry (Crosno, Rinaldo, Hulda, & Scott, 2009; Miller, 2008). Often, boundary spanning research focuses on those who are at the periphery of organizations such as hotel front desk employees (Kim, Peter, Murrmann, & Lee, 2009), human service providers (Cordes & Dougherty, 1993) and community development practitioners (Miller, 2008; Weerts & Sandmann, 2010). But boundary spanners include anyone who spans boundaries. These boundaries also include departmental boundaries within a large organization (Cordes & Dougherty, 1993; Tushman, 1977; Tushman & Scanlan, 1981a) or they may be physical boundaries between walls and floors in an office building (Hinds & Keisler, 1995). Boundary spanners include those individuals with formal boundary spanning positions such as salespeople, customer service representatives, and outreach workers. But many individuals engage in informal boundary-spanning roles based on their specific skillsets, experiences, and values.

Definitions of boundary spanners vary. These individuals most commonly span boundaries across functional areas, groups, and memberships in an organization (R. Katz & Tushman, 1983; Tushman, 1977; Tushman & Scanlan, 1981a). As scholars in other disciplines have used theories of boundary spanning, the definition has changed. Marchington, Vincent, and Cook (2005) described boundary spanners in contracting relationships as "the people who are formally and informally responsible for maintaining the contract over time, and who interact with their opposite numbers in the client or supplier organization" (p. 135). While contracting and interorganizational relations influence this proposed study, this definition restricts the influence of boundary spanners. All individuals can engage in boundary-spanning activities

whether or not they are directly responsible for maintaining the contract in interorganizational relationships. Therefore, the definition adapted for this study, based on Leifer and Delbecq (1978) and Marchington, Vincent, and Cooke (2005), is the individuals who often operate at the boundary of a group or organization, perform organizationally relevant tasks, and assists in the fulfilling of explicit and implicit contracts by building capacity between the organization and its environment.

Themes of Boundary-Spanning Behaviors

Based on my review, the activities and behaviors of boundary spanners encompass four themes. Boundary spanners are communicators, protectors, innovators and relationship managers.

Communicator. Much of the research of boundary spanning focuses on communication across boundaries and how boundary spanners aid in knowledge diffusion (Huggins, Johnston, & Thompson, 2012; Janowicz-Panjaitan & Noorderhaven, 2009; Tushman & Scanlan, 1981a). As communicators, boundary spanners absorb and process a plethora of information from within the organization and from the environment around the organization (Aldrich & Herker, 1977). Thus, spanners must balance the best information to share with environmental context and constraints. Scholars viewed environmental uncertainty (Fennell & Alexander, 1987; Leifer & Huber, 1977; Tushman & Scanlan, 1981a) and the regularity of information (Leifer & Delbecq, 1978) as contributors to boundary-spanning activities. Boundary permeability, or "the degree to which the focal organization unit is open to influence from its environment" (Leifer & Delbecq, 1978, p. 41) affects the ability for a spanner to influence an organization (Leifer & Delbecq, 1978). Spanners have significant power in what they do with the information. They can forget it, choose not to share it, or share it widely across the organization internally as well as externally

with other individuals or groups. Tushman (1977) identified three boundary spanning communication roles based on the reach or scope of the individual: gatekeepers, organizational liaisons, and laboratory liaisons. An individual's formal role in the organization may include these activities or an individual may obtain the role organically. Gatekeepers are individuals identified as internal communications stars who have significant communication with those outside the organization (Tushman, 1977). Organizational liaisons on the other hand have tremendous amounts of communication with internal sub-units within their organization (Tushman, 1977). These liaisons identify and share applicable ideas and solutions, for example, across functional areas, departments or teams within an organization. Finally, "laboratory liaisons" are the lowest form of boundary spanners identified by Tushman (1977) and communicate across task functions within one department. The most effective boundary spanners are those who are effective at sharing both within the organization and with external audiences (Tushman & Scanlan, 1981a, 1981b). Boundary spanners have an ability to translate among the various language and coding schemes in specialized groups and organizations. This "local knowledge," as Yanow (2004) described, provides context for boundary spanners to make knowledge relevant to individuals outside the boundary of the in-group. The in-group may be the department, the organization, the geographic community, or any group of individuals who can be described as having some commonality.

Protector. A second role boundary spanners serve is one of protector of organizations. Fennell and Alexander (1987) described the protection function as buffering an organization from environmental uncertainty and influences. In buffering, boundary spanners have two mechanisms available. Organizations can add or adapt internal administration to interface with the environment. Fennell and Alexander (1987) suggested adding data processing employees if

the healthcare environment required new regulatory restrictions as an example. Higher education institutions add offices coordinating outreach and engagement (Weerts, 2005b; Weerts & Sandmann, 2008). These offices serve as a front door for communities partnering with the campus but also buffer the organization from uncertainty with these community partners. The other mechanism available to boundary spanners is to "augment peripheral structures that deal directly with boundary management and interfacing with environments" (Fennell & Alexander, 1987, p. 45). Peripheral structures added at higher education institutions include faculty and staff who, like the front desk staff at hotels, work solely at the boundary. The University of Georgia, for example, altered the structure of work at the boundary of the university in the mid-1990s. The University of Georgia created public service faculty, a parallel classification to tenure-track faculty who specialize at the nexus of the university and the community.

Innovator. Third, boundary spanners serve as innovators. Because they link organizationally oriented individuals to external information sources, they bridge organizations, encouraging risk taking, experimentation and entrepreneurship to face complex problems (Janowicz-Panjaitan & Noorderhaven, 2009; Williams, 2002). Opposed to the buffering function, the bridging function (Fennell & Alexander, 1987) of boundary spanners is proactive in finding external links to organizations rather than adapting internal design. Boundary spanners are important in the innovation process (Tushman, 1977), linking locally-oriented employees to external sources (Tushman & Scanlan, 1981b). Ernst and Chrobat-Mason (2011) clarified this function as weaving. Weaving integrates new knowledge with existing information to form intergroup interdependence. Hill and Birkinshaw (2014) called this ambidexterity, defined as, "the capacity to capitalize on an existing set of resources and capabilities while…developing new combinations of resources to meet future market needs" (p. 1899). Intergroup

interdependence is “a state of mutual dependence and collective learning that develops when boundaries are interlaced within a large whole” (Ernst & Chrobot-Mason, 2011, p. 179).

Power Manager. Finally, boundary spanners serve as relationship and power managers. As a power manager, boundary spanners choose what information to share both internally and externally. For those removed from the boundary, information from outside the organization is difficult to verify (Aldrich & Herker, 1977). Thus, both other individuals and the organizations as a whole must have trust in their boundary spanners. They must believe their spanners are aligned with organization’s interests and have commitment to the organization. Jones and Noble (2008) defined this role as maintaining synergetic momentum. Particularly during implementation of boundary-spanning activities, opportunities for delay exist in an “unfamiliar, ambiguous and pressurized environment” (Jones & Noble, 2008, p. 111). Maintaining synergetic momentum is the “process whereby boundary spanners adopt, and adapt to, this environmental tension” (Jones & Noble, 2008, p. 111). Ernst and Chrobat-Mason (2011) offered that boundary spanners manage relationships and power through self-reflection and encouraging reflection in others; this brings out commonalities from differences to manage not only conflict, but also power. Boundary spanners as power managers also manage the boundaries, determine how and when to tear down and construct new boundaries (Ernst & Chrobot-Mason, 2011; Finkelstein, 1999).

These four themes of communicator, protector, entreprenuer, and relationship manager comprise the major activities of boundary spanners within organizations. Every specific activity or task of the boundary spanner cannot be expressed, in part, because of their strengths. In an effort to react to the environment, boundary spanners may practice new activities. Table 3 features selected empirical studies, both seminal and emerging works, that have contributed to

the emerging cross-disciplinary boundary spanning theory. These studies have examined boundary spanners roles, antecedents, influence and impact.

Skills and Antecedents of the Boundary Spanner

Scholars have also examined the skills and traits of boundary spanners and the antecedents of boundary-spanning activities. This section will describe competence, organizational understanding, and formal status as three of the identified antecedents of boundary-spanning activities. The section will continue with comprehension of power, trust making, and self identity as three skills of boundary spanners. The section will conclude with the limitations of the research about the skills and antecedents of boundary spanners.

Boundary spanners must be technically competent. Tushman and Scanlan (1981a, 1981b) found individuals perceived by co-workers as valuable sources of information were more likely to serve as boundary spanners across organizational units and externally to other organizations. Additionally, they found this to be a cyclical process. Perceived competence among co-workers led employers to promote individuals through the ranks that facilitate greater exposure internally and externally, reinforcing boundary-spanning behavior (Tushman & Scanlan, 1981a, 1981b). With the greater exposure, individuals gained power to connect between organizational units and the external environment.

Having a strong understanding of the organization (Tushman & Scanlan, 1981a, 1981b) leads boundary spanners not only to float between and among the power structures of organizations, but also to contribute to the flexibility and entrepreneurial spirit of boundary spanners. Leadbeater and Goss (1998) found boundary spanners to be "creative, lateral thinking rule-breakers who frequently combine a capacity for visionary thinking with an appetite for opportunism" (as cited by Williams, 2002, p. 110); spanners operate somewhat independent of

Table 3

Selected Boundary Spanning Empirical Studies

Study	Date	Purpose of Study	Sample	Methodology	Results
Keller & Holland	1975	To examine boundary spanning activity's contributions to role conflict, ambiguity and job satisfaction	n = 51	Questionnaire with created boundary spanning activity scale, role conflict, ambiguity, Job Description Index marginality, and personality related values from the Study of Values test	Boundary spanning roles can differ substantially depending on the interorganizational relations and context; typical to a scientists in an R&D organization
Tushman	1977	To investigate the existence and the characteristics of special boundary roles as one means for innovating organizations to deal with the necessity of cross-boundary communications	n = 345	Questionnaires distributed to professionals in an R&D facility; tracked communications over 15 weeks	Boundary spanners assist in the innovation process internal to an R&D firm
Leifer & Delbecq	1977	To examine boundary spanning activity as an intervening variables between organizational structure and perceived environmental uncertainty	n = 220	Questionnaire to employees in 12 semi-autonomous workgroups	Found support of boundary spanning activity as an intervening variable and support organizational structure affects perceived environmental uncertainty
Tushman & Scanlan	1981	To investigate the antecedents of boundary role status	n = 210	Reporting actual, work-related, oral communication compared to demographic data and per nominations	Informational boundary spanning would be accomplished only by individuals who were strongly linked internally **and** externally. Results suggest distinguishing between informational and representational boundary spanning roles
Tushman & Scanlan	1981	To distinguish between boundary spanning individuals and those who simply have substantial boundary spanning activity	n = 345	Reporting actual, work-related, oral communication compared with the 61 projects occurring in the R&D facility	Perceived competence is an important determinant of boundary role status.
Katz & Tushman	1983	To investigate the influence of boundary spanning supervisors on the turnover and promotions of their project subordinates	n = 325	Questionnaires distributed internal to an R&D organization and categorized communications among staff	Found boundary spanning supervisors had little direct effect on the careers of all project subordinates

Table 3 (continued)

Selected Boundary Spanning Empirical Studies

Schwab, Ungson, & Brown	1985	To test whether boundary spanning is primarily related to environmental changes or to structure variables	n = 379	Questionnaires to CEOs for distribution to those dealing with the external environment	Boundary spanning activity is related to environment, but this relationship appears to vary along dimensions of environment as well as by industry. Size, perceived influence, and function are found to moderate the BS-environment relationship; boundary spanning activity is not related to the hierarchical level of the employee
Fennell & Alexander	1987	To test differences in boundary-spanning strategies between freestanding organizations and organizations that are members of multiorganizational systems	n = 901	Mailed survey to hospitals	Found that hospitals in systems were more likely to adopt bridging strategies; institutional constraints affect organizational selection of boundary-spanning strategies
Shrum	1990	To test status incongruence's effects on the exchange and conflict among professionals	n = 113	Interviews of the main state planning agencies, then county planners, and others in other levels of government	Revealed that structural features interact to produce characteristic exchange flows, and the exchange of resources among these professionals affects perceptions of conflict
Hinds & Kiesler	1995	To examine the communications methods among technical and administrative employees	n = 88	Brief survey; Diary of all communication that used technology over 2 days, compared communications to status of recipient; post-diary interview	Telephone & email encourages lateral communications across organizational boundaries; the informal network has historically been viewed as the grapevine and not important….not so with the changes occurring in network governance.
Finkelstein	1999	To develop the concept and practice of boundary management and its usefulness in tearing down the walls and creating organizational change	n = 1	Case study of an aging Midwestern steel mill	Action committees are at the heart of transformation; shop-floor teams bring labor and management to work through problems and issues
Callister	2001	To examine conflicts that occur across organizational boundaries	n = 30; n = 109	Interviews in part 1; conflict incidents in 9 managed care organizations in part 2	Organizational power affects behavioral responses, where status differences and previous negative interactions affect emotions
Blair & Jost	2003	Measure effects of boundary permeability between low group identity and high group identity	n = 72	Experimental simulation; factorial design	Priority group identity is capable of leading people to resist the temptation of individual exit associated with permeable group boundaries

Table 3 (continued)

Selected Boundary Spanning Empirical Studies

Perrone, Zaheer, and McEvily	2003	Explain trust in boundary spanners by the extent of role autonomy	n = 119	Dyadic research design combines data from purchasing managers and supplier representatives	Granting purchasing managers greater autonomy enhances supplier representative trust in purchasing managers
Druskat & Wheeler	2003	To explore how effective leader behaviors and strategies unfold over time	n = 66	Critical incident interview with self-managing work teams and team members as well as surveys	Found that effective external leaders move back and forth across boundaries to build relationships, scout necessary information, persuade their teams and outside constituents to support one another, and empower their teams to achieve success
Tarant	2004	To examine factors that have a potential influence on the effectiveness of boundary role incumbents operating within interorganizational relationships, more specifically within industry-university partnerships	n = 220	Questionnaire with bivariate and multivariate research questions; dependent variables included dollar value, research relevance, commercialization, professional networking and students hired	While this study forwards the field, it focuses on the effectiveness from the perspective of the university and the industry partner. It does not focus on the roles that the individual boundary spanner engages in.
Ferguson, Paulin & Bergeron	2005	To determine the relative influence of relational and contractual governance mechanisms on the customer-based evaluation of the exchange performance and to determine the extent to which their closeness to the client company was associated with the implementation of relational and contractual governance mechanisms and with the customer-based evaluation of exchange performance	n = 160	Used in-depth interviews between 160 business clients and their account managers at commercial banks; created dyads	Found that the boundary spanner's closeness to the client company mediates the performance of midmarket commercial banking exchanges through the implementation of both relational and contractual governance. The account manager gather information willingly transferred from the business client in a climate of trust cooperation and commitment.
Marchington, Vincent, and Cooke	2005	To analyze the role of boundary-spanning agents	n = 4	Case studies	Found that while boundary spanner is important in interorganizational relations, protecting one's own organization

Table 3 (continued)

Selected Boundary Spanning Empirical Studies

Richter, West, van Dick, & Dawson	2006	To explain effective intergroup relations in organizations by reference to boundary spanners' self-concept and behavior	n = 53	Questionnaire with scales measuring intergroup conflict, intergroup contact, and group and organizational identification	Effective intergroup relations were moderated by organizational identification, supporting a dual identity model. Found if boundary spanners displayed frequent intergroup contact and identified highly with their organization, group identification was most strongly related to effective intergroup relations
Jones & Noble	2008	To examines the challenges that confront individual managers whose work involves bridging the organizational boundaries of public-private partnerships: so called-boundary spanners	n = 7	Multiple case study design with data from 47 personal interviews, non-participant observation at regular meetings and organizational and public available documentations	Boundary spanners maintain synergetic momentum to respond to pressure. Their behaviors are influenced and shaped by the lack of a single authority figure, constant pressure to maintain time frames and a drive to ensure their own personal success and survival.
Miller	2008	To learn more about boundary spanning leadership by examining it in two urban contexts and analyzing it among relevant conceptual discourses	n = 2	Semi-structured interviews of 39, observations of 30 programs and meetings and document analysis	Found that boundary spanners are aided by contextual knowledge, interpersonal skills, trust and connectedness, but they are motivated by an underlying community loyalty and a fundamental, socially conscious impetus--one which invites active advocacy for the oppressed via strategic collaboration
Crosno, Rinaldo, Black & Kelley	2009	To examine optimism as an internal characteristic that facilitates coping with role stressor experienced by service providers in boundary spanning positions	n = 220	Online survey measuring optimism, role ambiguity, role conflict, burnout, job satisfaction and performance	Found that optimism facilitates coping with role stressors; Boundary-spanning employees with high levels of optimism will experience less felt stress and increased job satisfaction and performance
Weerts & Sandmann	2010	Examine how research universities build bridges to community partners, and thus increase institutional capacity for engagement	n = 80	Interview and documents in three phases of data collection; Phase 1 = Provost & Chief officers of Engagement led to those interviewed in Phase 2 (snowball); Phase 3 community partners involved in engagement initiatives	Community problem solvers, technical experts, internal engagement advocate and engagement champions were four roles identified in universities

Table 3 (continued)

Selected Boundary Spanning Empirical Studies

Ramarajan, Bezrukova, Jehn, & Euwema	2011	Examine the negative consequences of boundary spanning contact in multi-organizational contexts	n = 833	Questionnaire	Employee's boundary spanning with members of other organizations was associated with reports of negative relationships with external parties (e.g. work specific problems, culture-specific problems); negative attitudes toward their own jobs / organizations; greater contact between boundary spanners increases conflict rather than cooperation in the absence of inter-org norms
Williams	2011	To identify, describe, categorize and understand boundary spanning competencies and effective collaborative behavior	n = 469, 22, 10, 15	Survey of three different organizations with second phase in-depth snowball interviews of 15 people	The author found key factors and influences in effective collaborative working: Building sustainable relationships, managing through influencing and negotiation, managing complexity and interdependencies, and managing roles, accountabilities and motivations
Hill & Birkinshaw	2012	To examine why some corporate venture units survive and others do not	n = 50 ; n = 447	Interviews and then a survey; third phase was a follow up interview	Boundary spanning units within CV firms achieve ambidexterity through their relational context, while technical core units are more likely to attain ambidexterity through their behavioral context
Skolaski	2012	To better understand the identity and work of academic and extension staff who have boundary spanning responsibilities	n = 832	Mixed methods survey distributed to academic and Cooperative Extension staff from three land-grant institutions with document review	Author found distinct differences in identity, work, visibility, support and value between academic and extension staff. Also found significant differences at one institution compared to the others
Adams	2013	To examine community located higher education boundary spanners in a higher education – community partnerships	n = 3	Multi-case study including document review, focus groups and interviews	Boundary spanners come with developed boundary spanning capacities and serve important roles in representing their organizations

formal structures, often a contract, to nurture relationships (Marchington et al., 2005). The skills of boundary spanners according to Leadbetter and Goss (1998) reflected agents as conceived by Williamson (1979) with their appetite for opportunism. Boundary spanners may appreciate operating somewhat independent of formal structure. This ability equips them to be the relational contract manager in interorganizational relationships.

Boundary spanners may have either formal or informal status and the power that accompanies that status. Tushman and Scanlan (1981a, 1981b) found formal status is not significant to serve as a boundary spanner; though they shared it helps. Schwab, Ungson, and Brown (1985) supported that the hierarchical level of the individual does not influence their boundary spanning role. This surprised these authors since higher level individuals are most likely to interact with the external environment. Thus, uncertainty remains whether positional rank within an organization influence boundary spanning roles. It seems to be partially supported as senior managers in setting up partnerships select those considered "best suited for the job, either by virtue of previous experience or current expertise, or because they were the next-in-line management in a small private sector organization" (Noble & Jones, 2006, pp. 897-898). Boundary spanners have significant leadership qualities (Williams, 2002), but are more of the *doers*, becoming "intimately involved in day-to-day relationship-building activities and operations" (Noble & Jones, 2006, p. 897).

Trust is an important component of relationships between organizations as trust assists in coping with uncertainty (Bachmann, 2001). Boundary spanners contribute the skill of trustworthiness. Trust's impact is easy to see, but, as a concept, trust is difficult to define fully and beyond the purpose of this review. Williams (2002) called trust "a kind of currency or lubricant" (p. 116). It is important at both individual and organizational levels and is difficult to

untangle (Williams, 2002). This encourages organizations to continue building capacity for boundary spanning among a wide variety of individuals. If one boundary spanning individual leaves an organization who negotiated a trusting relationship with an external entity, trust may decrease until it can be rebuilt with a new individual. Bachmann (2001) shared interorganizational relationships often begin with personal trust and personal power rather than system trust and system power. Hardy, Phillips, and Lawrence (1998) stated "power can be hidden behind a façade of 'trust' and a rhetoric of 'collaboration' and can be used to promote vested interests through the manipulation and capitulation of weaker parties" (as cited in Williams, 2002, p. 111). Building system trust becomes of greater importance when taking this perspective. One mechanism to build trust is to share risk in uncertainty such as when an incomplete contract exists in an interorganizational relationship; boundary spanners do this by sharing information that could do harm if misused. This mechanism works whether an entity approaches trust from a deficit approach, or having no trust until it is built, or an asset approach, trusting from the outset of a relationship until disproven. Building trust at individual and organizational levels is required relational contracting (Kusari, Cohen, Singh, & Marinova, 2005; Miller, 2008; Perrone, Zaheer, & McEvily, 2003). This further reinforces the role of a boundary spanner as essential in relational contracting.

The ability to see, understand, and navigate power relationships is important in boundary spanners. Williams (2002) saw negotiating effective deals as the core of an effective boundary spanner since it depends on so many interrelated skills such as "an acute understanding of interdependencies between [sic] problems, solutions and organizations; an interpersonal style that is facilitating, respectful and trusting; and a drive to devise solutions that make a difference to solving problems on the ground" (p. 117). Caldwell and O'Reilly (1982) called this skillset

self-monitoring and found successful boundary spanners adjusted their self-presentation to the situation. This trait may explain what Williams (2002) found in describing spanners as effective networkers outside of the formal decision-making structures.

Interestingly, one's philosophical outlook influences one's ability to be a boundary spanner. Though boundary spanners see their immediate role is to their employing organization (Williams, 2002), they experienced role and identity conflict and tension (Jones & Noble, 2008; Noble & Jones, 2006; Perrone et al., 2003; Richter, West, van Dick, & Dawson, 2006; Williams, 2002). Effective boundary spanners blur personal and professional relationships to overcome this conflict and tension (Williams, 2002). However, blurring this line strains long-term relationships, particularly if an individual leaves a partnership or collaboration (Janke, 2009). Scholars understand boundary spanners experience great role conflict and role ambiguity, in part because they facilitate and manage intergroup conflicts (Richter et al., 2006) and they find themselves betwixt and between structures, similar to what contingent employees face (Garsten, 1999). Contingent employees often lack full-time employment. Without describing each type of contingent employee, contingent employees work when there is work available. They may have full-time employment, but rely on external funding to guarantee their schedule. Contingent employees find themselves between their employer and the external organization supporting their work. Using a higher education analogy, grant-funded employees could be classified as contingent employees. These contingent employees are a form of contractors, owing allegiance to both themselves and to their organization. Boundary spanners have this dual identity as they find themselves torn between two organizations or entities, sometimes with conflicting goals or missions (E. George & Chattopadhyay, 2005; Kreiner, Hollensbe, & Sheep, 2006; Richter et al., 2006). Crosno, Rinaldo, Black, and Kelley (2009) discovered that successful boundary spanners

are optimistic in their personality which makes it easier for them to cope with this role ambiguity and conflict. Williams (2002) clarified this, stating competent boundary spanners have an "easy and inviting personality, particularly those who are able to divest themselves of their organizational and professional baggage" (p. 116). There are three primary factors leading to managing interdependencies: interorganizational experience, transdisciplinary knowledge, and cognitive ability (Williams, 2002). These factors combined with specific skills of individuals, are seen as antecedents for effective boundary spanners. But evidence is mixed as to whether the antecedents of boundary spanning lead to boundary-spanning activities and their success. Some uncertainty exists because antecedents may also be a part of the skills individuals bring to the boundary spanning roles. For example, trustworthiness is a skill boundary spanners have but trust between individuals or interorganizational trust is an antecedent. One may inform and support the other, resulting in a fly-wheel or self-propulsion effect. Therefore, more information is needed in the roles, skills, and antecedents of boundary spanning.

In summary, boundary spanners bring unique experience and skills to organizations. Boundary spanners need perceived competence, organizational, and environmental understanding, and formal or informal status to influence their boundary-spanning activities. The spanners imbue trust in themselves and in others, practice diplomacy in power relationships, and assume dual identities to make them successful boundary spanners.

A limitation of the boundary spanning literature is its subjects. Williams (2002) accepted the limitation since his data came from strategic level boundary spanners. Much of the empirical research examines boundary spanners in professional positions such as engineers (R. Katz & Tushman, 1983), technology professionals (Schwab et al., 1985), research and development staff (Tushman, 1977; Tushman & Scanlan, 1981a), and social service professionals (Williams, 2002).

Williams (2002) stated the strategic level spanners are "acutely aware of the need to cross the boundary between strategy and implementation, to ensure that policy intentions are translated into problem solving on the ground" (p. 119). Nevertheless, boundary spanners have been examined in a variety of contexts such as community engagement (Adams, 2013; Skolaski, 2012; Weerts & Sandmann, 2010), K-12 education (Miller, 2008), civil service (Shrum, 1990), and neighborhood governance (van Hulst, de Graaf, & van den Brink, 2011, 2012).

Additionally, the effectiveness of boundary spanners lacking the above skills has not been examined fully (Isbell, 2009). Important to note for this study, traits which individuals have are not important to this specific study and will not be studied. Some research about boundary spanning uses a framework of trait theory, where boundary spanning is something an individual can or cannot do. The model for this study assumes a framework where all individuals can and are engaged to varying degrees in boundary-spanning activities (Weerts & Sandmann, 2010).

Boundary Spanning in Interorganizational Relationships and Community Engagement

Effective boundary management brings organizational change (Finkelstein, 1999) and innovation (Tushman, 1977). As society moves towards additional networked governance structures in the private and in the public sector, leaders in organizations must develop capacity for boundary-spanning activities within their organizations and in the skillsets of employees. Merely engaging in boundary-spanning activities, however, does not make one an effective boundary spanner (Keller & Holland, 1975; Tushman & Scanlan, 1981b). Noble and Jones (2006) hypothesized boundary spanners are selected based on their unique skills and abilities and do not volunteer for the roles based on their interests. Others, by way of their formal role or position within an organization, engage in boundary-spanning activities, but are not necessarily effective boundary spanners (Shrum, 1990; Tushman & Scanlan, 1981b). Therefore, in order to

enhance the effectiveness of organizations and their boundary spanning activity, leaders create a mechanism to identify and encourage the unique skills based on specific boundary-spanning activities.

Researchers have examined boundary spanners in fields diverse fields such as interorganizational collaborations (Noble & Jones, 2006), professional positions (Schwab et al., 1985; Tushman, 1977), business (Marchington & Vincent, 2004; Marchington et al., 2005), and the public sector (Miller, 2008; Noble & Jones, 2006). But scholars have also examined boundary spanners within educational institutions and educational administration and delivery such as faculty and staff involved with community engagement (Weerts & Sandmann, 2010), K-12 school-community partnerships (Miller, 2008), community health (Waring, Currie, Crompton, & Bishop, 2013; Williams, 2011), and in industry-university partnerships (Tarant, 2004). Leifer and Delbecq (1978) described a boundary spanner as "people who operate at the periphery or boundary of an organization, performing organizational relevant tasks, relating the organization with elements outside it" (p. 40-41), Weerts and Sandmann (2010) expanded this definition to include even the internal actors of an organization and accepted that many employees engage in boundary-spanning activities.

Within the community engagement area, Weerts and Sandmann (2008) codified academic and professional staff into boundary spanning roles, yet all education leaders serve in boundary spanning roles to some degree (Miller, 2008). Concurrent to the previous scholarship of boundary spanners, Weerts and Sandmann found four key attributes needed in these individuals: active listening, power negotiation skills, a service ethic, and neutrality. Service ethic and neutrality deserve attention; they are unique to the Weerts and Sandmann model.

Service ethic surfaces thoughts of a steward from an agent versus stewardship continuum. What these scholars did not conclusively explain is whether the service was to the community or to the institution. Interesting to note, Weerts and Sandmann's (2008) research found traditional, tenure-track faculty less closely attached to the service ethic mindset. Finally, boundary spanners were seen as neutral. Within boundary spanning research in other contexts, neutrality never emerged as a key theme or topic. Neutrality implies that boundary spanners may only empower others to act in their self-interest rather than encouraging or influencing a course of action in the boundary spanner's interests. Their inclusion of neutrality does not align with boundary spanners as power brokers. Research is needed in these two important contributions to the literature. Previous studies describe the role conflict and tension boundary spanners have, but rarely used the term neutral. In explaining it, Weerts and Sandmann (2008) described neutrality as a state of being "equitable but not necessarily equal" (p. 94).

Weerts and Sandmann (2010) later closely examined boundary spanners within research universities. Their model demonstrated explicitly how members of a research university might engage in boundary spanning within community engagement. Using a model proposed by Friedman and Podolny (1992), they aligned research university boundary spanners along two axes, creating four quadrants based on task orientation and social closeness. Weerts and Sandmann found an employee's formal job role, individual traits, and unique experience influenced their task orientation. The task orientation axis creates a dyad between technical and practical tasks and socio-emotional tasks. An employee's social closeness is "the degree to which the spanner is aligned with the external partner versus the organization that he or she represents" (Weerts & Sandmann, 2010, p. 709). These two dyads create the four quadrants of

community-based problem solvers, technical experts, engagement champions, and internal engagement advocates.

The axis of task orientation not only is supported by Friedman and Podolny (1992) in examining role conflict, but also by Noble and Jones (2006). Noble and Jones (2006) described two different functions in initiating public-private partnerships, a type of community engagement. Their functions in creating public-private partnerships maintaining synergistic momentum through conflict by identifying courses of action and building trust among stakeholders (Noble & Jones, 2006). Though public-private partnerships do not have identical goals to of community engagement, they do share commonalities. The study by Noble and Jones (2006) included only the individuals locally focused as boundary spanners. Weerts and Sandmann (2010) included more than just the local community-based individuals. Noble and Jones (2006) identified project champions as individuals who "initiate and support the concept of a partnership arrangement and sometimes appear to take a vested interest in its success…they cheer from the sidelines and intervene as necessary" (p. 897). Weerts and Sandmann (2010) included these individuals explicitly as boundary spanners as they support those doing the on-the-ground work by "buttressing and support[ing] from higher levels within and beyond the organization" (Marchington & Vincent, 2004, p. 1053).

Additional research is needed for boundary spanners involved in community engagement. The introduction of boundary spanners to the field of youth (Miller, 2008) and adult (Weerts & Sandmann, 2010) education has introduced the model and emerging theory to the field based on their qualitative data. In order to strengthen theory in boundary spanning, additional quantitative research is needed to build a generalizable framework for other contexts. Ferguson, Paulin, and Bergeron (2005) offered a quantitative approach of boundary spanner closeness. But this survey

instrument applied only to the commercial banking industry and examined only the social closeness perspective. Separating the two dyads of task orientation and social closeness in the Weerts and Sandmann (2010) model may provide clarity to the roles and activities that do not influence the formal position an individual has within an organization. Using a generalized instrument fills a void in the scholarship and will link numerous disciplines examining boundary spanning in various contexts.

Summary

As described in this chapter, interorganizational relationships and networked governance is a lens in which to view community engagement. An assumption of networked governance is that a network of service providers can better solve society's complex problems. This assumption aligns with Boyer's (1990, 1996) call for universities to re-engage with communities to examine and develop interventions with the community at the local and global levels. But within these networks of universities and communities interacting with other public and private partners, conflicts can occur. Agency and stewardship theories provide an appropriate lens to examine how boundary spanners negotiate, defend, and manage the dynamics of these complex networks, assuming a community orientation from within an organizational structure. The current literature recognizes that boundary spanners support relational contracting in networked governance (Marchington et al., 2005) and boundary spanning supports community engagement in multiple areas of education (Miller, 2008; Skolaski, 2012; Weerts & Sandmann, 2010). Nevertheless, deficiencies exist. Most research is qualitative. It is segmented. This study formally examines the relationship between community engagement and networked governance. It aims to examine the roles and activities of boundary spanners, tying those roles to those of a relational contract manager using agency theory as a framework. Finally, given the limited

literature, it solidifies the roles and activities boundary spanners engage in between an institution and a community so that activities and roles may be generalizable to other contexts and organizations.

CHAPTER III

METHODOLOGY

This chapter describes the methodology to accomplish the broad purposes of this study. The purpose of this study was to investigate key boundary-spanning behaviors of contractors, employees in higher education institutions, working with military families or the Department of Defense. The study examined four research questions:

1) What specific boundary-spanning behaviors are prevalent in the population of university-military contractors?
2) To what extent are boundary-spanning behaviors explained *individually* by personal or work/organizational characteristics in the population of university-military contractors?
3) To what extent are boundary-spanning behaviors explained *jointly* by personal or work/organizational characteristics in the population of university-military contractors?
4) Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions?

The chapter has eight sections that describes the logical framework, instrumentation, pilot study, study population, data collection, data preparation, data analysis and limitations.

Logical Framework

A questionnaire-based study was selected to clarify the Weerts and Sandmann (2010) framework displayed in Figure 1, to generalize a model, and to offer it for understanding similar contexts. Having reviewed the literature and understanding the importance of individuals in interorganizational collaborations and networked governance in a variety of contexts, a selected response instrument was needed to describe better the activities, functions, and behaviors these individuals undertake and their influences to initiate, guide, and retain interorganizational relationships. In order to create an instrument robust enough for applicability in a variety of contexts inside and outside of higher education, I collaborated with a fellow graduate student to create the survey instrument for her study of volunteers working with youth organizations.

Specifically, the process to create this selected response instrument was completed by a four-person research team. Two graduate students planned to use the co-created instrument with two different samples. The four person research team of Sandmann, Jordan, Mull, and Valentine coauthored a technical report to capture the process, decision points, and pilot study completed collectively. While the two graduate students (Jordan and Mull) completed the day-to-day tasks, Sandmann and Valentine facilitated and validated the process. The methodology for this proposed study relied on the foundational work to create a reliable instrument. Throughout this chapter, a published article based on the technical report is quoted and cited extensively. Much of our work was completed together, but differences do exist and will be noted.

Sandmann, Jordan, Mull, and Valentine (2014) stated:

> The logical model for this development work is an extension of a boundary spanners model proposed by Weerts and Sandmann (2010). Weerts and Sandmann's (2010) qualitative study relied on the seminal research of Aldrich and Herker (1977) in identifying and describing boundary-spanning behaviors. The quantitative focus of this development work generalizes their model for use in other boundary spanning research contexts.

> Along two perpendicular axes, as illustrated in Figure 1, Weerts and Sandmann (2010) proposed task orientation and social closeness as the two domains differentiating the ways boundary spanners "reduce conflict and facilitate spanning goals" (p. 708). Task orientation "relates to an individual's formal job role and how it influences that person's relationship with external constituents" (p. 709). Those serving as boundary spanners may take a leadership or advocacy role for boundary spanning, leading to a socioemotional or leadership task orientation. Others will focus on technical, practical tasks. The tasks spanners complete may also be influenced by personal characteristics and skillsets of individuals in relation to others around them. These differences may influence variation along the scale (p. 86-87).

The second domain, social closeness, is most applicable to my study of university employees engaged with the military community. Social closeness:

> is "the degree to which the spanner is aligned with the external partner [vis-à-vis] the organization that he or she represents" (Weerts & Sandmann, 2010, p. 709). As in task orientation, an individual's position influences social closeness, but other personal and organizational characteristics—including personal and professional background, experience, disciplinary expertise (Weerts & Sandmann, 2010), and loyalty (Miller, 2008)—play roles as well (Sandmann et al., 2014, p. 87).

The social closeness constructs of community and organizational orientations parallel issues of agency and stewardship. It followed that an individual exhibiting higher levels of the organizational construct acts more like an agent of the community. Their interests are aligned with their organization, in part, due to the psychological or written contract between the organization and the individual. This cascading effect of the principal-agent relationship from organization through multiple levels of hierarchy in an organization to an individual employee is outlined by Azevedo and Akdere (2008, 2011). One high in the community construct acts as a steward of the collective interests of the community in which they serve. This concept is similar to Caers and colleagues' (2006) stewardship-agency axis. Unlike Caers and his colleagues, though, an individual in this study could be high in both community and organizational orientations, or stewardship and agency perspectives, respectively. The orientations may influence behaviors but they cannot fully describe all behaviors in which a contractor engages.

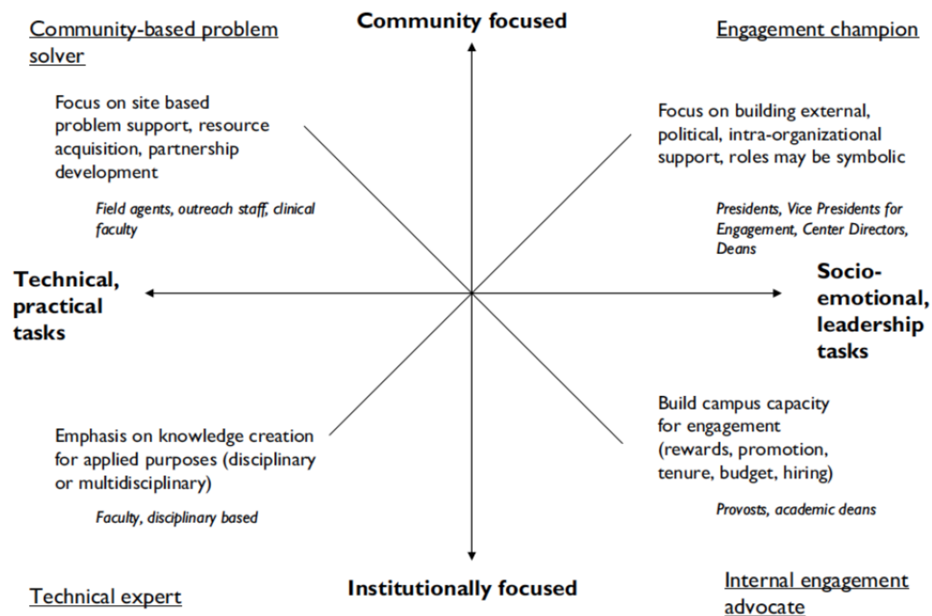

Figure 1. University-community engagement boundary-spanning roles at public-research universities as identified by Weerts and Sandmann (2010)

However, it is important to note the Weerts and Sandmann (2010) model is not predictive of future roles, but examines the current roles individuals have when organizations engage with others. Weerts and Sandmann noted that should their boundary spanning framework be generalizable to boundary spanners other than those in community engagement at research universities, "this knowledge may help practitioners create role differentiation strategies…internally and externally" (p. 723). This contribution will assist practitioners in developing the skills and abilities of individuals performing these boundary spanning roles. Additionally, the knowledge will contribute to scholars' understanding of knowledge diffusion between and among groups and organizations through the use of boundary spanners. Sandmann, Jordan, Mull, and Valentine (2014) stated, "The two domains create four quadrants within which boundary spanners may find themselves aligned. Weerts and Sandmann (2010)

classified the individuals in these quadrants: 1) community-based problem solver; 2) technical experts; 3) internal engagement advocates; 4) engagement champions" (p. 87-88).

My collaborator and I found these four quadrants a challenge:

> As we worked to operationalize the Weerts and Sandmann (2010) framework based on their qualitative data, it became apparent to us through our brainstorming and both formal and informal critique panels that using the two domains, task orientation and social closeness, may be inadequate. As we studied the model, we realized we had two significant choices. The first choice was determining whether we were measuring types of people, those who found themselves inside the four quadrants Weerts and Sandmann defined, or measuring behaviors engaged in by those types of people identified in the model as they span boundaries. We decided to measure behaviors. These behaviors included both observable actions and cognitive processes. We included cognitive aspects because a growing body of research indicates that cognitive and affective processes influence observable behaviors (Chisholm, Risko, & Kingstone, 2013). This choice offered us more flexibility in measurement and provided data most relevant to researchers and practitioners working with boundary spanners. (Sandmann et al., 2014, p. 6)

After concluding to measure behaviors, we examined the two axes created by Weerts and Sandmann (2010):

> Through discussion, we discovered that the two ends of the axes may not be inversely related. For example, individuals' behaviors and activities could be classified as both high in community orientation and high in organizational orientation. Because we wanted to measure this possibility, we reconstructed these two bipolar dimensions into four independent constructs.
>
> After deciding to use four constructs to measure a boundary spanner's social closeness and task orientation, the research team derived definitions [Table 4] from the literature for the four orientations: (1) technical practical orientation, (2) socio-emotional orientation, (3) community orientation, and (4) organizational orientation. (Sandmann et al., 2014, p. 88)

The team finalized and accepted the constructs and respective definitions as stated in Table 4. But the team had one additional challenge to expand the Weerts and Sandmann (2010) model to apply to other contexts. Finally, the team:

> standardized terminology of organizational orientation. Because we wanted our instrument to have applicability outside of institutions of higher education, we used the broader, less formal term organization to include voluntary associations of community based on interests and proximity (Sandmann et al., 2014).

The research team continued:

Several relationships are key contributors in correlation with boundary-spanning behaviors. These relationships include

- the individual's relationship to the organization, which encompasses the individual's current relationship, previous experience, and proximity, and
- the individual's relationship with the community, including the community's type and
- the individual's proximity to and experience with the community

The variables relevant to the study also follow factors related to both the participants and the organization. These variables include

- how frequently participants exhibit boundary-spanning behaviors
- the prevalence of boundary-spanning roles in the organization; as well as organizational components relevant to boundary spanning. These include policies and guidelines that influence organizational support through training, recruitment, or orientation to specific boundary spanning roles (Sandmann et al., 2014, p. 89-90)

Table 4
Constructs of Boundary-Spanning Behaviors Based on the Weerts and Sandmann Model

Constructs	**Definition**
Technical Practical orientation	The degree to which an individual's behaviors focus on transforming inputs into outputs in a way which enhances the performance of an organization or group
Socio-Emotional orientation	The degree to which an individual's behaviors support developing the knowledge, skills, abilities, and needs of others as well as the reward system and authority structures that exist in a group or organization
Community orientation	The degree to which an individual is aligned with the interests of the community, a unified body of individuals with common interests, external to the individual's organization.
Organizational orientation	The degree to which an individual's behaviors are aligned with their own organization's overarching mission, vision and interests

Table taken from Sandmann, Jordan, Mull and Valentine, 2014. Used with permission.

Instrumentation

We designed the instrument to measure several broad areas: predictor variables including personal and work characteristics, the constructs of boundary-spanning behaviors, and some limited descriptors of the boundaries the individuals span. The constructs of the boundary-spanning activities is the focus of the instrument. The others were included to measure the personal and work characteristics that predict the boundary-spanning activities and the

descriptors of the boundaries assisted in determining the density of the network the individual maintains and that boundary spanner's centrality in the military community network. The conceptual model for my specific study and research questions is depicted in Figure 2.

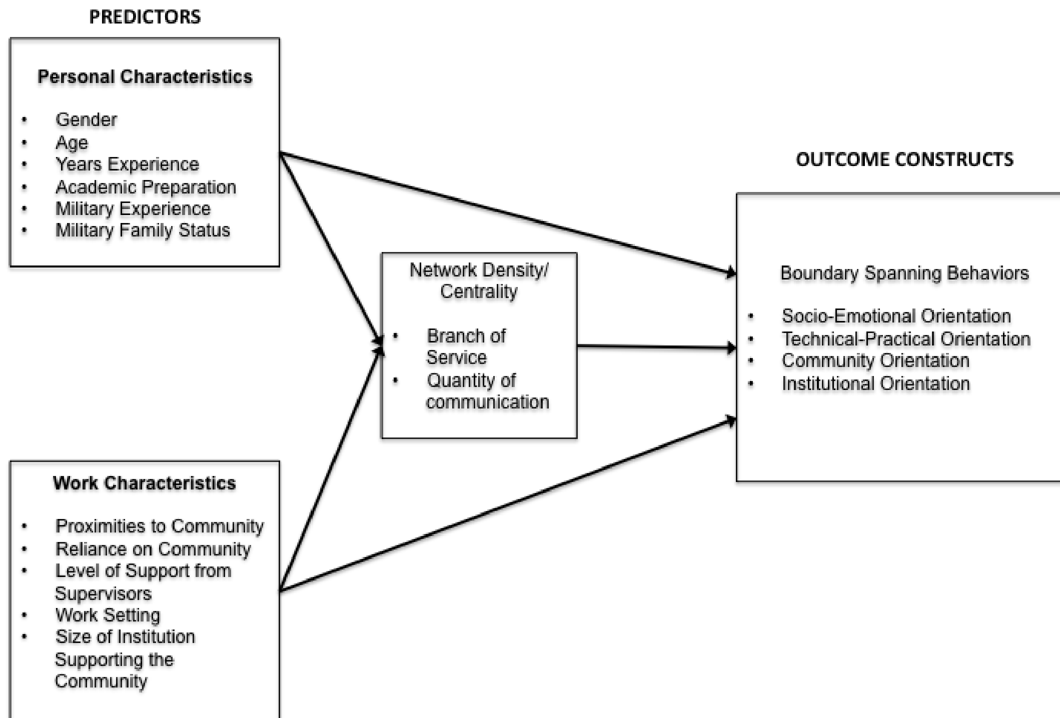

Figure 2. A Conceptual Model of the Study Including the Personal and Work Predictor Variables and the Outcome Constructs.

The instrument was administered through an online self-completion survey. The development of the instrument followed an eight-stage process: (a) construct clarification, (b) item identification, (c) response scale construction, (d) expert review of the survey instrument, (e) validity sort, (f) pilot study, (g) predictor variable identification, and (h) descriptor variable

identification. The first stage of the instrument development process, outlined above, was to clarify the constructs.

Identifying Items to Measure Boundary Spanning Roles

The second stage of the instrument development process was item identification. In order to exhaust the item pool:

> The research team drew on the work of a larger group of emerging scholars studying boundary spanning and community engagement that included representation from multiple universities. Working with a larger research team made it possible to develop a summation of a larger pool of items measuring boundary-spanning behaviors and levels of participation. Sources for the preliminary items included extensive literature review, preliminary data from current research of doctoral students studying boundary spanning at the University of Georgia, and data from the emerging scholars studying boundary spanning and community engagement at other universities. Any item describing boundary-spanning behavior was included in the list and keyed to a potential construct. The initial item pool included 60 technical-practical items, 52 socioemotional items, 48 community orientation items and 34 organizational orientation items. These 194 items were coded by source so that further clarification or review would be possible (Sandmann et al., 2014, p. 90)

Refining Items

Several activities occurred during the fourth and fifth stages of the process. As new information and ideas emerged, the research team reexamined, and in some cases, reversed or clarified decisions from previous stages of development. The number of items by construct at the various stages of the process is noted in Table 5. The two researchers segregated the items within the four constructs initially defined by Weerts and Sandmann (2010), carefully considering the content and construct validity. They (2014) continued:

> Through further refinement of both the original research and the applicable construct, the research team of graduate students and tenure-track faculty members evaluated the item lists. We refined the individual behavior items, combined duplicate items, removed or clarified items that could be classified in more than one of the orientations. Each item was assigned to one possible construct.
>
> In order to remove, consolidate or change an item from the initial item pool, both graduate students had to agree. After several iterations, the graduate students scheduled an item-critique session with one of the faculty members and advanced doctoral students

who had experience in boundary spanning, quantitative measurement, or both areas. In this 2-hour session, five advanced doctoral students provided feedback on unclear items, items possibly not fitting the assumed constructs, and readability of items. The reviewers analyzed 16 technical-practical items, 16 socioemotional items, 17 community orientation items and 16 organizational orientation items. The feedback provided through this session enabled the graduate students to reconsider items, combine like items, and remove those that were unclear.

The graduate students worked together and in consensus to refine and clarify the pooled items. The faculty member on the research team who was serving as the methodologist challenged these students to ensure that the items offered flexibility among contexts for administration of the survey, but were not so vague as to allow multiple interpretations. (Sandmann et al., 2014, p. 91)

Table 5

Item Pool Contents by Stage

	Initial Item Pool	**Refined Item Pool**	**Pre-Validity Sort Pool**	**Final Item Pool**
Technical Practical Orientation	60	16	10	8
Socio-Emotional Orientation	52	16	10	8
Community Orientation	48	17	10	8
Organizational Orientation	34	16	10	8
Total Items	194	65	40	32
Table taken from Sandmann, Jordan, Mull and Valentine, 2014. Used with permission.				

Once the instrument's four central constructs were almost complete with ten items per construct, the research team conducted a validity sort. Twenty-one graduate students in an upper level survey development course completed the validity sort. Participants received a kit containing "instructions for the process; four colored envelopes labeled with a construct and definition on each; and 40 index cards, each with an item from the instrument. Each item on the card had been randomized and numbered for tracking" (Sandmann et al., 2014, p. 92). After collecting the responses from the participants, the research team:

established 15 accurate placements of the identified construct as a threshold for definite inclusion of the item in the final instrument. In order to determine the final items for the pilot study, the graduate students included all items for which 15 or more individuals correctly identified the construct. Fifteen was selected because it represents a greater than 70% placement of the item in the appropriate construct. (Sandmann et al., 2014, p. 92)

In analyzing the results of the validity sort, the team first:

> identified five items in the community construct and one item in the organizational construct that met the standard for inclusion in the pilot study. The research team decided that in some instances the phrasing "individual or groups" had led a number of individuals to incorrectly identify an item as a socioemotional behavior rather than a community or organizational behavior. These phrases repeatedly skewed the placement in a way that differed from the research team's initial consideration. In response, these items were rephrased but not removed. (Sandmann et al., 2014, pp. 92-93)

Next, the team examined socio-emotional and technical-practical orientations. Fewer than eight valid items were identified from the activity sort. After examining the responses and corresponding items closest to the standard of 15, they "determined which were best aligned with the items in the literature. The language of these items was refined based on the literature to more accurately describe the behaviors" (Sandmann et al., 2014, p. 93). The team removed one item that the activity sort participants divided evenly between socio-emotional and technical-practical orientations. After completing the validity sort, the four constructs were ready for a pilot test using the final survey items outlined in Table 6.

Table 6
Final Survey Items Measuring Boundary Spanning Roles

Construct	**Item Language**
Technical-Practical Orientation	I apply my skills to new situations
	I design processes for projects
	I determine solutions for challenges
	I facilitate meetings between individuals or groups
	I identify barriers to success
	I identify issues in communication
	I identify resources to support projects
	I manage projects
Socio-Emotional Orientation	I broker resources among individuals or groups
	I build capacity among individuals
	I build trust with people I interact with
	I identify expertise in individuals
	I maintain relationships with a variety of individuals
	I negotiate power among individuals
	I resolve conflict among other individuals
	I support others in their accomplishments and challenges
Community	I advocate for organizational policy that supports the community

Orientation	I communicate the community's interests to others
	I develop partnerships that benefit the community
	I find ways to meet community needs with organization partners
	I identify expertise in the organization to support the community
	I represent the community's perspective
	I translate organizational information to the community
	I utilize information to support the community
Organizational Orientation	I advocate for community policy that supports the organization
	I communicate the organization's interests to others
	I develop partnerships that benefit the organization
	I find ways to meet organization needs with community partners
	I identify expertise in the community to support the organization
	I represent the organization's perspective
	I translate community information to the organization
	I utilize information to support the organization

Construction of a Response Scale

The research team experimented with multiple response scales, ultimately using a frequency based scale. The following described the process the team followed to agree on a frequency scale:

> During the initial item pool development, two possible response scales were created and examined. One was a Likert 6-point agreement scale from *strongly disagree* to *strongly agree*. The team chose an even-point scale to remove the neutral option from respondents. Because boundary spanners perform a variety of tasks and behaviors, the team assumed that respondents could use the neutral response to signify both agreement and disagreement with the items. The second response scale explored was a frequency scale. The team experimented with frequency scales by altering the item stems to include simple statements and participle phrases to indicate importance.
>
> After the item critique session, the research team concluded that a 6-point agreement scale might not accurately reflect the amount of variation. The research team agreed that a frequency scale could indicate the level of importance an individual attaches to certain activities based on how frequently the respondent engages in those activities. A frequency scale would give adequate variation and could be scaled appropriately for the respondents by altering the items in the community and organizational orientations.
>
> At this time as well, the team decided to alter the items for community and organizational orientation, making them parallel with almost identical items. This occurred because the team realized items in the socioemotional and technical-practical categories could reflect very different behaviors, but behaviors related to community and organizational orientation were identical except for the word community or organizational. This factor had become particularly evident in the validity sort. A boundary spanner may self-identify as high in both community orientation and organi-

zational orientation; however, the behaviors themselves support either organizations or communities. The graduate students took each item in both community orientation and organizational orientation and redesigned them so that each one had both a focus on community and a focus on organization. These items became dyads, forming eight dyads from the 16 items. (Sandmann et al., 2014, pp. 93-94)

Selecting Predictor and Demographic Variables

Identifying Predictor Variables

The next stage in the process was to identify the predictor variables of the roles in which boundary spanners engage as listed in Table 7 with their rationale. It was at this point that some of the specific variables differed among the research team members based on the audience completing the survey. In the administration of the instrument for this study, it was anticipated that the potential sample included those who may have had previous experience with the military either as a military spouse, military member, or military dependent. These individuals may have unique qualifications that strengthen their boundary-spanning activities as they pertain to the military community.

Table 7
Listing and rational of predictor variables

Type	Predictor Variable	Rationale
Personal	Gender	Behaviors may be tied to gender
	Age	Maturity may affect willingness and perception of others to span boundaries
	Years Experience	Those with more experience may span boundaries more easily due to a large network
	Academic Preparation	Degree level may influence the formal job requirements of boundary spanning, specifically as it relates to the task orientation
	Military Experience	Previous military experience may influence orientations
	Military Family Status	Current or prior military family status may influence orientations
Work	Proximity to Community - Physical Work Location	Proximity to the community may influence the social closeness

Work	Proximity to Community – Psychological Location	Proximity to the community may influence the social closeness
	Reliance on Community - Percent of Work with the Community	Reliance on the community may influence the social closeness
	Reliance on Community - Percent of Work with the Community Budgeted with External Funds	Reliance on the community may influence the social closeness
	Reliance on Community – Job Position / Job Classification	Reliance on the community may influence the social closeness
	Level of Support	The level of support from the organization, supervisor, colleagues and community may encourage higher degrees of boundary-spanning activities
	Work Valued	The value of their work with a community by the organization, supervisor, colleagues and community may encourage higher degrees of boundary-spanning activities
	Work Setting	Type of higher education institution may influence individual's ability to span multiple roles
	Size of Institution / Department Supporting the Community	The ratio of staff members working with the community may influence the diversity of boundary-spanning activities and roles
	Number of Individuals working with the Community	The ratio of staff members working with the community may influence diversity of the boundary spanning roles
	State of the organization	The location of the organization may influence the state’s need and desire to support the community based on the impact of the community to the state
Density	Communications with community	Communications with the community may influence boundary spanning orientation

Personal characteristics predictors. Research indicates gender is one influencer in the workplace. Glavin, Schieman, and Reid (2011) found women differ from men based on boundary-spanning work-family demands. While this study does not include components of a boundary spanner’s family, the study controlled for gender to determine if it is a contributing factor to behaviors.

Years experience and age are two predictor variables with mixed evidence supporting them. Tushman (1977) and Tushman and Scanlan (1981a, 1981b) did not conclude whether those effective at boundary spanning moved into positions in their organizations with responsibilities for boundary spanning or whether specific positions encourage boundary-spanning activities. They (1977, 1981) held that perceived competence of individuals within organizations enabled them to engage in boundary-spanning activities and build a larger network. Because achieving perceived competence requires time, both age and years experience within the organization were included. Using these two measures controlled whether the perceived competence occurs within the organization, previous to employment in the organization, or if it had no effect.

Adult education, human and organizational development and management literature examines the influence professionalism and knowledge workers have in the workplace (Bierema, 2010). Educational attainment can be an indicator of many professions. Under agency theory, professionals typically could have more opportunities for opportunism or moral hazards because of the specialized knowledge associated with their positions (Mitchell & Meacheam, 2011). Sharma (1997) proposed professionals have more methods to be controlled by their employing organizations to act in the organization's self-interest. This is especially true in knowledge worker positions (Mitchell & Meacheam, 2011). Organizations' modes of control for these employees are based on reciprocity and commitment rather than bureaucratic control (Mitchell & Meacheam, 2011). Therefore, academic preparation was an appropriate predictor variable influencing boundary spanning roles and activities.

An individual's introduction to and experience with a community may influence how they engage or do not engage with that community. Several researchers found that group

identification influenced productivity, intergroup relations, and organizational affiliation (Bartel, 2001; Richter et al., 2006; Sluss & Ashforth, 2008). In this study, the interested affiliation was the military community. The individual's previous military experience or military family status may have different influences. One with previous military experience (i.e. veterans) would have more intimate knowledge of the military structure and its internal operations. It was conjectured that having this internal knowledge may assist in navigating the power dynamics in working with the military influencing boundary-spanning behaviors.

Additionally, being a part of a military family either currently or previously may build an empathy or additional affiliation towards the military community, similar to the group identification influences (Bartel, 2001; Richter et al., 2006; Sluss & Ashforth, 2008). Group identification as a member—past or present—of a military family may influence boundary-spanning behaviors with the military community. The institutional support for military families is greater than in previous generations (Huebner, Mancini, Bowen, & Orthner, 2009). This new institutional support, too, may affect group identification with those affiliating in the most recent period.

Work/organizational characteristics predictors. Grounded in the literature but also including discussions with practitioners in the military-university relationships, personal experience, and deliberations with the study methodologist, I selected appropriate work or organizational characteristics and explain the rationale behind those decisions.

Based on the literature, proximities to the community are included. I intentionally described proximity as plural as one's proximity can be defined in several ways. Borgatti and Foster (2003) reviewed how physical proximity, beliefs and attitudes, and interactions are interrelated. Adkins (2011) summarized three types of proximity: geographic, organizational

and technological. The focus is on geographic proximity in order to gauge the physical closeness of a boundary spanner and his or her community. While other researchers have found that technological proximity can eliminate some physical barriers (see Adkins, 2011 for a full description), the nature of university-community partnerships encourages personal relationships and experiences. The organizational proximity Adkins (2011) described reflects the personal characteristics I used of military family and military status.

Reliance on the community for one's work was included with similar variables. The differences among similar variables may offer significance to the responses. The reliance on the community was measured based on an individual's self-described percentage of their work with the community. A second, related variable was measured through an individual's percentage of their work budgeted to work with a specific community. These two variables attempted to gauge the respondent's agency towards the community and their organization/institution. As an individual's budgeted time to support the community increases, that individual has a financial incentive to act in the interests of that community. If there is not a great reliance on the community, the individual may lack the financial incentives to serve best the community and may align more closely to the organization. This reliance on the community attempted to capture the impact of the principal-agent relationship (Van Slyke, 2003, 2007). A final type of reliance on the community was the specific job title or role classification. For example, a staff member in a military and veterans center may respond more closely to the military community. A field faculty member, too, may more likely identify with the community. Thus, several job titles and job classifications were captured.

The boundary spanner's level of support and the perceived value of the work also may impact the boundary spanning roles and activities. In her unpublished dissertation, Skolaski

(2012) found that boundary spanners needed and received support of varying degrees from the organization, supervisor, colleagues, and the community partners. Additionally she (2012) found varying degrees of value for the work completed by these boundary spanners. Her research was limited to seeing if differences in value and support were perceived. Using her items for measuring level of support and work value, I expanded her study to determine how differences influence boundary-spanning behaviors.

The factors describing the organization and the number of individuals involved in serving the community were included to determine if there is a difference among settings. I hold that the type of higher education institution may influence the ability or desire to serve the community. Larger, public institutions have greater resources and a historic tradition to serve the community (Kellogg Commission on the Future of State and Land-Grant Universities, 1999). Other institutions may not have a historic or current mission that involves serving the community through the teaching and research occurring on their campuses. Additionally, the size of the organization and the number of individuals within a boundary spanner's organization and department supporting community engagement within a specific community may influence the activities of boundary spanners. For example, a large group of individuals working with the military community in one organization may strategically spread the boundary spanning tasks among staff members. This concept corresponded to the internal and external communications roles Tushman and Scanlan (1977) found. For approximately a decade, the Carnegie Classification for Community Engagement designation has highlighted higher education institutions systematically embedding two-way engagement between the institution and the community (Carnegie Foundation for the Advancement of Teaching, 2014). This institutional

classification may influence the boundary-spanning behaviors of individuals working for these institutions.

Other predictors. One other variable was included in the instrument. The military community is diverse and has numerous boundaries within the community itself. In an effort to measure the individual boundary spanner's placement within the network she or he maintained, I collected the quantity of communication with each military service branch. While I have called this network density or centrality, this density or centrality was not measurable from a social network analysis method (Fredericks & Durland, 2005). Centrality is "the degree to which an actor is in a central role in the network" and network density is "the proportion of the total available ties connecting actors" (Fredericks & Durland, 2005, p. 18). Centrality is analyzed at the individual level while density's unit of analysis is the network. This variable helped describe the network with the military community and among the many sub-departments and organizations of the Department of Defense. Adkins (2011) found the managerial level of responsibility impacted the interorganizational collaboration. Boundary spanners with different levels or geographic areas of responsibility may have different boundary-spanning roles and may have different quantities of communication with the various military subunits. Examining communications in boundary-spanning roles was consistent with Aldrich and Herker (1977). Without this additional variable, we had an idea of the boundary-spanning behaviors, but there was no record of with whom these activities occur. This variable was neither solely personal nor organizational. It was, however, a predictor of boundary-spanning behaviors and was included.

Finalizing the Survey Instrument

Pilot Study

Sandmann, Jordan, Mull, and Valentine (2014) conducted a pilot study to examine and confirm the instrument. Specifically, the pilot study attempted to answer the following research questions:

1) Are the proposed data collection methods effective?
2) Is the instrument reliable and valid?

The researchers used a population for the pilot study with similar characteristics to the final study, but one that remained distinct from the specific population of this study. The population included the Georgia Cooperative Extension faculty and staff. Each respondent completed the 48-item questionnaire through Qualtrics, a web-based survey system.

The demographic and predictor variables paralleled the final study:

> The demographic and predictor variables identified for this audience attempted to mirror similar predictor variables for the researchers' final studies. The demographic and predictor variables included county work setting, residence of the employee, length of employment, current position and rank, percentage of time budgeted by program area, estimated percentage of time spent by program area, estimate of salary source, gender, highest degree obtained, race/ethnicity, and year of birth. (Sandmann et al., 2014, p. 95)

Two of the researchers currently serve as public service faculty and were members of the potential population. In order to gain access to this population, the team:

> used a list of Georgia Cooperative Extension faculty and staff provided by and with the permission of the associate dean for Extension at the University of Georgia. The list encompassed all e-mail addresses of the EXTALL e-mail list for Cooperative Extension in Georgia. The research team removed duplicate addresses and approximately 140 generic county extension office addresses. The generic county office e-mail addresses are intended to serve as a generic e-mail address for the local office, and the county secretary typically forwards e-mail from these addresses to the individuals intended to receive the information. This yielded 949 potential participants with unique e-mail addresses. (Sandmann et al., 2014, p. 95)

The team completed a data collection plan to emulate each respective team member's final study. Each member of the Cooperative Extension listserve:

> received a prenotification from the associate dean for Extension. Each individual then received a unique invitation from the graduate students through Qualtrics to complete the survey. The survey included one follow-up reminder, which was sent 8 days after the initial request. Of the 949 potential respondents, 377 participated. (Sandmann et al., 2014, p. 95)

This response rate of just below 40% cannot be expected to hold across other groups as this population does not represent the population of this current, final study.

The research team determined the data collection methods were effective and instrument was both reliable and valid. The instrument resulted in a high reliability:

> The technical-practical and socioemotional items had an alpha of .893 and .839, respectively. The community orientation and the organizational orientation items had a reliability of .923 and .907, respectively. In reviewing the reliability of each item within a construct, removing any item did not significantly increase the reliability of the construct. In looking at the technical-practical orientation construct, only one item's removal resulted in increasing the reliability an insignificant amount. In the socioemotional, community, and organizational orientations, no item's removal resulted in increasing reliability. (Sandmann et al., 2014, p. 99)

Because intercorrelation among items was generally high and because there were some concerns about discriminant validity of the measures, we decided to ensure that no items duplicate. The team completed an inter-item reliability test to remove any equivalent semantic items. Although thirteen (13) of the 496 inter-item correlations were above the threshold set, the "researchers agreed that the correlations were high but reasonable. Thus, no items were changed" (Sandmann et al., 2014, p. 97). After completing the pilot study, the instrument's central constructs of boundary spanning roles and activities were ready for study in the proposed population.

Study Population

The purpose of this study was to understand how military contractors engage in boundary-spanning behaviors. But military contractors are not a monolithic group. They take many different forms. Some work with the private sector. Others work with different levels of the public sector. They work for both large organizations and may work as independent contractors. The sample for this study included university faculty and staff working with military family audiences. This definition was broad enough to include those who work part-time and full-time with military communities yet specific enough to exclude those collaborations with the military in weapons and other basic research. Family services was broad enough to include most social services where accountability and contract fulfillment is more challenging (Brown & Potoski, 2004; Brown et al., 2006; Martin & Kettner, 2010; Van Slyke, 2007). Challenges in accountability and contract fulfillment provided opportunities for boundary spanners to serve as a relational contract manager. To the military, these individuals could be called contractors.

This group and military family service contractors provided a focused examination but also large enough to give a broad perspective for rigor, reliability, and validity. The definition of a contractor varies. For purposes of this study, the university employee had to self-identify themselves as engaged with the military community. While I may generically classify all of them as contractors for the military, these individuals may not self-identify themselves as contractors and the military may not call them contractors. This was a challenge in examining boundary spanners. They can have and manage a dual identity (E. George & Chattopadhyay, 2005; Richter et al., 2006) leading to classification difficulties. I defined a military family services (university) contractor for purposes of this study as anyone working to support military children, youth, military spouses, military members, and/or veterans and who was not excluded

by the following conditions: (a) receiving a paycheck as a full-time civilian employee of the Department of Defense, or (b) receiving a paycheck as a full-time/active duty military member in the United States Armed Forces. I must note the full-time caveat to this definition as military members may serve in the inactive or selective reserve, receive a paycheck for their "weekend warrior" duty and may return during the work week as either a federal civilian or a contractor. For example, an individual's civilian job may be as a systems analyst for a private firm working with the Defense Department, but she may also serve in an Army Reserve function in the rear detachment (supporting those at home during a deployment). This individual's military function is a type of family services, albeit not their *full time* position. The number of individuals working in family services as a contractor and classified as part of the selected reserve of the United States Armed Forces was likely low and insignificant in this study. In attempting to define military contractor and the social closeness of the individual to the military, I dismissed defining military contractor as one who holds a *CAC* (Common Access Card) card. These cards are standard identification cards for military personnel, civilians and eligible contractor personnel. Unfortunately, not all contractors in the Department of Defense receive a CAC card and most working for universities do not receive them.

Table 8
Initial Publicly Available Respondents

Group	Number	Listserve
4-H Military Liaisons	54	militaryliaisons@lyris.nifa.usda.gov
OMK Coordinators	108	OMK-L@listserv.ksu.edu
Extension Military Families Community of Practice	232	Military-families@lists.extension.org
Georgia Military Education Listserv	71	RACMIL@listserv.uga.edu

In the design of this study, the sample selected includes those who work for higher education institutions, universities, that are working with military audiences. The advantages of

this sample included a large pool from which to take the sample, a diversity of organizational characteristics but with a common link, a freer environment without the confidentiality that may occur in the private sector and a preexisting relationship with this sample population.

The sample was diverse, active in a variety of responsibilities. Although the sample was strong, extending the findings to other groups of military contractors should be only done through logical inference and with caution.

This study's method included a modified snowball sample where publicly available information was used to create the initial pool. This initial pool included individuals from four publicly available listserves and communities of practice. The number of individuals included in the initial pool via the listserves is outlined in Table 8. Several individuals belonged to multiple listserves and duplicates were removed. After removal, 413 unique email addresses received the invitation to participate. The Qualtrics survey collection system tracked the unique links and the number of times individuals used their links to complete or start the survey. Of the 413 unique links, 149 of the links were used to start 237 individual surveys. Of this group that began the surveys, 189 completed them and 178 were deemed usable.

Table 9
Data Collection Responses

Number	Description
413	Unique collection links distributed
149	Unique collection links used
237	Surveys started of the unique collection links used
189	Completed surveys
178	Usable surveys

The respondents ranged in age from 24 to 78, with a mean age of 49.6. The respondents were 28.4% male and 71.6% female. The number of years in their current position ranged from half a year to 37 years with a mean of 8.8 years in their current position. The number of years

employed by their current higher education institution ranged from half a year to 50 years with a mean of 13.8 years. Almost half (46.9%) of the respondents had a master's degree with 29.7% holding a doctorate or specialists degree. The remaining respondents had a bachelor's degree or lower. The respondents also indicated the percentage of their salary from military contracts, grants or other military funding sources. The mean of the salary percentages from military sources was 28.5%. A summary of the personal characteristics of the respondents completing the survey instrument is provided in Table 10.

Table 10
Personal Characteristics of Study Respondents (n=178)

Variable		Value	
Age (n = 173)		M = 49.6	SD = 12.4
Gender (n = 176)			
	Male	n = 50	28.4%
	Female	n = 126	71.6%
Years in Current Position (n = 176)		M = 8.8	SD = 8.3
Years Employed by Current Organizations (n = 167)		M = 13.8	SD = 10.0
Level of Highest Educational Degree (n = 175)			
	Associates or Below	n = 3	1.70%
	Bachelors	n = 38	21.70%
	Masters	n = 82	46.90%
	Specialists	n = 3	1.70%
	Doctorate	n = 49	28.00%
Hours worked in Job Each Week (n = 176)		M = 47.47	SD = 9.46
Percent Salary from Military Contracts/Grants		M = 28.48	SD = 40.19
Percent Salary Supporting Military Community but not military funds (n = 173)		M = 6.79	SD = 20.56
Percent Salary (All other non-military) (n = 174)		M = 64.77	SD = 42.40

The work characteristics of the study respondents are summarized in Table 11. An overwhelming majority of the size of the higher education institutions represented in the study were research universities with 82.7% being doctoral or research universities as indicated by the Carnegie Classification. The remaining 17.3% of institutions all were master's level colleges and universities. The type of institution was similarly skewed towards large, four-year universities with 54.9% of the respondents coming from large four-year, highly residential universities and 27.1% coming from large four-year, primarily residential universities.

Table 11
Work Characteristics of Study Respondents (n=178)

Variable		Value	
Institution Size (n = 133)			
	RU/VH: Research Universities (very high research activity)	n = 23	17.30%
	RU/H: Research Universities (high research activity)	n = 63	47.40%
	DRU: Doctoral/Research Universities	n = 24	18.00%
	Master's/M: Master's Colleges and Universities (medium programs)	n = 15	11.30%
	Master's/S: Master's College and Universities (smaller programs)	n = 8	6.00%
Institution Type (n = 133)			
	L4/HR: Large four-year, highly residential	n = 73	54.90%
	L4/R: Large four-year, primarily residential	n = 36	27.10%
	L4/NR: Large four-year, primarily non-residential	n = 9	6.80%
	M4/HR: Medium four-year, highly residential	n = 7	5.30%
	M4/4: Medium four-year, primarily residential	n = 2	1.50%
	M4/NR: Medium four-year, primarily nonresidential	n = 2	1.50%
	S4/HR: Small four-year, highly residential	n = 2	1.50%
	S4/R: Small four-year, primarily residential	n = 1	8.00%
	VS4/HR: Very small four-year, highly residential	n = 1	8.00%

Data Collection

Dillman's (2009) tailored design method informed the data collection strategy. Using social exchange theory in the instrument, I built trust and rapport with potential respondents by communicating with them, highlighting the benefits of participation and minimizing the perceived costs. The collection occurred through a web-based survey delivered through an email link distributed through publicly and private available records. Potential respondents who are known through listserves and other publicly held information allowed for multiple communications.

Email was an adequate distribution method for the survey requests because the intended respondents are employees of universities, most in professional positions. Email was an accepted tool required in the course of business for these individuals. The communications strategy (Table 12) presented the four contacts with potential respondents which Dillman (2009) indicated leads to a higher response rate.

The data was collected using the University of Georgia's Qualtrics software subscription. Qualtrics offered flexibility in presenting information and questions following an individual's responses. Qualtrics also had a preformatted identity to the University of Georgia, adding credibility as a university-supported project rather than an individual collecting data and potentially undermining military operational security. Qualtrics, as a purchased product of the University of Georgia, provided technical assistance, secured data, and allowed for collaboration.

For the groups indicated in Table 8 above, a multiple contact strategy summarized in Table 12 was utilized. The initial contact for each listserve was an introductory notification by a representative of the United States Department of Agriculture who oversees military partnerships from a federal partner level and works close with land-grant university faculty and staff or the

applicable coordinator of the listserve. While those affiliated to USDA through the Cooperative Extension System were not the only potential subjects, there were a large number affiliated and a study with support from USDA may add credibility across multiple universities. The Georgia military education listserve introductory message was sent by the military outreach coordinator working with the schools in the University System of Georgia. Less than a week later, the sample population received a personalized message with unique link. Personalization, as possible, was used to build rapport with the respondent. The standard set of email notifications to the participants included: (a) request for participation containing the hyperlink to the survey and the research consent agreement, (b) first reminder to those receiving the survey, and (c) a final reminder to those who received the survey. An electronic thank you was delivered following the close of the survey to anyone who started the survey. Of the 413 unique email addresses, three (3) had unresolved delivery issues.

Table 12
Communications Strategy

Communications Strategy	
Week Zero	• Initial Contact Introducing the Study
Week One	• Personalized email with unique link
Week Three/Four	• Thank you note to those completing the survey • Reminder to those who have not started the survey • Reminder to finish the survey for those who began it
Week Five	• Thank you to all participants who began or completed survey

Some individuals received only one communications. In order to receive the diversity of individuals working with the military, even those with more limited involvement with military families, I could rely solely on publicly available information. A strength of boundary spanners is the network of individuals they maintain. To capture a proxy of the network of individuals, I sought additional respondents through those who are publicly known. In the request to those who work at the state level in Cooperative Extension, for example, I requested they forward the

request to participate to those county-based faculty who collaborate with military audiences without formal military related titles or positions at their universities. I encouraged these individuals to forward the participation request to collaborators and known individuals within their state. This request was for all respondents in the study.

Through this data collection process, 237 surveys were started from 149 unique links. This indicates that each unique hyperlink was used with a mean 1.59 times with a maximum of a hyperlink used 11 times. Of the 189 returned questionnaires, 178 were deemed usable based on their completion of all 32 items in the boundary spanning scales.

Data Preparation

The collected 237 responses were exported from Qualtrics into SPSS for data cleaning. The first step in preparing the data was to remove those surveys that had not been completed. This resulted in 189 completed surveys. Eleven questionnaires were eliminated from the dataset that had one or more missing answers to the 32 items creating the boundary-spanning behavior scales. Several items required recoding. A respondent's age was calculated by subtracting their birth year from the current year (2014). I then cleaned the number of years in one's current position and the number of years employed by one's higher education institution to eliminate text and create integers.   Fifteen individuals checked "Other" in their position title and I recoded their responses to best fit into the other categories, when intent was clear. Most were able to be reclassified into faculty or classified staff positions based on the titles respondents used. For items that had a checkbox response in Qualtrics, unchecked items appear as if they were missing responses in SPSS. For transparency in frequencies and other statistics, I recoded items that were seen but not checked to return an appropriate response in SPSS. These items included items such as working on a military installation regularly, veteran status, and job

classification/titles. Recoding of percentage of time spent with the military community, budgeted time with the military community, and military related salary occurred by subtracting the non-military related time or salary from 100. Three predictor scales were created from several items. Work valued and work supported scales were created from five specific items in each scale. A communications with service branches scale was calculated from the responses of communications with each of the military service branches and components (Active Air Force, Air Guard, Air Reserve, etc.). Finally, respondents replied with their higher education institution. With that information, I was able to create additional characteristics to describe the sample including the institution size, institution type, control, community engagement classification, and land-grant status. The first four were coded based on the Carnegie Classification of higher education institutions and the final characteristic was determined through a publicly available list from the United States Department of Agriculture.

After preparing the personal and work characteristics, in SPSS, I ensured that each variable was classified appropriately as ordinal, nominal or categorical. The 32 boundary-spanning behaviors were combined to create the four (4) scales for each of the constructs: (a) technical-practical orientation, (b) socio-emotional orientation, (c) community orientation, and (d) institutional/organizational orientation. Additionally, a final construct of all 32 items was created to measure the boundary-spanning behaviors. This final construct was included only for descriptive purposes.

In SPSS, the frequencies, means and standard deviations for each item on the questionnaire were then calculated. After reviewing the results of each, I concluded that the range of responses was appropriate. The next step was to calculate the coefficient alpha for each of the boundary spanning construct scales to examine reliability. Each of the scales

approximated a normal curve. The four constructs each had a theoretical range of 6 to 48. The means ranged 34.54 to 38.29. For the four construct scales, alphas ranged from a high of .94 to .89. Specifically, coefficient alphas ran in descending order as follows: .94 for *community orientation*, .92 for *technical-practical orientation*, .92 for *organizational orientation*, and .89 for *socio-emotional orientation.* A summary of the scales reliabilities is depicted in the table below. Histograms of each scale frequency are presented in the figures below. Three other scales were created from items indicating support, value for military community work, and communications with the military service branches. These items were not evaluated for reliability as the items came from a previously published examination and were not directly related to the research questions, but the reliability measure was provided. Their predictive value, however, was examined.

Table 13
Distribution and Reliability of Key Measures

Scale	Number of Items	M	SD	Mean Item Mean	Alpha
Construct Sub-Scales					
Technical-Practical Orientation	8	38.3	7.5	4.8	0.92
Socio-Emotional Orientation	8	35.5	7.0	4.4	0.89
Community Orientation	8	35.1	8.7	4.4	0.94
Organizational Orientation	8	34.5	8.4	4.3	0.92
Total Boundary-Spanning Behaviors	32				
Overall Support for Military Community Work	5	23.4	5.0	4.7	0.87
Overall Value for Military Community Work	5	21.9	5.7	4.4	0.88
Communications with Military Components	12	32.66	12.6	2.7	0.94

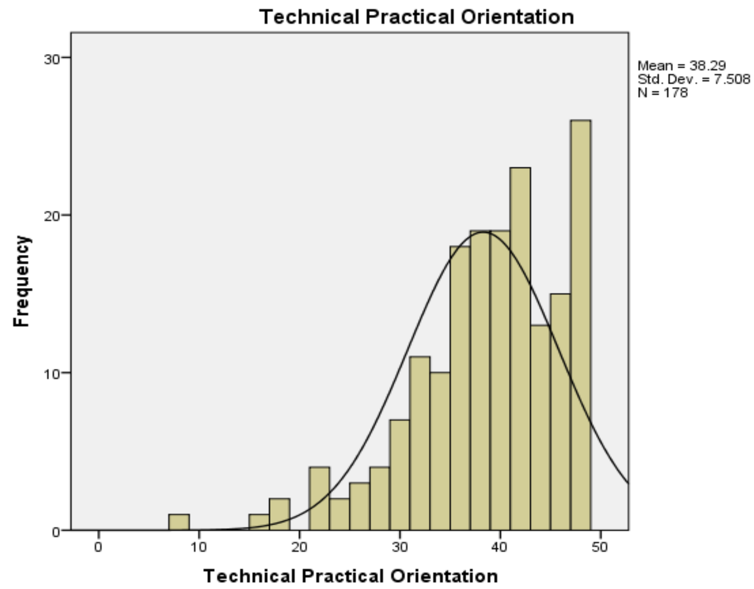

Figure 3. *Distribution of Technical Practical Orientation Scale*

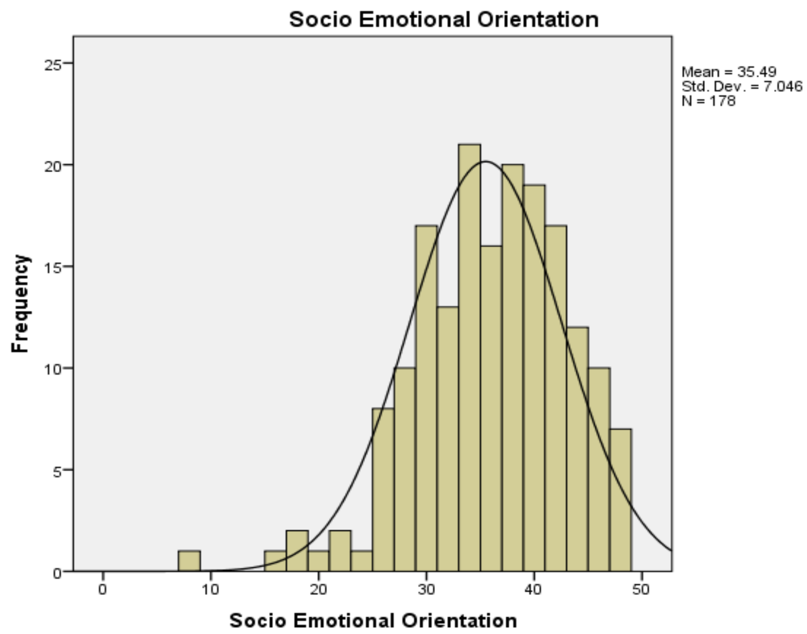

Figure 4. *Distribution of Socio-Emotional Orientation Scale*

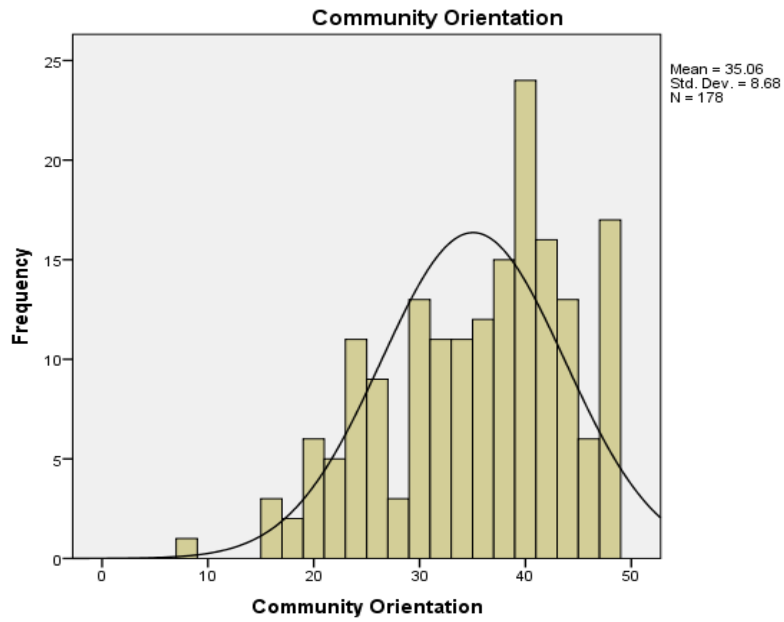

Figure 5. *Distribution of Community Orientation Scale*

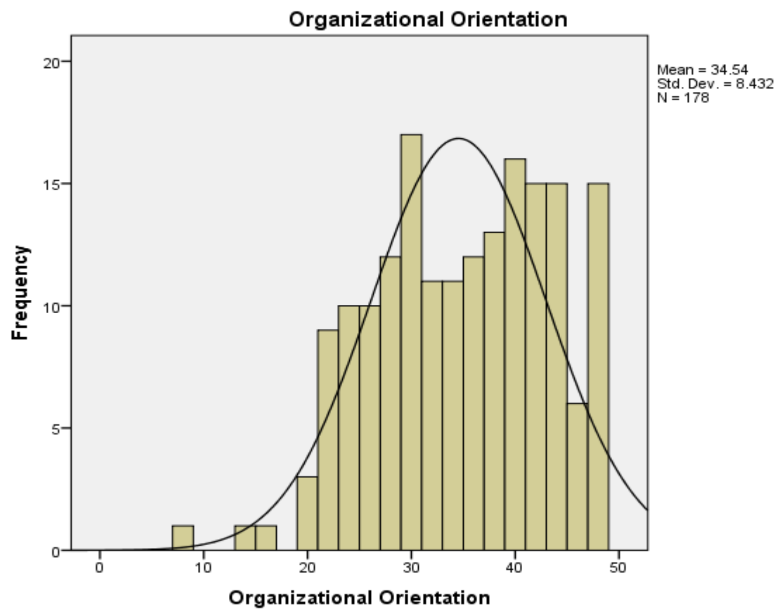

Figure 6. *Distribution of Organizational Orientation Scale*

The final analysis in data preparation was to determine the intercorrelation among the four construct scales. The correlation coefficient between every pair of scales was significant at the level of .01. Table 14 presents the findings. Generally speaking, these correlations were not only significant but also substantial as can be seen by the coefficient of determination, which demonstrates the amount of shared variance. This led ultimately to add research question four where we conducted a factor analysis to derive empirically a conceptual structure for the instrument.

Table 14
Intercorrelations Among Orientation Construct Scales

	n	r	r^2
Technical-Practical with Socio-Emotional	178	0.92	0.85
Technical-Practical with Community	178	0.85	0.72
Technical-Practical with Organizational	178	0.84	0.70
Socio-Emotional with Community	178	0.82	0.67
Socio-Emotional with Organizational	178	0.83	0.70
Community with Organizational	178	0.93	0.87

Data Analysis

The data were analyzed using SPSS 21 available at the University of Georgia. Appropriate statistical analyses were used to answer the research questions. In addition to descriptive statistics, the analysis included exploratory factor analysis and correlations to determine variable relationships.

Research question #1 (What specific boundary-spanning behaviors are prevalent in the population of university-military contractors?) was addressed by rank ordering the 32 boundary spanning items. The mean of each item was calculated and ranked from highest to lowest. The items were also grouped by construct to provide a rank order of which constructs were most commonly used.

Research question #2 (To what extent are boundary-spanning behaviors explained *individually* by personal or work/organizational characteristics in the population of contractors?) was addressed by a series of bivariate analyses to determine the separate predictive power of the identified personal and work/organizational characteristic predictors on the four boundary-spanning behavior constructs.

Research question #3 (To what extent are boundary-spanning behaviors explained *jointly* by personal or work/organizational characteristics in the population of contractors?) was addressed by a series of multivariate analyses to determine the separate and combined predictive power of the identified personal and work / organizational characteristic predictors on the four boundary-spanning behavior constructs. Specifically a forward regression method was utilized. Because the goal of this research question was to maximize explanatory power of covariance, we used forward loading stepwise regression. Maximizing explanatory power achieved the highest r-squared valued with a parsimonious and meaningful model.

Research question #4 (Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions?) was addressed by exploratory factor analyses to determine how the data fit a separate, underlying conceptual structure other than the one used to define this study. We used exploratory factor analysis because the theoretical work that we did in constructing the survey was challenged by the pattern of intercorrelations (see table 14) among the measures. Consequently, we wanted to ask the naïve question "what is going on" rather than the question "do I have it right?"

Limitations

There are two primary limitations to this study. The respondents represented a cross section of university-military contractors engaged in the military family services. But as stated previously, military contractors are not monolithic. Extending the findings to other groups of contractors should only be done with logical inference and caution. The modified snowball sampling technique also limits the generalizability of the findings to all university-military contractors.

Because of the exploratory multivariate analyses used in this study—forward loading stepwise regression and exploratory factor analysis—caution should be exercised in attempting to generalize these findings beyond the original population. Replication of the exploratory findings through certain confirmatory analysis will be necessary before generalizability can proceed with confidence.

CHAPTER IV

FINDINGS

The purpose of this study was to investigate the key boundary-spanning behaviors of contractors, employees in higher education institutions, working with military families or the Department of Defense. This exploration examined the predictors of these boundary-spanning behaviors. This chapter presents the results of the statistical analyses described in the preceeding chapter. The findings will be presented in relation to the four research questions:

1) What specific boundary-spanning behaviors are prevalent in the population of university-military contractors?
2) To what extent are boundary-spanning behaviors explained *individually* by personal or work/organizational characteristics in the population of contractors?
3) To what extent are boundary-spanning behaviors explained *jointly* by personal or work/organizational characteristics in the population of contractors?
4) Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions?

Findings Related to Research Question #1

The first research question asked, "What specific boundary-spanning behaviors are prevalent in the popuation of university-military contractors?" Table 16 depicts the means of the

32 boundary-spanning behaviors. Overall, the means are high. This is not necessarily suprising as these individuals are navigating between the community and their organization. The item means ranged from 3.29 to 5.44 on a 1 (never), 2 (rarely), 3 (sometimes), 4 (often), 5 (usually), and 6 (always) pont scale. Table 16 displays a rank order listing of boundary spanning scales. The frequency table of each item is located in Appendix G.

The top nine highest ranked practices included four of the technical-practical orientation items and three of the socio-emotional items. No items from the community orientation were included in the top nine.

The ten lowest ranking practices included four of the organizational orientation items and three of the socio-emotional and community orientation items. There were no items from the technical-practical behaviors in the lowest ranking ten items.

The mean item mean for the four boundary-spanning behaviors construct scales ranged from 4.32 to 4.79. These item means were relatively high and, therefore, have restricted variation. The behaviors scale reported with the most frequent use was technical-practical orientation while organizational orientation repesented the lowest frequency. Table 15 displays the full information for the four boundary-spanning behavior scales.

Table 15
Rank Order List of Boundary Spanning Scales

Rank	Scale	Number of Items	M	SD	Mean Item Mean	Alpha
1	Technical-Practical Orientation	8	38.29	7.51	4.79	0.92
2	Socio-Emotional Orientation	8	35.49	7.05	4.44	0.89
3	Community Orientation	8	35.06	8.68	4.38	0.94
4	Organizational Orientation	8	34.54	8.43	4.32	0.92

Table 16

Rank Order Listing of Boundary-Spanning Behaviors (n = 178)

Rank	Item	Item Language	M	SD	Construct
1	11	I maintain relationships with a variety of individuals.	5.44	0.89	Socio-Emotional Orientation
2	13	I build trust with people I interact with.	5.34	0.9	Socio-Emotional Orientation
3	15	I identify resources to support projects.	5.04	1.09	Technical-Practical Orientation
4	6	I apply my skills to new situations.	4.99	1.06	Technical-Practical Orientation
5	3	I manage projects.	4.94	1.2	Technical-Practical Orientation
6	9	I support others in their accomplishments and challenges.	4.93	1.06	Socio-Emotional Orientation
7	14	I facilitate meetings between individuals or groups.	4.88	1.13	Technical-Practical Orientation
8	28	I represent the organization's perspective.	4.79	1.17	Organizational Orientation
9	32	I utilize information to support the organization.	4.76	1.15	Organizational Orientation
10.5	5	I determine solutions for challenges.	4.7	1.13	Technical-Practical Orientation
10.5	31	I utilize information to support the community.	4.7	1.2	Community Orientation
12	16	I identify barriers to success.	4.69	1.15	Technical-Practical Orientation
13	24	I develop partnerships that benefit the organization.	4.63	1.12	Organizational Orientation
14	25	I translate organizational information to the community.	4.58	1.22	Community Orientation
15	12	I broker resources among individuals or groups.	4.56	1.31	Technical-Practical Orientation
16	23	I develop partnerships that benefit the community.	4.54	1.19	Community Orientation
17	22	I communicate the organization's interests to others.	4.51	1.27	Organizational Orientation
18.5	1	I build capacity among individuals.	4.48	1.23	Socio-Emotional Orientation
18.5	4	I design processes for projects.	4.48	1.31	Technical-Practical Orientation
20	10	I identify issues in communication.	4.45	1.23	Socio-Emotional Orientation

Table 16 (continued)

Rank Order Listing of Boundary-Spanning Behaviors (n = 178)

21	21	I communicate the community's interests to others.	4.38	1.34	Community Orientation
22	29	I advocate for organizational policy that supports the community.	4.32	1.4	Community Orientation
23	17	I find ways to meet community needs with organization partners.	4.27	1.24	Community Orientation
24	26	I translate community information to the organization.	4.26	1.26	Organizational Orientation
25.5	19	I identify expertise in the organization to support the community.	4.24	1.27	Community Orientation
25.5	2	I identify expertise in individuals.	4.04	1.31	Socio-Emotional Orientation
27	27	I represent the community's perspective.	4.02	1.46	Community Orientation
28	18	I find ways to meet organization needs with community partners.	4.01	1.35	Organizational Orientation
29	20	I identify expertise in the community to support the organization.	3.81	1.44	Organizational Orientation
30	30	I advocate for community policy that supports the organization.	3.76	1.6	Organizational Orientation
31	7	I resolve conflict among other individuals.	3.52	1.33	Socio-Emotional Orientation
32	8	I negotiate power among individuals.	3.29	1.35	Socio-Emotional Orientation

Findings Related to Research Question #2

The second research question asked, "What personal and workplace characteristics *individually* explain levels of boundary-spanning behaviors in the population of contractors?" To address the question, simple correlation, t-tests, and ANOVA analyses were used to determine the bivarate relationships between the predictor variables and the four boundary-spanning behavior scales.

The type of analysis used depended on the level of measurement of the specific predictor. To determine the bivariate relationships, a Pearson Correlation was obtained for each of the boundary spanning behavior constructs. To determine the relationship between the boundary-spanning behavior scales and the dichotomous variables, t-tests were conducted. Finally, the one-way ANOVA analysis was conducted to determine the relationship between the boundary-spanning behavior constructs and the categorical variables including educational attainment, institution size/setting and institution type. When the correlations were significant, the correlation coefficients were squared to obtain the coefficients of determination. This statistic provided the proportion of variance in each dependent variable explained by each of the independent variables separately. Each of the predictor variables is included in the tables below, regardless of the significance. With so many statistical tests, errors can occur. This requires adjusting for multiple testing. Multiple testing theory provides a control for error rates (Bender & Lange, 2001). There is not a set standard for controlling for the different types of error rates (Bender & Lange, 2001).

As seen in the tables below, many of the predictors achieved statistical significance. In order to avoid a type I error, a false positive, we set the required signficance at $p < .01$. This has a secondary benefit when conducting an exploratory study like this where there are many

predictors. It highlights those in which there is the most confidence they influence the dependent variable. Each table includes the predictor variables that fall within the $.01 < p < .05$ range. This was to demonstrate the strong confidence in some predictors compared to others. This decision was consisent with Bender and Lange (2001), particularly as this was an exploratory study and does not apply to medical research where errors are more costly.

Predictors of Technical-Practical Orientation

Thirteen of the predictor variables demonstrated a significant correlation with the technical-practical orientation behaviors. Frequency of the communications with military service branch components explained 15.5% of the observed variance in technical-practical orientation. The other statistically significant correlates were: frequency of meeting face-to-face with military family service members (14.6%), actual time to work with military audiences (11.8%), frequency of visiting a military installation (11.2%), frequency of visiting a guard/reserve facility (10.6%), frequency of meeting face-to-face with military service members/families (10.4%), budgeted time to work with military audiences (9.6%), perceived support of military-related work 9.3%), perceived value of military related work (5.5%), and percentage salary from military connected funds (5.3%). Three of the t-tests resulted in signficant influence of the technical-practical orientation. There was a significant effect for working on a military installation, $t(62.68) = 3.262$, $p <.05$ with those working on an installation regularly having a higher technical-practical orientation. Those teaching groups of service members and their families also had a higher level of technical-practical orientation, $t(176) = 2.092$, $p<.05$. Finally, those serving as the Operation: Military Kids Coordinator had higher levels of a technical-practical orientation, $t(176) = 3.112$, $p<.05$. Table 17 summarizes the test statistics of predictor variables for the technical-practical orientation for all the variables.

Table 17

Correlations of Predictor Variables with Technical-Practical Orientation

Personal Characteristics Predictor Variable	Test Statistic				
	Test	Results	p	r^2	
Age	Pearson	r = -0.03	0.66	0.00	
Years in Current Position	Pearson	r = -0.06	0.40	0.00	
Years Employed by Current Institution	Pearson	r = -0.12	0.12	0.01	
Gender	T-Test	t (174) = -.71	0.48	-	
Veteran Status	T-Test	t (172) = 1.0	0.32	-	
Spouse / Partner Veteran Status	T-Test	t (159) = 1.47	0.14	-	
Immediate Family Member Veteran Status	T-Test	t (168) = -1.43	0.15	-	
Educational Attainment	Spearman	r_s = 0.03	0.73	0.00	
Work Characteristics Predictor Variable	**Test**	**Results**	**p**	**r^2**	
Frequency of Communications with Military Service Branch Components	Pearson	r = 0.39	0.00	0.16	**
Frequency of Meeting Face to Face with Military Family Service Professionals	Pearson	r = 0.38	0.00	0.15	**
Actual Time to Work with Military	Pearson	r = 0.34	0.00	0.12	**
Frequency of Visiting a Military Installation	Pearson	r = 0.33	0.00	0.11	**
Frequency of Visiting a Guard/Reserve Facility	Pearson	r = 0.33	0.00	0.11	**
Frequency of Meeting Face to Face with Military Service Members/Families	Pearson	r = 0.32	0.00	0.10	**
Budgeted Time to Work with Military	Pearson	r = 0.31	0.00	0.10	**
Work with Military Supported	Pearson	r = 0.31	0.00	0.09	**
Work with Military Valued	Pearson	r = 0.23	0.00	0.05	**
Percentage Salary from Military Related Funds	Pearson	r = 0.23	0.00	0.05	**
Difference Between Budgeted and Actual Work with Military	Pearson	r = -0.05	0.54	0.00	
Hours Worked per Week	Pearson	r = -0.03	0.72	0.00	
Work on a Military Installation Regularly	T-Test	t (62.68) = 3.26	0.00	-	**
Work with Service Members/Families	T-Test	t (150.37) = 1.93	0.06	-	
Interact with Service Members/Families	T-Test	t (60.02) = 2.49	0.02	-	
Conduct research on/with Service Members/Families	T-Test	t (175) = 1.92	0.06	-	
Teach groups of Service Members/Families	T-Test	t (176) = 2.09	0.04	-	*
Help others to Serve Service Members/Families	T-Test	t (176) = -.082	0.09	-	
Military Liaison Position	T-Test	t (78.06) = 1.21	0.23	-	
Operation: Military Kids Coordinator Position	T-Test	t (176) = 3.11	0.00	-	**
Classified Staff Member Position	T-Test	t (176) = -1.51	0.13	-	
Tenure Track Faculty Position	T-Test	t (176) = -.028	0.98	-	
County/Field Faculty Position	T-Test	t (176) = -1.24	0.22	-	
Military / Veterans Center Staff	T-Test	t (176) = .64	0.52	-	
University Administrator Position	T-Test	t (176) = -.16	0.87	-	
Community Engagement Classification	T-Test	t (135) = -1.37	0.17	-	
Land Grant College/University Status	T-Test	t (135) = -.55	0.58	-	
Institution Size/Setting	ANOVA	F (4, 128) = 1.16	0.33	-	
Institution Type	ANOVA	F (8, 124) = .46	0.89	-	

Predictors of Socio-Emotional Orientation

Twelve of the predictor variables demonstrated a signficant correlation with the socio-emotional orientation behaviors. Frequency of communications with military service branch components explained 15.9% of the observed variance in socio-emotional orientation. The other statistically significant correlates were: frequency of meeting face to face with military family service members (14.8%), frequency of visiting a military installation (11.0%), frequency of meeting face-to-face with military service members/families (10.8%), frequency of visiting a guard/reserve facility (8.1%), actual time to work with military audiences (6.6%), perceived support of military related work (5.4%), budgeted time to work with miltiary audiences (4.7%), and perceived value of military related work (2.6%).

There was a significant effect for working on a military installation, $t(176) = 2.32$, $p < .05$, with those working on an installation regularly having a higher socio-emotional orientation. Those interacting with groups of service members and their families also had a higher level of socio-emotional orientation, $t(60.50) = 3.11$, $p < .05$. Finally, those teaching service members also had higher levels of a socio-emotional orientation, $t(176) = 2.70$, $p < .05$. Table 18 summarizes the test statistics of predictor variables for the socio-emotional orientation.

Table 18

Correlations of Predictor Variables with Socio-Emotional Orientation

Personal Characteristics Predictor Variable	Test Statistic				
	Test	Results	p	r^2	
Age	Pearson	r = 0.09	0.27	0.01	
Years in Current Position	Pearson	r = 0.02	0.85	0.00	
Years Employed by Current Institution	Pearson	r = -0.05	0.49	0.00	
Gender	T-Test	t (174) = -.18	0.86	-	
Veteran Status	T-Test	t (172) = .79	0.43	-	
Spouse / Partner Veteran Status	T-Test	t (159) = 1.66	0.1	-	
Immediate Family Member Veteran Status	T-Test	t (168) = -.81	0.42	-	
Educational Attainment	Spearman	r_s = -0.06	0.41	0.00	
Work Characteristics Predictor Variable	**Test**	**Results**	**p**	**r^2**	
Frequency of Communications with Military Service Branch Components	Pearson	r = 0.40	0	0.16	**
Frequency of Meeting Face to Face with Military Family Service Professionals	Pearson	r = 0.39	0	0.15	**
Frequency of Visiting a Military Installation	Pearson	r = 0.33	0	0.11	**
Frequency of Meeting Face to Face with Military Service Members/Families	Pearson	r = 0.33	0	0.11	**
Frequency of Visiting a Guard/Reserve Facility	Pearson	r = 0.29	0	0.08	**
Actual Time to Work with Military	Pearson	r = 0.26	0.001	0.07	**
Work with Military Supported	Pearson	r = 0.23	0.002	0.05	**
Budgeted Time to Work with Military	Pearson	r = 0.22	0.004	0.05	**
Work with Military Valued	Pearson	r = 0.16	0.03	0.03	*
Percentage Salary from Military Related Funds	Pearson	r = 0.14	0.07	0.02	
Difference Between Budgeted and Actual Work with Military	Pearson	r = -0.09	0.25	0.01	
Hours Worked per Week	Pearson	r = 0.03	0.74	0.00	
Work on a Military Installation Regularly	T-Test	t (176) = 2.32	0.02	-	*
Work with Service Members/Families	T-Test	t (176) = 1.60	0.11	-	
Interact with Service Members/Families	T-Test	t (60.50) = 3.11	0.00	-	**
Conduct research on/with Service Members/Families	T-Test	t (175) = 1.96	0.05	-	
Teach groups of Service Members/Families	T-Test	t (176) = 2.70	0.01	-	**
Help others to Serve Service Members/Families	T-Test	t (176) -.42	0.67	-	
Military Liaison Position	T-Test	t (176) = 1.42	0.16	-	
Operation: Military Kids Coordinator Position	T-Test	t (176) = 1.47	0.14	-	
Classified Staff Member Position	T-Test	t (176) = -.80	0.43	-	
Tenure Track Faculty Position	T-Test	t (31.942) = -.29	0.78	-	
County/Field Faculty Position	T-Test	t (176) = -.43	0.67	-	
Military / Veterans Center Staff	T-Test	t (176) = .82	0.41	-	
University Administrator Position	T-Test	t (176) = .20	0.84	-	
Community Engagement Classification	T-Test	t (135) = -1.84	0.07	-	
Land Grant College/University Status	T-Test	t (135) = -.81	0.42	-	
Institution Size/Setting	ANOVA	F (4, 128) = 1.10	0.36	-	
Institution Type	ANOVA	F (8, 124) = .41	0.91	-	

Predictors of Community Orientation

Eighteen of the predictor variables demonstrated a signficant correlation with the community orientation behaviors. Frequency of the communications with military service branch components explained 17.1% of the observed variance in community orientation. The other statistically significant correlates were: frequency of meeting face to face with military family service members (15.4%), frequency of visiting a military installation (16.0%), frequency of meeting face to face with military service members/families (15.4%), frequency of visiting a guard/reserve facility (11.9%), actual time to work with military audiences (8.6%), perceived support of military related work (10.6%), budgeted time to work with military audiences (7.6%), perceived value of military related work (7%), and percentage salary from military related funds (6.9%).

Educational attainment, $F(4, 170) = 3.04$, $p = .02$ influenced the community orientation boundary-spanning behaviors. Six of the predictor variables, working on a military installation regularly, working with service members/families, interacting with service members/families, teaching service members/families and serving as a classifed staff member or Operation: Military Kids Coordinator influenced the community orientation. The resulting test statistics for these, as well as the others, are summarized in Table 19.

Table 19

Correlations of Predictor Variables with Community Orientation

Personal Characteristics Predictor Variable	Test Statistic				
	Test	Results	p	r^2	
Age	Pearson	r = -0.06	0.46	0.00	
Years in Current Position	Pearson	r = 0.001	0.99	0.00	
Years Employed by Current Institution	Pearson	r = -0.02	0.77	0.00	
Gender	T-Test	t (174) = -1.39	0.17	-	
Veteran Status	T-Test	t (172) = -.23	0.82	-	
Spouse / Partner Veteran Status	T-Test	t (159) = 1.22	0.22	-	
Immediate Family Member Veteran Status	T-Test	t (168) = -1.12	0.27	-	
Educational Attainment	Spearman	r_s = -0.22	0.00	0.05	**
Work Characteristics Predictor Variable	**Test**	**Results**	**p**	**r^2**	
Frequency of Meeting Face to Face with Military Family Service Professionals	Pearson	r = 0.41	0	0.17	**
Frequency of Visiting a Military Installation	Pearson	r = 0.4	0	0.16	**
Frequency of Meeting Face to Face with Military Service Members/Families	Pearson	r = 0.39	0	0.15	**
Frequency of Communications with Military Service Branch Components	Pearson	r = 0.36	0	0.13	**
Frequency of Visiting a Guard/Reserve Facility	Pearson	r = 0.35	0	0.12	**
Work with Military Supported	Pearson	r = 0.32	0	0.11	**
Actual Time to Work with Military	Pearson	r = 0.29	0	0.09	**
Budgeted Time to Work with Military	Pearson	r = 0.28	0	0.08	**
Work with Military Valued	Pearson	r = 0.26	0	0.07	**
Percentage Salary from Military Related Funds	Pearson	r = 0.26	0	0.07	**
Hours Worked per Week	Pearson	r = 0.00	0.98	0.00	
Difference Between Budgeted and Actual Work with Military	Pearson	r = 0.00	0.98	0.00	
Work on a Military Installation Regularly	T-Test	t (176) = 2.41	0.02	-	*
Work with Service Members/Families	T-Test	t (176) = 2.90	0.00	-	**
Interact with Service Members/Families	T-Test	t (176) = 3.49	0.00	-	**
Conduct research on/with Service Members/Families	T-Test	t (175) = .20	0.84	-	
Teach groups of Service Members/Families	T-Test	t (176) = 2.98	0.00	-	**
Help others to Serve Service Members/Families	T-Test	t (176) = -.52	0.61	-	
Military Liaison Position	T-Test	t (74.09) = 1.77	0.08	-	
Operation: Military Kids Coordinator Position	T-Test	t (111.38) = 6.60	0	-	**
Classified Staff Member Position	T-Test	t (176) = -2.22	0.03	-	*
Tenure Track Faculty Position	T-Test	t (176) = -.58	0.56	-	
County/Field Faculty Position	T-Test	t (176) = .41	0.68	-	
Military / Veterans Center Staff	T-Test	t (176) = -1.76	0.08	-	
University Administrator Position	T-Test	t (176) = -.53	0.59	-	
Community Engagement Classification	T-Test	t (135) = -1.60	0.11	-	
Land Grant College/University Status	T-Test	t (135) = .10	0.92	-	
Institution Size/Setting	ANOVA	F (4, 128) = 2.10	0.09	-	
Institution Type	ANOVA	F (8, 124) = 1.41	0.20	-	

Predictors of Organizational Orientation

Fourteen of the predictor variables demonstrated a signficant correlation with the organizational orientation behaviors. Frequency of the communications with military family service professionals explained 16.6% of the observed variance in organizational orientation. The other statistically significant correlates were: frequency of meeting face to face with military service members/families (15.4%), frequency of communications with military service branch components (14.4%), frequency of visiting a military installation (11.6%), frequency of visiting a guard/reserve facility (10.2%), perceived support of work with military audiences (9.2%), actual time to work with military audiences (5.4%), budgeted time to work with military audiences (4.4%).

Educational attainment, $F(4, 170) = 2.835$, $p = .03$ influenced the organizational orientation boundary-spanning behaviors. Seven of the predictor variables, working with service members/families, interacting with service members/families, teaching groups of service members/families, serving as the 4-H Military Liaison, serving as the Operation: Military Kids Coordinator, working at an institution with a community engagement classification and working at a larger instiution all influenced the organizational orientation. The resulting test statistics for these, as well as the others, are summarized in Table 20.

Table 20

Correlations of Predictor Variables with Organizational Orientation

Personal Characteristics Predictor Variable	Test Statistic				
	Test	Results	p	r^2	
Age	Pearson	r = -0.07	0.37	0.00	
Years in Current Position	Pearson	r = -0.03	0.69	0.00	
Years Employed by Current Institution	Pearson	r = -0.04	0.62	0.00	
Gender	T-Test	t (174) = -.73	0.47	-	
Veteran Status	T-Test	t (172) = .02	0.98	-	
Spouse / Partner Veteran Status	T-Test	t (159) = 1.35	0.18	-	
Immediate Family Member Veteran Status	T-Test	t (168) = -1.83	0.07	-	
Educational Attainment	Spearman	r_s = -0.21	0.00	0.04	**
Work Characteristics Predictor Variable	**Test**	**Results**	**p**	**r^2**	
Frequency of Meeting Face to Face with Military Family Service Professionals	Pearson	r = 0.41	0.00	0.17	**
Frequency of Meeting Face to Face with Military Service Members/Families	Pearson	r = 0.39	0.00	0.15	**
Frequency of Communications with Military Service Branch Components	Pearson	r = 0.38	0.00	0.14	**
Frequency of Visiting a Military Installation	Pearson	r = 0.34	0.00	0.12	**
Frequency of Visiting a Guard/Reserve Facility	Pearson	r = 0.32	0.00	0.10	**
Work with Military Supported	Pearson	r = 0.30	0.00	0.09	**
Actual Time to Work with Military	Pearson	r = 0.23	0.00	0.05	**
Work with Military Valued	Pearson	r = 0.23	0.00	0.05	**
Budgeted Time to Work with Military	Pearson	r = 0.21	0.01	0.04	**
Percentage Salary from Military Related Funds	Pearson	r = 0.15	0.06	0.02	
Difference Between Budgeted and Actual Work with Military	Pearson	r = -0.04	0.64	0.00	
Hours Worked per Week	Pearson	r = 0.01	0.86	0.00	
Work on a Military Installation Regularly	T-Test	t (176) = 1.70	0.09	-	
Work with Service Members/Families	T-Test	t (152.18) = 2.58	0.01	-	*
Interact with Service Members/Families	T-Test	t (176) = 3.65	0	-	**
Conduct research on/with Service Members/Families	T-Test	t (175) = 0.28	0.78	-	
Teach groups of Service Members/Families	T-Test	t (176) = 2.44	0.02	-	*
Help others to Serve Service Members/Families	T-Test	t (176) = -.65	0.52	-	
Military Liaison Position	T-Test	t (69.48) = 2.99	0.00	-	**
Operation: Military Kids Coordinator Position	T-Test	t (74.44) = 3.98	0	-	**
Classified Staff Member Position	T-Test	t (176) = -1.85	0.07	-	
Tenure Track Faculty Position	T-Test	t (176) = -.66	0.51	-	
County/Field Faculty Position	T-Test	t (176) = .66	0.51	-	
Military / Veterans Center Staff	T-Test	t (176) = -.21	0.84	-	
University Administrator Position	T-Test	t (176) = -.17	0.87	-	
Community Engagement Classification	T-Test	t (135) = -2.52	0.01	-	*
Land Grant College/University Status	T-Test	t (135) = -.34	0.73	-	
Institution Size/Setting	ANOVA	F (4, 128) = 2.74	0.03	-	*
Institution Type	ANOVA	F (8, 124) = .70	0.69	-	

Findings Related to Research Question #3

The third research question asked, "To what extent do workplace and personal characteristics *jointly* explain observed variance in the four boundary spanning constructs?" To address the question, a series of multivariate relationships were examined between the signficant predictor variables and each of the boundary spanning constructs.

Identification of the "best" explanatory model for the four boundary-spanning behaviors was determined by a desire to explain the maximum variance. It resulted in the most parsimoneous model with the greatest explanatory value. To produce the potential models, a forward loading multiple regression was conducted to explore which variables explain as much of the observed variation as possible among the four boundary-spanning behaviors construct scales. Two linear regressions were conducted for each of the boundary-spanning behavior constructs. The first linear regression included all the predictors, regardless of their signficance in the bivariate analyses. This forward multiple regression on this first run resulted in 8, 6, 5, and 3 models for technical-practical, socio-emotional, community, and organizational orientations respectfully. The maximum observed variance for each of the models was R^2 = 0.404, 0.422, 0.434, and 0.328, respectively. The second linear regression included only the independent variables with a $p < .05$ in the bivariate, or independent relationship to explore which of the significant variables from the bivariate analyes *jointly* affect boundary-spanning behaviors. Below is a summary of the predictors for each of the four construct scales.

Predictors of Technical-Practical Orientation

In the second regression conducted for the technical-practical orientation which included all significant predictor variables, the forward regression produced three proposed models. The selected model explained approximately 22% of the variance for the technical-practical

orientation. This three-variable model explained 22.4% of the observed variance in the dependent variable, technical-practical orientation. Table 21 presents the third model of the forward multivariate regression of the personal and work/organizational characteristic predictors.

Table 21
Best Model for Technical Practical Orientation

Parameter	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	p
Frequency of Communication with Military Service Branches	0.15	0.24	2.98	0.00
Military Work Supported	0.30	0.20	2.81	0.01
Frequency of meeting face to face with military service professionals	1.00	0.18	2.18	0.03

Note. Model Statistic: $R^2 = .224$; F = 15.90; p = 0.00

Predictors of Socio-Emotional Orientation

In the regression conducted for the socio-emotional orientation with the significant ($p < .05$) predictor variables from the bivariate analyses, the forward regression produced two proposed models. This selected model contained two variables explaining 19.4% of the observed variance in the dependent variable, socio-emotional orientation. Table 22 presents the model of

Table 22
Best Model for Socio Emotional Orientation

Parameter	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	p
Frequency of Communication with Military Service Branches	0.16	0.28	3.35	0.00
Frequency of meeting face to face with military service professionals	1.16	0.22	2.71	0.01

Note. Model Statistic: $R^2 = .194$; F = 19.92; p = 0.00

the foward multivariate regression of the personal and work/organizational characteristic predictors.

Predictors of Community Orientation

In the regression conducted for the community orientation with the significant ($p < .05$) predictor variables from the bivariate analyses, the forward regression produced three possible models. The selected model contained three variables explaining 27.8% of the observed variance in the dependent variable, community orientation. Table 23 presents the model of the foward multivariate regression of the personal and work/organizational characteristic predictors.

Table 23
Best Model for Community Orientation

Parameter	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	p
Frequency of Visiting a Military installation	2.11	0.34	4.87	0.00
Operation: Military Kids Coordinator Position	-4.36	-0.21	-3.00	0.00
Military Work Supported	0.31	0.18	2.61	0.01

Note. Model Statistic: $R^2 = .278$; $F = 21.00$; $p = 0.00$

Predictors of Organizational Orientation

In the regression conducted for the organizational orientation which included the significant ($p < .05$) predictor variables from the bivariate analyses, the forward regression produced four proposed models. This selected model contained four variables explaining 24.8% of the observed variance in the dependent variable, organizational orientation. Table 24 presents the model of the forward loading regression of the personal and work/organizational characteristic predictors.

Table 24
Best Model for Organizational Orientation

Parameter	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	p
Frequency of meeting face to face with military service professionals	1.45	0.24	2.90	0.00
Military Work Supported	0.33	0.20	2.77	0.00
Frequency of Communication with Military Service Branches	0.11	0.17	2.07	0.04
4-H Military Liaison Position	-2.89	-0.14	-2.07	0.04

Note. Model Statistic: R^2 = .248; F = 13.44; p = 0.00

Findings Related to Research Question #4

The final research question asked, "Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions?" This research question was designed to accomplish a slightly different purpose from the rest of the study. It involved a more in-depth examination of the instrument used in this study. I was one of the developers of the instrument. A robust description of the instrument's development is described in Sandmann, Jordan, Mull, and Valentine (2014). In the findings reported in chapter three about the multicollinearity measures, the high intercorrelation was obviously a concern for any instrument claiming to measure four independent constructs. Consequently, I undertook an exploratory factor analysis to determine if a better structure might exist than the one that conceptually drove the instrument's development. This process involved the examination of the covariation among the 32 items encompassing the instrument I co-developed to determine if there were common, underlying factors existent.

Table 25
Rotated Component Matrix for 4 Factor Reduction

Boundary Spanning Items	Component				Orig Cons
	1	2	3	4	
I identify expertise in the organization to support the community.	.786	.298	.110	.162	C
I translate community information to the organization.	.782	.161	.218	.145	O
I identify expertise in the community to support the organization.	.763	.221		.342	O
I represent the community's perspective.	.747	.206	.264		C
I develop partnerships that benefit the community.	.743	.382	.335		C
I find ways to meet community needs with organization partners.	.738	.416	.137		C
I communicate the community's interests to others.	.722	.264	.310		C
I utilize information to support the community.	.718	.249	.376		C
I advocate for community policy that supports the organization.	.712			.391	O
I translate organizational information to the community.	.703	.191	.364		C
I advocate for organizational policy that supports the community.	.698	.152	.172	.347	C
I find ways to meet organization needs with community partners.	.696	.369		.313	O
I communicate the organization's interests to others.	.691	.148	.285	.315	O
I utilize information to support the organization.	.644	.120	.374	.321	O
I develop partnerships that benefit the organization.	.631	.326	.241	.186	O
I represent the organization's perspective.	.542	.111	.384	.270	O
I design processes for projects.	.237	.764	.237	.190	TP
I manage projects.	.222	.749	.272		TP
I build capacity among individuals.	.299	.710	.131		SE
I determine solutions for challenges.	.154	.707	.364	.293	TP
I identify expertise in individuals.	.302	.653	.174	.305	SE
I apply my skills to new situations.	.275	.534	.480	.319	TP
I identify resources to support projects.	.385	.469	.444	.240	TP
I maintain relationships with a variety of individuals.	.170	.264	.800	.117	SE
I build trust with people I interact with.	.314	.235	.738	.101	SE
I support others in their accomplishments and challenges.	.213	.324	.587	.318	SE
I facilitate meetings between individuals or groups.	.372	.338	.569	.272	TP
I identify barriers to success.	.362	.264	.545	.448	TP
I broker resources among individuals or groups.	.375	.275	.456	.362	TP
I resolve conflict among other individuals.	.183	.225	.285	.790	SE
I negotiate power among individuals.	.283	.348	.198	.740	SE
I identify issues in communication.	.224	.170	.591	.607	SE

Original Construct Abbreviations: C = Community Orientation; O = Organizational Orientation; TP = Technical Practical Orientation; SE = Socioemotional Orientation

A Varimax rotation was used in three factor solutions ranging from two to four factors. An analysis of each of the results was examined for conceptual meaningfulness. The analysis was guided by the following criteria: (a) meaning comprehension, (b) crossloader minimalizination, (c) avoidance of factors containing too few items (D. George & Mallery, 2001; Harroff, 2002).

After the factor solutions were selected, factor scores were computed for each individual factor. Once the factors were identified, SPSS completed the estimation factor scores as a Z score with a mean of zero and a standard deviation of one. In the initial reduction, I did not limit the number of factors. In the two and three factor solutions examined, each item loaded to at least one factor at the .50 criterion level. Using a Kaiser criteria where the Eigenvalues are greater than 1, the first factor reduction resulted in a four factor model. In the initial four factor reduction, the items did not mirror the initial conceptual structure. In the four factor reduction, one of the factors included all sixteen of the community and organizational orientations behaviors as can be seen in Table 25. The second factor in the first reduction model loosely resembled the technical-practical orientation and the socio-emotional orientation separated into two other factors. One of the items in the initial reduction was a crossloader between factors three and four and two other items did not load to any factor. The four reduced components align with Mintzberg's (1989) managerial roles. Components 1 and 3 in Table 25 are similar to the liaison and leader roles under the interpersonal category of Mintzberg's ten roles. Components 2 and 4 align with the informational and decisional categories (Mintzberg, 1989).

A second reduction extracting three factors resulted in one crossloader and one item that did not load to any factor as indicated in Table 26. In this second reduction, component 1 again mirrored Mintzberg's (1989) interpersonal, liaison role. Component 2 included the decisional

Table 26
Rotated Component Matrix for 3 Factor Reduction

Boundary Spanning Items	Component 1	Component 2	Component 3	Orig Cons
I identify expertise in the organization to support the community.	.789	.175	.289	C
I translate community information to the organization.	.786	.232	.182	O
I identify expertise in the community to support the organization.	.774	.248	.161	O
I represent the community's perspective.	.749	.224	.244	C
I develop partnerships that benefit the community.	.740	.203	.445	C
I find ways to meet community needs with organization partners.	.733		.440	C
I advocate for community policy that supports the organization.	.727	.331		O
I communicate the community's interests to others.	.722	.228	.315	C
I utilize information to support the community.	.715	.215	.328	C
I advocate for organizational policy that supports the community.	.710	.355	.123	C
I find ways to meet organization needs with community partners.	.705	.248	.313	O
I translate organizational information to the community.	.703	.256	.257	C
I communicate the organization's interests to others.	.703	.406	.149	O
I utilize information to support the organization.	.656	.470	.137	O
I develop partnerships that benefit the organization.	.636	.285	.335	O
I represent the organization's perspective.	.552	.441	.139	O
I identify issues in communication.	.247	.842	.165	SE
I resolve conflict among other individuals.	.213	.780	.121	SE
I identify barriers to success.	.378	.689	.280	TP
I negotiate power among individuals.	.310	.684	.234	SE
I support others in their accomplishments and challenges.	.224	.624	.369	SE
I maintain relationships with a variety of individuals.	.174	.614	.391	SE
I facilitate meetings between individuals or groups.	.380	.573	.390	TP
I broker resources among individuals or groups.	.388	.565	.290	TP
I apply my skills to new situations.	.283	.557	.550	TP
I build trust with people I interact with.	.317	.556	.357	SE
I manage projects.	.219	.246	.761	TP
I design processes for projects.	.238	.305	.747	TP
I build capacity among individuals.	.295	.135	.701	SE
I determine solutions for challenges.	.160	.468	.696	TP
I identify expertise in individuals.	.308	.346	.607	SE
I identify resources to support projects.	.391	.469	.498	TP

Original Construct Abbreviations: C = Community Orientation; O = Organizational Orientation; TP = Technical Practical Orientation; SE = Socioemotional Orientation

Table 27
Rotated Component Matrix for 2 Factor Reduction

Boundary Spanning Items	Component		Orig Con.
	Social Closeness	Task Orientation	
I identify expertise in the organization to support the community.	.806	.281	C
I translate community information to the organization.	.798	.259	O
I identify expertise in the community to support the organization.	.785	.259	O
I develop partnerships that benefit the community.	.766	.402	C
I represent the community's perspective.	.764	.292	C
I find ways to meet community needs with organization partners.	.757	.292	C
I communicate the community's interests to others.	.741	.342	C
I utilize information to support the community.	.735	.340	C
I advocate for community policy that supports the organization.	.729	.200	O
I find ways to meet organization needs with community partners.	.725	.357	O
I advocate for organizational policy that supports the community.	.721	.322	C
I translate organizational information to the community.	.720	.328	C
I communicate the organization's interests to others.	.716	.378	O
I utilize information to support the organization.	.669	.422	O
I develop partnerships that benefit the organization.	.657	.402	O
I represent the organization's perspective.	.565	.405	O
I determine solutions for challenges.	.204	.792	TP
I apply my skills to new situations.	.321	.764	TP
I identify issues in communication.	.269	.749	SE
I maintain relationships with a variety of individuals.	.204	.715	SE
I support others in their accomplishments and challenges.	.253	.707	SE
I identify barriers to success.	.403	.695	TP
I design processes for projects.	.283	.693	TP
I resolve conflict among other individuals.	.231	.675	SE
I facilitate meetings between individuals or groups.	.409	.673	TP
I negotiate power among individuals.	.332	.666	SE
I identify resources to support projects.	.424	.658	TP
I manage projects.	.264	.656	TP
I build trust with people I interact with.	.344	.642	SE
I identify expertise in individuals.	.346	.634	SE
I broker resources among individuals or groups.	.411	.604	TP
I build capacity among individuals.	.335	.529	SE

Original Construct Abbreviations: C = Community Orientation; O = Organizational Orientation; TP = Technical Practical Orientation; SE = Socioemotional Orientation

category of Mintzberg's ten roles, and component three included the informational category. The third, and final, reduction extracted two factors using a varimax rotation with Kaiser normalization. Ultimately, the two-factor solution was selected. The rotated component matrix for the final reduction is depicted in Table 27. This solution captured 60.72% of the variance observed in the 32 boundary spanning variables. The three factor solution captured 65.44% of the observed variance and the original four factor solution captured 69.04% of the total variance. All three factor models captured more than 60% of the total variance. Because the final reduction eliminated all crossloaders and non-loaders, I chose to focus on the two-factor solution.

With this solution, there were no cross loaders and items aligned with the initial two construct model proposed by Weerts and Sandmann (2010). Items in the lower half of Table 27 align with the *task orientation* axis originally proposed by Weerts and Sandmann and items in the upper half align with the *social closeness* axis named by Weerts and Sandmann (2010). Although this will be discussed more throughly in the discussion chapter, it is worth noting that this provides significant support to the original theoretical formulation by Weerts and Sandmann (2010).

Summary

Several statistical methods were used to answer the research questions; these included descriptive statistics, bivariate correlations, linear regression and exploratory factor analysis. Key summary findings include: (1) seven of the top nine most frequent items were technical-practical or socio-emotional, (2) seventeen of the predictor variables significantly influenced at least one of the boundary spanning constructs, (3) communications was the most significant predictor in the multivariate analyses that described between 19.4% and 27.8% of the variance

for the boundary spanning constructs, and (4) exploratory factor analysis confirmed that a conceptual structure can be empirically derived that differs from the logically derived constructs. This empirically derived conceptual structure parallels the Weerts and Sandmann (2010) model.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The purpose of this study was to investigate the boundary-spanning activities, behaviors and their antecedents, of contractors who are employed by higher education institutions working as adult educators with military families and the Department of Defense. The study accomplished this through four research questions: (1) What specific boundary-spanning behaviors are prevalent in the population of university-military contractors; (2) To what extent are boundary-spanning behaviors explained *individually* by personal or work/organizational characteristics in the population of contractors; (3) To what extent are boundary-spanning behaviors explained *jointly* by personal or work/organizational characteristics in the population of contractors; and (4) Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions? This chapter examines the findings presented previously from the questionnaire-based responses of university-contractors engaged with the U.S. military community. A summary of these findings is followed by the conclusions based on the findings. Additionally, the implications for practice and policy as well as future research will be explored based on these findings.

Summary of Findings

This quantitative study employed a selected response instrument distributed to higher education employees engaged with the military community. The military community included service members and their dependents as well as the other professionals supporting them. Data

were collected through an online data collection tool after co-creating an instrument with a research team. The research team used qualitative data provided by a group of doctoral students and faculty members studying boundary spanning as well as previous literature to create a 48-question survey instrument. The instrument was created to measure the four boundary-spanning orientations identified by the research team, *technical-practical, socio-emotional, community and organizational*. These boundary-spanning orientations served as the central constructs of the study and also included items to capture personal and work/organizational characteristics to assess the predictors of the boundary-spanning activities.

Higher education employees working with the military served as the population of the study. Of this population, 413 unique collection links were distributed through publicly available listserves to individuals known to be working with the military community. Individuals beginning the survey were encouraged to forward the invitation to others known to them to be engaged with the military community. Of the population, 149 of the links were used a total of 237 times. After reviewing the responses, 178 usable surveys were identified through the data collection plan guided by Dillman (2009). The collection plan included an email invitation, two reminders, and an electronic thank you.

Statistical analyses of the 178 usable surveys included descriptive statistics, rank ordering of means, bivariate correlations, multiple regression analysis, and exploratory factor analysis. To address the first question, item means were calculated and rank ordered. To address the second question, the correlation between the predictor variables and boundary-spanning behavior orientations was calculated. The third question was answered by multiple factor analysis of the statistically significant predictors in the bivariate calculations. Finally, exploratory factor analysis empirically derived a conceptual model to describe the boundary spanning model.

Findings Related to Research Question #1

Rank ordering of the 32 boundary-spanning behaviors was used to answer the question: "What specific boundary-spanning behaviors are prevalent in the population of university-military contractors?" The means ranged from 1 to 6 on a frequency scale of never to always. The nine highest ranked practices included three from the socio-emotional orientation and four from the technical-practical orientation. The two highest-ranking items were in the socio-emotional orientation. Interestingly, the bottom two items were also in the socio-emotional orientation. The top two items included maintaining relationships with a variety of individuals and building trust with people. The bottom two items were resolving conflict among other individuals and negotiating power among individuals. Seven of the top half of the behaviors were categorized into the technical-practical orientation while the other three orientations all had three items in the top half.

Overall, this group of boundary spanners engaged in all boundary-spanning behaviors with every item achieving a mean above "often" in the frequency scales. This frequency should be viewed in context with an understanding that this self-assessment by the respondent may lead to higher ratings due to social desirability.

No behaviors within the technical-practical orientation were in the bottom eight rank ordered items. Seven were in the top half. This may have occurred because technical-practical behaviors tend to be more action oriented whereas the socio-emotional behaviors may appear more cognitive. This is consistent with some of the previous research describing the internal abilities and factors of boundary spanners (Perrone et al., 2003).

When examining the rank order of boundary spanning scales, all four means are high. The technical-practical orientation is notably higher than the other three scales. The boundary-

spanning behaviors prevalent in university-military contractors focused on technical-practical behaviors with the least utilized behaviors occurring in the organizational orientation.

The community orientation and the organizational orientation scales' means are notably close. In Weerts and Sandmann's (2010) model, an individual could not have a high community and high institutional orientation. Under this study's model, it appears that not only can an individual have high community and organizational orientations, but also they do. This finding aligned with George and Chattapadhyay (2005) and Richter, West, Van Dick, & Dawson (2006). They found that a dual identity could occur in contract workers and boundary spanners.

Findings Related to Research Question #2

Simple correlation and bivariate analyses were implemented to answer the second research question: "To what extent are boundary-spanning behaviors explained *individually* by personal or work/organizational characteristics in the population of contractors?" Of the 37 tested predictors of boundary-spanning behaviors, 20 significantly influenced at least one of the boundary-spanning orientations. Over half of the predictor variables significantly influenced one of the boundary-spanning orientations. Personal characteristic predictors influenced to the least extent with only one personal characteristic significantly influencing any of the four boundary spanning orientations. Communications frequency with the military service branches was the most influential item of boundary-spanning behaviors. It explained at least 16% of the variance of the boundary-spanning behaviors in each of the construct scales. The other predictors significantly influencing all four of the boundary-spanning orientation scales are actual and budgeted time of work with the military community, frequency of face-to-face meetings with service members/families and military service professionals, frequency of visiting a military

installation or guard/reserve facility, teaching groups of military service members or families and a perception that their work with the military is supported and valued.

Serving as the Operation: Military Kids (OMK) Coordinator influenced all but the socio-emotional orientation. This is consistent with the roles and responsibilities outlined in the Weerts and Sandmann (2010) model. In the realm of their work, the OMK Coordinator serves as the community-based problem solver. In the Weerts and Sandmann model, this individual would dedicate fewer resources to socio-emotional roles. The 4-H Military Liaison works with the OMK Coordinator, serves as the Principal Investigator on the funding stream for Operation: Military Kids. Interestingly, the 4-H Military Liaison position only influenced the *organizational orientation* construct. This mirrors expectation that the OMK Coordinator would be closer to the community, accomplishing the technical-practical tasks, but leaving the 4-H Military Liaison as the more organizationally-focused individual.

The only personal characteristic predictor with influence over the boundary spanning constructs was educational attainment. The percentage of variance educational attainment explains, however, was approximately 5% or less. The other predictors not previously mentioned included interacting with service members or their families, working on a military installation regularly, percentage salary from military related funds, work with service members or families, community engagement classification and institution size/setting. The final two characteristics only influenced the organizational orientation and with less certainty than some of the other predictors. Due to multiple testing error, the degree of certainty was lower, but still significant with these two predictors.

Findings Related to Research Question #3

Linear multiple regression was used to determine a response to research question three: "To what extent are boundary-spanning behaviors explained *jointly* by personal or work/organizational characteristics in the population of contractors?" In order to respond to this question, a linear regression was calculated using only the significant bivariate predictors from research question two. In each of the models for the four boundary spanning constructs, frequency of communications appeared as significantly influential. Multiple types of communications influence boundary-spanning behaviors to a great extent. The types of communication included oral, written and face-to-face. The study did not segregate one method of communications as more effective than others. Other predictors did have an influence over the respective boundary spanning orientations, but nothing as influential as communications.

In each of the models constructed for the four boundary spanning constructs, several themes emerge. Frequency of communications, written, auditory or face-to-face, influenced each of the boundary-spanning constructs. The explanation of observed variance in each of the four best models for simultaneous influence was moderately small, explaining approximately 20% of the observed variance. The perceived support of community engaged military work from stakeholders influenced three of the four constructs in the multivariate analysis as did the frequency of communications with the military service branches.

Findings Related to Research Question #4

Exploratory factor analysis was used to answer the final question: "Is it possible to derive empirically a conceptual structure for the boundary spanning instrument used in this study that differs from the logically derived constructs used in the three preceding research questions?" By

completing factor analysis, it was determined that a conceptual structure could, in fact, be derived empirically from the data.

The exploratory factor analysis found an initial factor reduction that included cross-loaders and non-loaders. By restricting the reduction to three factors, all but one cross-loader was eliminated, and by restricting the reduction to only two factors, each item maintained the simple structure for which factor analysis strives.

Conclusions and Discussions

Conclusion 1: For most of the dimensions of boundary-spanning behaviors, personal characteristics are not a major predictor. However work/organizational characteristics are.

The most surprising conclusion is that the evidence suggested that personal characteristics do not significantly influence the boundary-spanning behaviors of these university-military contractors. This is surprising because so many of the qualities embodied in effective boundary spanners focus on individuals skills, behaviors, or experiences (Ernst & Chrobot-Mason, 2011; Williams, 2002).

The only personal characteristic influencing boundary-spanning behaviors was an individual's educational attainment. Those with greater educational attainment were less likely to engage in both community-oriented behaviors and organizational-oriented behaviors. Based on the Weerts and Sandmann (2010) model, greater educational attainment would be logically aligned with lower community orientation as field staff members in community engagement projects may not have advanced degrees. Skolaski (2012) confirmed that educational attainment influences the boundary-spanning behaviors in community engagement in some situations, mirroring this study. Relatedly, it could be argued that greater educational attainment should

result in greater organizational orientation as these individuals would be the technical experts and discipline-based faculty members in the Weerts and Sandmann model. A possible reason these results challenge Weerts and Sandmann's model can be inferred. Those with terminal degrees are most likely to be in tenure-track faculty positions at the universities with respondents in this study. Because of their tenure-track status, these respondents may not feel obligated and oriented towards organizational boundary-spanning behaviors.

A boundary spanner's tenure, or length of service with the community or the organization, has been found to influence boundary-spanning activities. Miller (2008) highlighted that the density of the relationships two community-based adult educators maintained formed over many years. These relationships allowed the adult educators to gain access to knowledge and resources in the community inexperienced staff could not discover. George and Chattopadhyay (2005) found that tenure did not influence one's identity in interorganizational collaboration with Tarant (2004) confirming this in her study of boundary-spanning behaviors.

Most previous studies of boundary-spanning behaviors (see Table 3) do not examine personal characteristic predictors of boundary spanners. This study suggested that they do not matter for future study. While there are some personal characteristics that previous studies have uncovered as antecedents to boundary-spanning behaviors such as foundational knowledge (Agnihotri, Rapp, Andzulis, & Gabler, 2013) and perceived competence (Tushman & Scanlan, 1981a, 1981b), these characteristics are difficult to capture directly on a self-assessment questionnaire. Tenure, previous experience with the community, age, and years with the community could be moderating variables to this foundational knowledge or perceived competence, but this study concluded they are insignificant if present.

Ernst and Chrobot-Mason (2011) highlighted individual skills and activities to encourage boundary spanning in and among organizations. But this study suggested that their attention may be misguided. Rather than focusing on the self-awareness of the individual's ability to span boundaries, an organization, group, or community must have a readiness for boundary-spanning activities. Organizations with systems, policies, and procedures in place to encourage or require boundary spanning with specific communities had greater boundary-spanning activities of all orientations. The proximities of these boundary spanners to the community, perceived value and support of work with the community, and reliance on the community influenced the boundary-spanning behaviors. Organizations that create formal partnerships with communities, publicly identifying mirroring missions and valuing collaboration would appear to influence individual boundary spanners. Embedding organizational representatives into the community also appears to influence boundary spanning roles.

These work/organizational influences indicated that Williams' (2013) question "We are all boundary spanners now?" can become a proclamation. With understanding that personal characteristics do not predict boundary-spanning behaviors, organizations must heed the work characteristics that encourage these behaviors. With knowledge of them, organizations can respond and create an environment supporting boundary-spanning behaviors.

This study examined individuals. Though the findings indicated what makes individuals unique is not predictive of boundary-spanning activities, the literature is full of descriptions of unique, individual qualities of boundary spanners (Williams, 2002). This study indicated that the workplace or the organization has almost sole influence on the boundary-spanning activities of individuals. This is not wholly consistent with other scholars, yet the challenge of identifying antecedents of boundary spanning is well documented.

Williams (2002) segmented boundary spanners by "their ability to engage with others and deploy effective relational and interpersonal competencies" (p. 110). Van Hulst, de Graaf, and van den Brink (2012) noted boundary spanners as "exemplary practitioners [who] show a mix and a dose of entrepreneurialism, strategic networking, and empathic engagement that differ from standard bureaucracy" (p. 434). These examples are all uniquely individual characteristics. This study used several personal characteristics as predictors yet only educational attainment showed any significance in any of the four boundary-spanning orientations.

Marchington and Vincent (2004; 2005) indicated mutuality and power dynamics are challenging to measure in their studies of interorganizational relationships because of the institutional forces influencing individuals. Miller (2008) found that boundary spanners possess exceptional interpersonal skills but this went unmeasured in the current study. Similar to the claim about communications, there may be a flywheel effect occurring (Jones & Noble, 2008; Tushman & Scanlan, 1981a). Work or organizational characteristics and environmental context lead to opportunities where individuals can excel in the interpersonal skills they have, continue to refine them, and only become exceptional through practice. The lack of explanatory power of these characteristics of boundary spanning behaviors may indicate significant characteristics were unidentified or unmeasured in this study.

Conclusion 2: Communications is a catalyst to boundary-spanning activities.

This study reinforced the importance of communication to boundary-spanning activities. What scholars define as a boundary spanner has matured over the past three decades. Tushman and Scanlan (1981) defined a boundary spanning individual as one who is both an internal and external communications star. Ernst and Chrobat-Mason (2011) more recently defined a boundary spanning leader as one who buffers, reflects, connects, mobilizes, weaves and

transforms. Williams (2013) called boundary spanners, "individuals who have a dedicated job role or responsibility to work in collaborative environments…who coordinate, facilitate and service the processes of collaboration between a diverse set of interests and agencies" (p. 19).

A theme throughout all these definitions is communication. Where some scholars defined boundary spanning as communications, others see communications as a tool to accomplish boundary-spanning activities in the global, collaborative society. This study did not add a unique perspective or challenge to communications as essential to boundary spanning. It only served to affirm that the single, greatest contributor to boundary-spanning behaviors is communications among a variety of groups. Miller (2008) defined these individuals as effective collectors and disseminators of information.

The degree and frequency of the communications did influence positively the boundary-spanning behaviors of individuals. The "multiple and frequent contacts" (Marchington & Vincent, 2004, p. 1037) aid in joint decision making which assists networked governance through a shared mission. This study did not measure the cyclical approach of communications, but deductive reasoning infers that as individuals engaged in additional communications, they further sustain themselves as boundary spanners, as those connectors among organizations and across boundaries. This logic is consistent with prior research discovering that "densely linked networks are more efficient at diffusing information to all their members when compared to sparsely linked groups" (Long et al., 2013, p. 12).

This study found communications as a predictor, but it is also the tool. Geographical proximity had a lubricating effect on interorganizational communications (Marchington & Vincent, 2004). Richter, West, Van Dick, and Dawson (2006) found frequent intergroup contact and organizational affiliation led to effective intergroup relations. The linchpin of groups and

interorganizational collaborations are those individuals who ease tension and bridge divides. They accomplish this through communications, leading to additional communications.

Conclusion 3: Affirmation for the boundary spanning work encourages its use.

Affirmation of boundary spanning work with the community significantly influenced the boundary-spanning behaviors of all orientations. The greater the value and support the boundary spanner perceived, the higher frequency of boundary-spanning activities occurred among each of the constructs. This study used the same items from Skolaski (2012) and confirmed her findings. The scale used both the value and support from internal groups of an organization as well as the value and support from community members.

Other studies have found that organizational support may be related to task performance. Those who have strong organizational support have less role ambiguity and conflict in boundary spanning roles (Stamper & Johlke, 2003). They also have an intent to remain at their organizations. While Stamper and Johlke (2003) concluded that support is not related to task performance, Crosno, Rinaldo, Hulda and Scott (2009) surmised optimistic boundary spanners with organizational support respond proactively to stressors. This response led to higher levels of performance and job satisfaction.

Conclusion 4: This study provides support for the Weerts and Sandmann (2010) model.

Research question four provided an opportunity to develop an empirically derived model based on the data. The resulting factor analysis conjoined the four constructs into two. The two construct rotation mirrored exactly the Weerts and Sandmann (2010) model shaped by two axes of social closeness and task orientation. Nevertheless, the data indicated that an individual can appear high on both ends of an axis, particularly the social closeness axis.

Richter, West, Van Dick, and Dawson (2006) and George and Chattopadhyay (2005) indicated that a dual identity forms in boundary spanners and contract workers. This study confirmed their conclusion. Individuals can feel affiliation towards their parent organization as well as a second group, or community.

The task orientation axis, conversely, presented a greater challenge in concluding that the tasks are the same. Weerts and Sandmann (2010) defined the axis as technical-practical and socio-emotional tasks. The current study presented all these tasks as the same. Several justifications exist. The task orientation axis only represented one construct, as indicated by the two factor reduction analysis. If true, the types of tasks in which boundary spanners engage cannot be segmented to define different types of boundary spanners. A second explanation, the current study respondents' did not represent a diverse enough sample of tasks within higher education. Weerts and Sandmann (2010) indicated that upper level administrators in higher education such as presidents and deans completed the socio-emotional tasks. Neither presidents nor deans indicated their position in the current study, so they were not represented in this study.

Implications for Practice and Policy

The implications for practice and policy are presented based on the sphere of influence from the individual level to the societal level. Beginning with building awareness among individuals, the recommendations expand to the societal level; the net effect remains on the relationships between and among boundary spanners and their respective communities and institutions.

Individual Level Implications

At the individual level of influence, having a self-awareness of one's boundary-spanning behaviors can assist specific boundary spanners in tailoring their performance and roles based on

their unique skillsets, attributes, and qualities. By completing this boundary-spanning instrument, an individual can quantitatively define how close to the community and their organization they appear.

Uniting this instrument with other self-assessment scales can further personal or organizational needs in understanding how boundary spanners serve in the workforce. Crosno, Rinaldo, Hulda, and Scott (2009) found that optimistic individuals experienced less burnout and higher performance in boundary-spanning positions. While this instrument can be used for all positions and assumes that all individuals span some type of boundaries, using this instrument as an assessment in specific, strategic boundary-spanning contexts can assist supervisors, consultants, or other training and development coordinators.

Boundary spanners experience a dual identity (E. George & Chattopadhyay, 2005; Kreiner et al., 2006; Richter et al., 2006), sharing the identity of not only their organization, but also their community or other group with which they span a boundary. With this dual identity, a collaborative approach can occur. Rather than viewing other organizations as competitors, these organizations can be collaborators. With this shared identity among the boundary spanners, which often occurs when missions align, these individuals can lead their multiple organizations in a networked governance model.

Goldsmith and Eggers (2004) called for a boundary spanner as the new government employee, as one who connects and manages a network of suppliers rather than managing the supplies. This study examined the contrary. It examined a government provider/contractor that connects and manages a network. The implications of this offer a corollary to Goldsmith and Eggers. This study may indicate that the government could contract out the management of the network. This differed from the traditional government procurement model, but in order to be

successful, the network manager, the boundary spanner, must align with both the organization and the community.

Organizational Level Implications

The findings and discussion described the importance of organizational influence on boundary spanners in network formation and networked governance. The job role and organizational characteristics were the greatest influences on boundary-spanning behaviors. First, an organization has to have a level of readiness to utilize fully boundary spanners. Traditional hierarchical organizations may not be organizationally ready to embrace high levels of boundary-spanning activities. Flexible, entrepreneurial organizations understanding the collaborative versus competitive landscape may use boundary spanners to their fullest potential. But organizations can encourage, support, and value boundary spanning to overcome organizational constraints such as the hierarchical structure. For example, in a hierarchical or functional organizational structure, an organization can embed boundary spanners with a specific job role to cross the organizational boundaries in place. These boundary spanners would cross-pollinate ideas, information, and power among the various organizational structures.

This study illustrated the changes occurring within higher education institutions as community engagement continues to develop. The study's participants included only higher education employees that are nestled in boundary spanning activities and positions. The need for effective boundary spanners within higher education continues to grow in importance. This contradicts the historical specializations and silos created by the various academic disciplines. Thus, this study informs specifically higher education leaders in building organizational capacity for community engagement that could lead to institutionalization.

In the selection and orientation process of individuals needed for boundary spanning roles, organizations ought to highlight the crux of communications in the workplace, using multiple and frequent contacts (Marchington & Vincent, 2004). Equipping employees with multiple communications tools that fit the organizational and community contexts could engage both internal and external communications. Placing these boundary spanners in proximities close to the community further reinforces the boundary-spanning behaviors with both organization and community. In practical terms, this may include having multiple office locations, a shared space, or embedded employees within the community. While not specifically a component of this study, others have demonstrated how technology can reduce the perceived proximities between an organization and a community (Adkins, 2011). Future studies could introduce this feature.

In order to retain boundary spanners, the organization must not stifle the boundary-spanning activities. Perceived support and value of work with the community encouraged the boundary-spanning behaviors across all orientations. The perceived support and value may occur, in part, because the community-based or local work may be similar to a calling, or a call to serve (Dobrow, 2004; Sikula & Sikula Sr, 2005). This may influence some boundary spanning work more than others. Therefore, some organizations, due to having specific missions, functions, or employees, may be better placed within the environment to encourage boundary-spanning behaviors.

Finally, training and development can reinforce the boundary-spanning behaviors or can maximize the weaker behaviors. Resolving conflict and negotiating power were the two lowest ranking behaviors in the current study. Previous scholars (Bachmann, 2001; Friedman & Podolny, 1992; Williams, 2002) indicated these are important and often required skills in

effective boundary spanners. Providing appropriate work-based learning opportunities to model and practice conflict resolution, diplomacy, and tact could assist boundary spanners in their perceived or actual weaknesses.

Societal and System Level Implications

Change occurs more slowly at the system and society levels. Policy changes and influences at the federal level, particularly relating to networked governance, can encourage the use of boundary spanners within the federal sector. Boundary spanners are entrepreneurial, work the system in place for the advantage of the community and organization, and manage power dynamics. Because each of these skillsets can be used to abuse federal resources, primarily funds, the federal government placed restrictions on nepotism, removed patronage, and enforceed contracting rules strictly. These restrictions discouraged the moral hazards discussed to prevent the principal-agent problem.

A new method for governance is networked. Identifying mechanisms providing multiple organizations to collaborate rather than compete, particularly in the federal sector, could influence other areas. Using this study of the university-military contractors offers one example how multiple organizations and groups collaborate and network for a common mission. Based on this study, the individuals' experience and background influenced less in network formation than the organization itself.

Identifying, testing, and refining new techniques and models of governance may assist in comprehending when good things happen at the community level, it occurs because of boundary spanners and networking. This knowledge would resolve Milward and Proven's (2000) complaint: when good things happen at the community level, it may "not be traced back to any particular approach to solving community problems" (p. 361).

Future Research

Recommendations for future research are presented based on ease of execution. Replicating this initial study to additional contexts and environments will test the reliability of the instrument with others and also test its applicability with other groups. This current study built on several streams of boundary spanning research in management, organizational development, education, and higher education institutions. Table 28 revisits the boundary spanning empirical studies to highlight concurrance with the previous studies. This table may help future scholars refine this study's methodology to measure differently or provide opportunities for future discussion.

Study Replications

This study was an extension of a qualitiative study conducted by Weerts and Sandmann (2010). Its initial purpose was to demonstrate quantitatively the model examining boundary spanners involved in community engagement at research universities. Three specific future populations will assist in determining the validity, reliability, and applicability of this boundary-spanning instrument. While the sample is strong in the current study, extending the findings to other groups should only be done through logical inference and with caution. Additional studies will aid in discovering generalizable findings.

First, this study examined a limited segment of those involved in higher education community engagement. Individuals working within the framework of Cooperative Extension and the military provided a unique sample with a national scope. The sample is not indicative of one higher education institution and their entire boundary spanning community engaged work or the entire Cooperative Extension System. Are there qualities from this population that do not hold with other higher education institutions? Do technical colleges differ? How do localized

Table 28

Selected Boundary Spanning Empirical Studies Comparison

Study	Date	Purpose of Study	Sample	Results	Concurrence
Keller & Holland	1975	To examine boundary spanning activity's contributions to role conflict, ambiguity and job satisfaction	n = 51	Boundary spanning roles can differ substantially depending on the interorganizational relations and context; typical to a scientists in an R&D organization	Concur
Tushman	1977	To investigate the existence and the characteristics of special boundary roles as one means for innovating organizations to deal with the necessity of cross-boundary communications	n = 345	Boundary spanners assist in the innovation process internal to an R&D firm	Concur
Leifer & Delbecq	1977	To examine boundary spanning activity as an intervening variables between organizational structure and perceived environmental uncertainty	n = 220	Found support of boundary spanning activity as an intervening variable and support organizational structure affects perceived environmental uncertainty	Did not measure directly
Tushman & Scanlan	1981	To investigate the antecedents of boundary role status	n = 210	Only individuals who were strongly linked internally and externally would accomplish informational boundary spanning. Results suggest distinguishing between informational and representational boundary spanning roles	Concur
Tushman & Scanlan	1981	To distinguish between boundary spanning individuals and those who simply have substantial boundary spanning activity	n = 345	Perceived competence is an important determinant of boundary role status.	Did not measure directly
Katz & Tushman	1983	To investigate the influence of boundary spanning supervisors on the turnover and promotions of their project subordinates	n = 325	Found boundary spanning supervisors had little direct effect on the careers of all project subordinates	Do not concur

Table 28 (continued)

Selected Boundary Spanning Empirical Studies Comparison

Schwab, Ungson, & Brown	1985	To test whether boundary spanning is primarily related to environmental changes or to structure variables	n = 379	Boundary spanning activity is related to environment, but this relationship appears to vary along dimensions of environment as well as by industry. Size, perceived influence, and function are found to moderate the BS-environment relationship; boundary spanning activity is not related to the hierarchical level of the employee	Do not concur
Fennell & Alexander	1987	To test differences in boundary-spanning strategies between freestanding organizations and organizations that are members of multiorganizational systems	n = 901	Found that hospitals in systems were more likely to adopt bridging strategies; institutional constraints affect organizational selection of boundary-spanning strategies	Did not measure directly
Shrum	1990	To test status incongruence's effects on the exchange and conflict among professionals	n = 113	Revealed that structural features interact to produce characteristic exchange flows, and the exchange of resources among these professionals affects perceptions of conflict	Do not concur
Hinds & Kiesler	1995	To examine the communications methods among technical and administrative employees	n = 88	Telephone & email encourages lateral communications across organizational boundaries; the informal network has historically been viewed as the grapevine and not important….not so with the changes occurring in network governance.	Did not measure directly
Finkelstein	1999	To develop the concept and practice of boundary management and its usefulness in tearing down the walls and creating organizational change	n = 1	Action committees are at the heart of transformation; shop-floor teams bring labor and management to work through problems and issues	Concur
Callister	2001	To examine conflicts that occur across organizational boundaries	n = 30; n = 109	Organizational power affects behavioral responses, where status differences and previous negative interactions affect emotions	Concur
Blair & Jost	2003	Measure effects of boundary permeability between low group identity and high group identity	n = 72	Priority group identity is capable of leading people to resist the temptation of individual exit associated with permeable group boundaries	Concur

Table 28 (continued)

Selected Boundary Spanning Empirical Studies Comparison

Perrone, Zaheer, and McEvily	2003	Explain trust in boundary spanners by the extent of role autonomy	n = 119	Granting purchasing managers greater autonomy enhances supplier representative trust in purchasing managers	Did not measure directly
Druskat & Wheeler	2003	To explore how effective leader behaviors and strategies unfold over time	n = 66	Found that effective external leaders move back and forth across boundaries to build relationships, scout necessary information, persuade their teams and outside constituents to support one another, and empower their teams to achieve success	Concur
Tarant	2004	To examine factors that have a potential influence on the effectiveness of boundary role incumbents operating within interorganizational relationships, more specifically within industry-university partnerships	n = 220	While this study forwards the field, it focuses on the effectiveness from the perspective of the university and the industry partner. It does not focus on the roles that the individual boundary spanner engages in.	Did not measure directly
Ferguson, Paulin & Bergeron	2005	To determine the relative influence of relational and contractual governance mechanisms on the customer-based evaluation of the exchange performance and to determine the extent to which their closeness to the client company was associated with the implementation of relational and contractual governance mechanisms and with the customer-based evaluation of exchange performance	n = 160	Found that the boundary spanner's closeness to the client company mediates the performance of midmarket commercial banking exchanges through the implementation of both relational and contractual governance. The account manager gather information willingly transferred from the business client in a climate of trust cooperation and commitment.	Did not measure directly
Marchington, Vincent, and Cooke	2005	To analyze the role of boundary-spanning agents	n = 4	Found that while boundary spanner is important in interorganizational relations, protecting one's own organization	Concur

Table 28 (continued)

Selected Boundary Spanning Empirical Studies Comparison

Richter, West, van Dick, & Dawson	2006	To explain effective intergroup relations in organizations by reference to boundary spanners' self-concept and behavior	n = 53	Effective intergroup relations were moderated by organizational identification, supporting a dual identity model. Found if boundary spanners displayed frequent intergroup contact and identified highly with their organization, group identification was most strongly related to effective intergroup relations	Concur
Jones & Noble	2008	To examines the challenges that confront individual managers whose work involves bridging the organizational boundaries of public-private partnerships: so called-boundary spanners	n = 7	Boundary spanners maintain synergetic momentum to respond to pressure. Their behaviors are influenced and shaped by the lack of a single authority figure, constant pressure to maintain time frames and a drive to ensure their own personal success and survival.	Concur
Miller	2008	To learn more about boundary spanning leadership by examining it in two urban contexts and analyzing it among relevant conceptual discourses	n = 2	Found that boundary spanners are aided by contextual knowledge, interpersonal skills, trust and connectedness, but they are motivated by an underlying community loyalty and a fundamental, socially conscious impetus--one which invites active advocacy for the oppressed via strategic collaboration	Partially concur
Crosno, Rinaldo, Black & Kelley	2009	To examine optimism as an internal characteristic that facilitates coping with role stressor experienced by service providers in boundary spanning positions	n = 220	Found that optimism facilitates coping with role stressors; Boundary-spanning employees with high levels of optimism will experience less felt stress and increased job satisfaction and performance	Did not measure directly
Weerts & Sandmann	2010	Examine how research universities build bridges to community partners, and thus increase institutional capacity for engagement	n = 80	Community problem solvers, technical experts, internal engagement advocate and engagement champions were four roles identified in universities	Concur

Table 28 (continued)

Selected Boundary Spanning Empirical Studies Comparison

Ramarajan, Bezrukova, Jehn, & Euwema	2011	Examine the negative consequences of boundary spanning contact in multi-organizational contexts	n = 833	Employee's boundary spanning with members of other organizations was associated with reports of negative relationships with external parties (e.g. work specific problems, culture-specific problems); negative attitudes toward their own jobs / organizations; greater contact between boundary spanners increases conflict rather than cooperation in the absence of inter-org norms	Do not concur
Williams	2011	To identify, describe, categorize and understand boundary spanning competencies and effective collaborative behavior	n = 469, 22, 10, 15	The author found key factors and influences in effective collaborative working: Building sustainable relationships, managing through influencing and negotiation, managing complexity and interdependencies, and managing roles, accountabilities and motivations	Concur
Hill & Birkinshaw	2012	To examine why some corporate venture units survive and others do not	n = 50 ; n = 447	Boundary spanning units within CV firms achieve ambidexterity through their relational context, while technical core units are more likely to attain ambidexterity through their behavioral context	Partially concur
Skolaski	2012	To better understand the identity and work of academic and extension staff who have boundary spanning responsibilities	n = 832	Author found distinct differences in identity, work, visibility, support and value between academic and extension staff. Also found significant differences at one institution compared to the others	Partially concur
Adams	2013	To examine community located higher education boundary spanners in a higher education – community partnerships	n = 3	Boundary spanners come with developed boundary spanning capacities and serve important roles in representing their organizations	Partially concur

programs specific to a smaller geopolitical boundary differ, if at all? Identifying and testing these institutional or systematic factors with this instrument will aid in understanding of the individual boundary-spanning behaviors.

Second, the study focused on a small component of military *contractors* engaged in a human services area. Previous research examined boundary spanning in research and development functions (R. Katz & Tushman, 1983; Tushman, 1977; Tushman & Scanlan, 1981b), but not in the military research and development area. With communications serving as a catalyst for boundary-spanning behavior, how does national security protocols inhibit communcations for these boundary spanners? Military contractors not involved in research and development deserve attention too. By examining the microcosm of the military and its boundary-spanning actors, additional study can inform public governance in other sectors and levels of the federal, state, and local government.

Third, non-employees should be examined using this boundary spanning framework. Volunteers and other forms of non-employees serve an important role in our organizations and our communities. They bridge organizations and communities, particularly in the United States with its strong history of volunteer-led organizations. How do volunteers differ from employees in their antecedents of boundary-spanning behavior? Do the personal characteristics play a larger role in predicting boundary-spanning behaviors in non-employees? By using one or more staff directed, volunteer implemented organizations such as 4-H, the Red Cross, or Boy Scouts/Girl Scouts, some of these questions could be answered.

A final opportunity to replicate this study could use trait theories as the personal predictor characteristics. Williams (2002) cited the reasoning for this line of future research. Many of the unique qualities of the boundary spanner named "innumerable references to the personalities,

character, traits, and disposition of boundary spanners" (p. 112). These trait theories are poor predictors of behavior (Williams, 2002). Other scholars continue the debate that these personalities and traits are "different cognitive styles and processes" (Williams, 2002, p. 112). Replicating this study using trait theory as a foundational theory of the predictors may add to the intellectual discussion. Using trait theory would provide that individuals have a trait of *boundary-spanningness* to varying degress. Environments either allow that trait to be operationalized or not. Then the organization either becomes the facilitator or the deterrant to boundary spanning behaviors.

In Depth Case Study or Qualitative Examination

One of the conclusions concentrates on the importance of communications in boundary spanning. A qualitative follow-up study focusing on the communications—content, patterns, types, and frequencies among others—in these actors may assist in segmenting how communications influences the specific constructs. Are some types of communciations preferred based on the organization? On the community? This study found that previous experience with a community is neither necessary nor a predictor to boundary-spanning behaviors. So how does an individual boundary spanner start formulating their network without previous experience? Is the genesis to network formation an organizational quality or a personal characteristic unidentified in this study?

A separate qualitiative approach could once again reconceptualize the Weerts and Sandmann (2010) model from the quantitative data in this case. By following up with respondents in this current study, the four types of boundary spanners—community-based problem solver, internal engagement advocate, engagement champion, and technical expert—

could be qualitiatively derived from the quantitative data, further confirming its accuracy of engagement in higher education institutions.

Altering Methodologies

Using this instrument combined with other quantitative tools in future research could provide clarity to boundary spanning theory making. Williams (2002, 2011) described diplomacy, tact, and political acumen as skills and qualities of a compotent boundary spanner. Negotiating power was the least noted boundary-spanning behavior among this study's respondents. Social undesirability may have influenced this specific item. Being political could be viewed as negative by typically selfless community-based individuals. The role of power in networked governance is distributed across the network and horizontal. Future research focusing on power dynamics and boundary spanning may indicate that negotiating power was the least used behavior because of the distributed sense of power.

Other skills identified in the research include coalition building, trustworthiness, and genuineness. Identifying a methodology to anchor some behaviors may remove this possibility of social desirability. Or a methodology that expands the study beyond just one individual survey may assist in describing and examining the qualities of trust, power, and mutuality that develops in relational contracts, networked governance and community engagement. Altering the methodology would introduce richer, substantative data from observations, focus groups, semistructured interviews, and other methods.

Summary

This chapter summarized the findings and offered four key conclusions. Specifically, four conclusions of this research are: (1) For most of the dimensions of boundary-spanning behaviors, personal characteristics are not a major predictor. However work/organizational

characteristics are; (2) Communications is a catalyst to boundary-spanning activities; (3) Affirmation for the boundary spanning work encourages its use; and (4) This study provides support for the Weerts and Sandmann (2010) model.

This chapter continued with the implications for policy and practice at the individual, organizational and societal levels. At the individual level, an awareness of boundary-spanning behaviors and one's use of these behaviors can assist and prepare oneself for the context, but the workplace's influence is much greater. To boost boundary-spanning activities, organizations must ready themselves, encourage, value, and support community or boundary spanning work, and equip boundary spanners to link separate entities effectively. At the societal level, encouraging collaborative efforts is recommended.

Future research in the realm of boundary spanning will add clarity to understanding antecedents, effectiveness, and the contexts of boundary spanning. Replicating this study with additional audiences and populations will further validate the instrument. Additional in-depth qualitative methods will contribute the back story to a brief questionnaire, and other methodologies could quantify the relationships, network, and success of boundary spanners and their work in our communities. As networked governance becomes more prevalent in society, the importance of the boundary spanner will continue to grow.

Boundary spanners permeate society; they also permeate boundaries. Not only do they permeate, but also they link, bridge, protect, and communicate. As the world continues to *flatten,* individuals will still be needed to break through the noise. Boundary spanners serve as an optimal mechanism to connect our institutions, our communities, our associations, and our people.

REFERENCES

Adams, K. R. (2013). *The exploration of community boundary spanners.* (Doctorate of Philosophy), University of Georgia, Athens, GA.

Adkins, G. L. (2011). *An exploratory analysis: The role of network structures and boundary spanner behaviors as related to collaboration in inter-organizational networks.* (Unpublished doctoral dissertation), University of Oklahoma, Norman, Oklahoma.

Agnihotri, R., Rapp, A. A., Andzulis, J. M., & Gabler, C. B. (2013). Examining the drivers and performance implications of boundary spanner creativity. *Journal of Service Research, 1*(18).

Aldrich, H., & Herker, D. (1977). Boundary spanning roles and organizational structure. *Academy of Management Review, 2*(2), 217-230.

Association of Public and Land-grant Universities. (2012). The land-grant tradition. Washington, D.C.: Association of Public and Land-grant Universities.

Au, K. Y., & Fukuda, J. (2002). Boundary spanning behaviors of expatriates. *Journal of World Business, 37*, 285-296.

Azevedo, R. E., & Akdere, M. (2008). The economics of utility, agency, theory, and human resource development. *Advances in Developing Human Resources, 10*(6), 817-833.

Azevedo, R. E., & Akdere, M. (2011). Examining agency theory in training & development: Understanding self-interest behaviors in the organization. *Human Resource Development Review*. doi: 10.1177/1534484311412150

Bachmann, R. (2001). Trust, power and control in trans-organizational relations. *Organization Studies, 22*(2), 337.

Bardach, E., & Lesser, C. (1996). Accountability in human services collaboratives: For what? And to whom? *Journal of Public Administration Research and Theory: J-PART, 6*(2), 197-224.

Bartel, C. A. (2001). Social comparisons in boundary-spanning work: Effects of community outreach on members' organizational identity and identification. *Administrative Science Quarterly, 46*(3), 379-413.

Bender, R., & Lange, S. (2001). Adjusting for multiple testing—when and how? *Journal of Clinical Epidemiology, 54*(4), 343-349. doi: http://dx.doi.org/10.1016/S0895-4356(00)00314-0

Bennett, C., & Ferlie, E. (1996). Contracting in theory and in practice: Some evidence from the NHS. *Public Administration, 74*(1), 49-66. doi: 10.1111/j.1467-9299.1996.tb00857.x

Bertelli, A. M., & Smith, C. R. (2010). Relational contracting and network management. *Journal of Public Administration Research and Theory, 20*(suppl 1), i21-i40. doi: 10.1093/jopart/mup033

Bierema, L. L. (2010). Professional identity. In C. E. Kasworm, A. D. Rose & J. M. Ross-Gordon (Eds.), *Handbook of adult and continuing education* (2010 ed.). Thousand Oaks, California: SAGE Publications.

Blasi, G. J. (2002). Government contracting and performance measurement in human services. *International Journal of Public Administration, 25*(4), 519.

Borgatti, S. P., & Foster, P. C. (2003). The network paradigm in organizational research: A review and typology. *Journal of Management, 29*(6), 991-1013.

Bovaird, T. (2004). Public–private partnerships: From contested concepts to prevalent practice. *International Review of Administrative Sciences, 70*(2), 199-215. doi: 10.1177/0020852304044250

Boyer, E. L. (1990). Scholarship reconsidered: priorities of the professoriate: The Carnegie Foundation for the Advancement of Teaching.

Boyer, E. L. (1996). The scholarship of engagement. *Journal of Public Outreach, 1*(1), 11-20.

Brown, T. L., & Potoski, M. (2004). Managing the public service market. *Public Administration Review, 64*(6), 656-668. doi: 10.1111/j.1540-6210.2004.00413.x

Brown, T. L., Potoski, M., & Van Slyke, D. M. (2006). Managing public service contracts: Aligning values, institutions, and markets. *Public Administration Review, 66*(3), 323-331. doi: 10.1111/j.1540-6210.2006.00590.x

Brown, T. L., Potoski, M., & Van Slyke, D. M. (2010). Contracting for complex products. *Journal of Public Administration Research and Theory, 20*(Suppl 1), 41-58.

Budd, J. (2009). *Higher education's purpose : intellectual and social progress*. Lanham, MD: University Press of America.

Burt, R. S. (2004). Structural holes and good ideas1. *American Journal of Sociology, 110*(2), 349-399.

Caers, R., Du Bois, C., Jegers, M., De Gieter, S., Schepers, C., & Pepermans, R. (2006). Principal-agent relationships on the stewardship-agency axis. *Nonprofit Management & Leadership, 17*(1), 25-47.

Caldwell, D. F., & O'Reilly, C. A. (1982). Boundary spanning and individual performance: The impact of self-monitoring. *Journal of Applied Psychology, 67*(1), 124-127. doi: 10.1037/0021-9010.67.1.124

Carnegie Foundation for the Advancement of Teaching. (2014). Carnegie classifications: Community engagement classification. Retrieved February 6, 2014, from http://classifications.carnegiefoundation.org/descriptions/community_engagement.php

Cohen, S. (2001). A strategic framework for devolving responsibility and functions from government to the private sector. *Public Administration Review, 61*(4), 432.

Cohen, S., & Eimicke, W. B. (2008). *The responsible contract manager : protecting the public interest in an outsourced world*. Washington, D.C.: Georgetown University Press.

Cooper, P. J. (2003). *Governing by contract : challenges and opportunities for public managers*. Washington, D.C.: CQ Press.

Cordes, C. L., & Dougherty, T. W. (1993). A review and an integration of research on job burnout. *Academy of Management Review, 18*(4), 621-656. doi: 10.5465/AMR.1993.9402210153

Courtenay, B. C. (1993). Managing the differences in public, private organizations. *Adult Learning, 4*(4), 13-30.

Cox, D. (2010). History of the scholarship of engagement movement. In H. E. Fitzgerald, C. Burack & S. D. Seifer (Eds.), *Engaged scholarship: contemporary landscapes, future directions*. East Lansing, MI: Michigan State University Press.

Crosno, J. L., Rinaldo, S. B., Hulda, G. B., & Scott, W. K. (2009). Half full or half empty: The role of optimism in boundary-spanning positions. *Journal of Service Research, 11*(3), 295-309.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review, 22*(1), 20-47.

DeHoog, R. H., & Salamon, L. M. (2002). Purchase-of-service contracting. In L. M. Salamon (Ed.), *The tools of government: A guide to the new governance*. Oxford, England: Oxford University Press.

Desrieux, C., Chong, E., & Saussier, S. (2013). Putting all one's eggs in one basket: Relational contracts and the management of local public services. *Journal of Economic Behavior & Organization, 89*(0), 167-186. doi: http://dx.doi.org/10.1016/j.jebo.2012.03.001

Dicke, L. A. (2002). Ensuring accountability in human service contracting. *American Review of Public Administration, 32*(4), 455-470.

Dill, D. D. (1997). Higher education markets and public policy. *Higher Education Policy, 10*(3-4), 3-4.

Dillman, D. A., Smyth, J. D., Christian, L. M., & Dillman, D. A. (2009). *Internet, mail, and mixed-mode surveys : the tailored design method* (3rd ed.). Hoboken, N.J.: Wiley & Sons.

Dobrow, S. (2004). Extreme subjective career success: A new integrated view of having a calling. *Academy of Management Proceedings, 2004*(1), B1-B6. doi: 10.5465/ambpp.2004.13863838

Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Austrailian Journal of Management, 16*, 49-64.

Eisenhardt, K. (1989). Agency theory: An assessment and review. In H. Tosi (Ed.), *Theories of organization*. Thousand Oaks, California: SAGE Publications.

Eisenhour, D. D. (1961). *Farewell radio and television address to the American people*.

Ernst, C., & Chrobot-Mason, D. (2011). *Boundary spanning leadership: Six practices for solving problems, driving innovation, and transforming organizations*. New York: McGraw-Hill.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*(2), 301-325.

Fennell, M. L., & Alexander, J. A. (1987). Organizational boundary spanning in institutionalized environments. *The Academy of Management Journal, 30*(3), 456-476.

Ferguson, R. J., Paulin, M., & Bergeron, J. (2005). Contractual governance, relational governance, and the performance of interfirm service exchanges: The influence of boundary-spanner closeness. *Journal of the Academy of Marketing Science, 33*(2), 217-234. doi: 10.1177/92070304268417

Ferris, J. M. (1986). The decision to contract out: An empirical analysis. *Urban Affairs Quarterly, 22*(2), 289-311.

Finkelstein, M. S. (1999). Good boundaries make good neighbors: Boundary management--tearing down the walls and fostering organizaitonal change. *Sociological practice: A journal of clinical and applied sociology, 1*(3), 193-208.

Fitzgerald, H. E., Bruns, K., Sonka, S., Furco, A., & Swanson, L. (2012). The centrality of engagement in higher education. *Journal of Higher Education Outreach & Engagement, 16*(3), 7-27.

Fredericks, K. A., & Durland, M. (2005). The historical evolution and basic concepts of social network analysis. In M. Durland & K. A. Fredericks (Eds.), *New Directions for Evaluation*. San Francisco, California: Jossey Bass.

Friedman, R. A., & Podolny, J. (1992). Differentiation of boundary spanning roles: labor negotiations and implications for role conflict. *Administrative Science Quarterly, 37*(1), 28-47.

Friedman, T. L. (2006). *The world is flat : a brief history of the twenty-first century* (1st updated and expanded ed.). New York: Farrar, Straus and Giroux.

Garsten, C. (1999). Betwixt and between: Temporary employees as liminal subjects in flexible organizations. *Organization Studies, 20*(4), 601-617. doi: 10.1177/0170840699204004

George, D., & Mallery, P. (2001). *SPSS for Windows*.

George, E., & Chattopadhyay, P. (2005). One foot in each camp: The dual identification of contract workers. *Administrative Science Quarterly, 50*(1), 68-99.

Ghoshal, S., & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *Academy of Management Review, 21*(1), 13-47.

Glavin, P., Schieman, S., & Reid, S. (2011). Boundary-spanning work demands and their consequences for guilt and psychological distress. *Journal of Health and Social Behavior, 52*(1), 43-57.

Goldsmith, S., & Eggers, W. D. (2004). *Governing by network : the new shape of the public sector*. Washington, D.C.: Brookings Institution Press.

Gupta, A., Herath, S. K., & Mikouiza, N. C. (2005). Outsourcing in higher education: an empirical examination. *International Journal of Educational Management, 19*(5), 396-412.

Harroff, P. A. (2002). *Dimensions of quality for web-based adult education.* (Unpublished doctoral dissertation), University of Georgia, Athens, Georgia.

Hefetz, A., & Warner, M. E. (2011). Contracting or public delivery? The importance of service, market and management characteristics. *Journal of Public Administration Research and Theory*. doi: 10.1093/jopart/mur006

Hill, S. A., & Birkinshaw, J. (2014). Ambidexterity and survival in corporate venture units. *Journal of Management, 40*(7), 1899-1931.

Hinds, P., & Keisler, S. (1995). Communication across boundaries: Work, structure, and use of communication technologies in a large organization. *Organization Science, 6*(4), 373-393.

Huebner, A. J., Mancini, J. A., Bowen, G. L., & Orthner, D. K. (2009). Shadowed by war: Building community capacity to support military families. *Family Relations, 58*(2), 216-228.

Huggins, R., Johnston, A., & Thompson, P. (2012). Network capital, social capital and knowledge flow: HOw the nature of inter-organizational networks impacts on innovation, industry and innovation. *Industry and Innovation, 19*(3), 203-232.

Isbell, M. G. (2009). *Communicating social identities: Exploring boundary spanners in interorganizational collaborations.* (Unpublished doctoral dissertation), University of Texas at Austin, Austin, Texas.

Isett, K. R., Mergel, I. A., LeRoux, K., Mischen, P. A., & Rethemeyer, R. K. (2011). Networks in public administration scholarship: Understanding where we are and where we need to go. *Journal of Public Administration Research and Theory, 21*(suppl 1), i157-i173. doi: 10.1093/jopart/muq061

Janke, E. (2009). Defining characteristics of partnership identity in faculty-community partnerships. In B. E. Moely, S. Billig, H & B. A. Holland (Eds.), *Creating our identitities in service-learning and community engagement*. Denver, Colorado: Information Age Publishing.

Janowicz-Panjaitan, M., & Noorderhaven, N. G. (2009). Trust, calculation, and interorganizational learning of tacit knowledge: An organizational roles perspective. *Organization Studies, 30*(10), 1021-1044. doi: 10.1177/0170840609337933

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership. *Journal of Financial Economics, 3*(4), 305-360.

Jensen, M. C., & Meckling, W. H. (1994). The nature of man. *Journal of Applied Corporate Finance, 7*(2), 4-19.

Jones, R., & Noble, G. (2008). Managing the implementation of public–private partnerships. *Public Money & Management, 28*(2), 109-114. doi: 10.1111/j.1467-9302.2008.00629.x

Kadushin, C. (2012). *Understanding social networks : theories, concepts, and findings*. New York: Oxford University Press.

Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York, NY: Wiley.

Katz, R., & Tushman, M. L. (1983). A longitudinal study of the effects of boundary spanning supervision on turnover and promotion in research and development. *Academy of Management Journal, 26*(3), 437-456. doi: 10.2307/256255

Keller, R. T., & Holland, W. E. (1975). Boundary-spanning roles in a research and development organization: an empirical investigation. *Academy of Management Jounral, 18*(2), 388-393.

Kellogg Commission on the Future of State and Land-Grant Universities. (1999). Returning to our roots: the engaged institution. Washington DC: Nasional Association of State Universities and Land-Grant Colleges.

Kim, B., Peter, C., Murrmann, S. K., & Lee, G. (2009). Moderating effects of gender and organizational level between role stress and job satisfaction among hotel employees.

International Journal of Hospitality Management, 28(4), 612-619. doi: http://dx.doi.org/10.1016/j.ijhm.2009.04.001

Knox, A. B., & Fleming, J. E. (2010). Professionalization of the field of adult and continuing education. In C. E. Kasworm, A. D. Rose & J. M. Ross-Gordon (Eds.), *Handbook of adult and continuing education* (2010 ed.). Thousand Oaks, California: SAGE Publications.

Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. (2006). On the edge of identity: Boundary dynamics at the interface of individual and organizational identities. *Human Relations, 59*(10), 1315-1341. doi: 10.1177/0018726706071525

Kusari, S., Cohen, D., Singh, J., & Marinova, D. (2005). *Trust and control mechanisms in organizational boundary spanners' cognitions and behaviors.* Paper presented at the Academy of Management.

Lambright, K. T. (2009). Agency theory and beyond: Contracted providers' motivations to properly use service monitoring tools. *Journal of Public Administration Research and Theory, 19*(2), 207-227. doi: 10.1093/jopart/mun009

Lecy, J. D., Mergel, I. A., & Schmitz, H. P. (2013). Networks in public administration. *Public Management Review*, 1-23. doi: 10.1080/14719037.2012.743577

Leifer, R., & Delbecq, A. (1978). Organizational/environmental interchange: a model of boundary spanning activity. *Academy of Management Review, 3*(1), 40-50.

Leifer, R., & Huber, G. P. (1977). Relations among Perceived Environmental Uncertainty, Organization Structure, and Boundary-Spanning Behavior. *Administrative Science Quarterly, 22*(2), 235-247.

Light, P. C. (1999). *The true size of government*: Brookings Institution Press.

Light, P. C. (2003). *Fact sheet on the new true size of government*: Brookings Institution.

Long, J. C., Cunningham, F. C., & Braithwaite, J. (2013). Bridges, brokers and boundary spanners in collaborative networks: a systematic review. *BMC health services research, 13*(1), 158.

Loyal, S., & Barnes, B. (2001). "Agency" as a red herring in social theory. *Philosophy of the Social Sciences, 31*(4), 507-507-524.

Lyons, B. R. (1996). Empirical relevance of efficient contract theory: inter-firm contracts. *Oxford Review of Economic Policy, 12*(4), 27-52. doi: 10.1093/oxrep/12.4.27

Marchington, M., & Vincent, S. (2004). Analysing the influence of institutional, organizational and interpersonal forces in shaping inter-organizational relations. *Journal of Management Studies, 41*(6), 1029-1056. doi: 10.1111/j.1467-6486.2004.00465.x

Marchington, M., Vincent, S., & Cooke, F. L. (2005). The role of boundary spanning agents in inter-organizational contracting. In M. Marchington, D. Grimshaw, J. Rubery & H. Willmott (Eds.), *Fragmenting work: Blurring organziational boundaries and disordering hierarchies*. Oxford, England: Oxford University Press.

Martin, L. L., & Kettner, P. M. (2010). *Measuring the performance of human service programs* (2nd ed.). Los Angeles: Sage.

Mawby, R. G. (1996). The challenge for outreach for land-grant universities as they move into the 21st century. *Journal of Public Service and Outreach, 1*(1), 46-56.

Miller, P. M. (2008). Examining the work of boundary spanning leaders in community contexts. *International Journal of Leadership in Education, 11*(4), 353-377. doi: 10.1080/13603120802317875

Milward, H. B., & Provan, K. G. (2000). Governing the hollow state. *Journal of Public Administration Research and Theory, 10*(2), 359-379.

Mintzberg, H. (1989). *Mintzberg on management: Inside our strange world of organizations*. New York, New York: Simon and Schuster.

Miron, D., & Moely, B. E. (2006). Community agency voice and benefit in service-learning. *Michigan Journal of Community Service Learning*, 27-37.

Mitchell, R., & Meacheam, D. (2011). Knowledge worker control: understanding via principal and agency theory. *Learning Organization, 18*(2), 149-160.

Nagle, J. F. (1999). *A history of government contracting* (2nd ed.). Washington, D.C.: George Washington University.

Noble, G., & Jones, R. (2006). The role of boundary-spanning managers in the establishment of public-private partnerships. *Public Administration, 84*(4), 891-917. doi: 10.1111/j.1467-9299.2006.00617.x

O'Meara, K. (2011). Faculty civic engagement. In J. Saltmarsh & M. Hartley (Eds.), *To serve a larger purpose* (pp. 14-26). Philadelphia, PA: Temple University Press.

O’Meara, K. A. (2005). Encouraging multiple forms of scholarship in faculty reward systems: Does It Make a Difference? *Research in Higher Education, 46*(5), 479-510. doi: 10.1007/s11162-005-3362-6

Ostrom, E. (2010). Analyzing collective action. *Journal of Agricultural Economics*, 155-166.

Page, S. (2004). Measuring accountability for results in interagency collaboratives. *Public Administration Review, 64*(5), 591-606. doi: 10.1111/j.1540-6210.2004.00406.x

Parsons, T. (1951). *The social system*. Glencoe, Ill.,: Free Press.

Parsons, T., & Shils, E. A. (1951). *Toward a general theory of action*. Cambridge,: Harvard University Press.

Paulin, M., Perrien, J., & Ferguson, R. (1997). Relational contract norms and the effectiveness of commercial banking relationships. *International Journal of Service Industry Management, 8*(5), 435-452. doi: 10.1108/09564239710189844

Perrone, V., Zaheer, A., & McEvily, B. (2003). Free to be trusted?: Organizational constraints on trust in boundary spanners. *Organization Science, 14*(4), 422-439.

Perry, J. L. (1997). Antecedents of public service motivation. *Journal of Public Administration Research and Theory, 7*(2), 181-197.

Perry, J. L. (2000). Bringing society in: Toward a theory of public-service motivation. *Journal of Public Administration Research and Theory, 10*(2), 471-488.

Polson, C. J. (2010). Military contributions to adult education. In C. E. Kasworm, A. D. Rose & J. M. Ross-Gordon (Eds.), *Handbook of adult and continuing education*. Los Angeles, California: SAGE.

Potvin, L., & Clavier, C. (2013). Actor-network theory: the governance of intersectoral initiatives. In C. Clavier & E. de Leeuw (Eds.), *Health promotion and the policy porcess*. Oxford: Oxford University Press.

Provan, K. G., & Gassenheimer, J. B. (1994). Supplier commitment in relational contract exchanges with buyers: A study of interorganizational dependence and exercised power. *Journal of Management Studies, 31*(1), 55-68. doi: 10.1111/j.1467-6486.1994.tb00332.x

Ramussen, W. D. (1989). *Taking the university to the people: Seventy-five years of cooperative extension*: Purdue University Press.

Rangachari, P. (2008). Knowledge sharing networks related to hospital quality measurement and reporting. *Health care management review, 33*(3), 253-263.

Richter, A. W., West, M. A., van Dick, R., & Dawson, J. F. (2006). Boundary spanners' identification, intergroup contact, and effective intergroup relations. *Academy of Management Journal, 49*(6), 1252-1269.

Ring, P. S., & Van De Ven, A. H. (1994). Developmental processes of cooperative interorganizational relationships. *Academy of Management Review, 19*(1), 90-118. doi: 10.5465/amr.1994.9410122009

Romzek, B. S., & Johnston, J. M. (2005). State social services contracting: Exploring the determinants of effective contract accountability. *Public Administration Review, 65*(4), 436-449. doi: 10.1111/j.1540-6210.2005.00470.x

Roper, C. D., & Hirth, M. A. (2005). A history of change in the third mission of higher education: The evolution of one-way service to interactive engagement. *Journal of Higher Education Outreach & Engagement, 10*(3), 3-21.

Salamon, L. M. (2002a). Contracting. In L. M. Salamon (Ed.), *The tools of government: A guide to the new governance*. Oxford, England: Oxford University Press.

Salamon, L. M. (2002b). The new governance and the tools of public action: An introduction. In L. M. Salamon (Ed.), *The tools of government: A guide to the new governance*. Oxford, England: Oxford University Press.

Saltmarsh, J., & Hartley, M. (2011). Democratic engagement. In J. Saltmarsh & M. Hartley (Eds.), *To serve a larger purpose* (pp. 14-26). Philadelphia, PA: Temple University Press.

Sandmann, L. R. (2006). Building a higher education network for community engagement. *Journal of Higher Education Outreach and Engagement, 11*(4), 41-55.

Sandmann, L. R., Jordan, J. W., Mull, C. D., & Valentine, T. (2014). Measuring boundary-spanning behaviors in community engagement. *Journal of Higher Education Outreach & Engagement, 18*(3).

Sandmann, L. R., Saltmarsh, J., & O'Meara, K. (2008). An integrated model for advancing the scholarship of engagement: Creating academic homes for the engaged scholar. *Journal of Higher Education Outreach & Engagement, 12*(1), 47-64.

Sandy, M., & Holland, B. A. (2006). Different worlds and common ground: Community partner perspectives on campus-community partnerships. *Michigan Journal of Community Service Learning*, 30-43.

Schwab, R. C., Ungson, C. R., & Brown, W. B. (1985). Redefining the boundary spanning-environment relationship. *Journal of Management, 11*(1), 75.

Sclar, E. (2000). *You don't always get what you pay for : the economics of privatization*. Ithaca, N.Y.: Cornell University Press.

Sharma, A. (1997). Professional as agent: knowledge asymmetry in agency exchange. *Academy of Management Review, 22*(3), 758-798.

Shrum, W. (1990). Status incongruence among boundary spanners: Structure, exchange, and conflict. *American Sociological Review, 55*(4), 496-511.

Sikula, J., & Sikula Sr, A. (2005). Spirituality and service learning. *New Directions for Teaching and Learning, 2005*(104), 75-81. doi: 10.1002/tl.216

Skolaski, J. P. (2012). *Boundary spanning in higher education: How universities can enable success.* (Unpublished doctoral dissertation), University of Wisconsin - Madison, Madison, Wisconsin.

Sluss, D. M., & Ashforth, B. E. (2008). How relational and organizational identification converge: Processes and conditions. *Organization Science, 19*(6), 807-823.

Snyder, T. D., & Hoffman, C. M. (2003). *Digest of education statistics 2002*: National Center for Education Statistics, Office of Educational Research and Improvement.

Soloway, S., & Chvotkin, A. (2009). Federal contracting in context *Government By Contract: Outsourcing and American Democracy* (pp. 192-238).

Stamper, C. L., & Johlke, M. C. (2003). The impact of perceived organizational support on the relationship between boundary spanner role stress and work outcomes. *Journal of Management, 29*(4), 569-588.

Sundaram, A. K., & Inkpen, A. C. (2004a). The corporate objective revisited. *Organization Science, 15*(3), 350-363. doi: 10.1287/orsc.1040.0068

Sundaram, A. K., & Inkpen, A. C. (2004b). Stakeholder theory and "The corporate objective revisited": A reply. *Organization Science, 15*(3), 370-371. doi: 10.1287/orsc.1040.0067

Sundaramurthy, C., & Lewis, M. (2003). Control and collaboration: Paradoxes of governance. *Academy of Management Review, 28*(3), 397-415.

Tarant, S. A. (2004). *The role of organizational boundary spanners in industry/university collaborative relationships.* (Unpublished doctoral dissertation), North Carolina State University, Raleigh.

Tushman, M. L. (1977). Special boundary roles in the innovation process. *Administrative Science Quarterly, 22*(4), 587-605.

Tushman, M. L., & Scanlan, T. J. (1981a). Boundary spanning individuals: Their role in information transfer and their antecedents. *Academy of Management Journal, 24*(2), 289-305.

Tushman, M. L., & Scanlan, T. J. (1981b). Characteristics and external orientations of boundary spanning individuals. *Academy of Management Journal, 24*(1), 83-98. doi: 10.2307/255825

van Hulst, M., de Graaf, L., & van den Brink, G. (2011). Exemplary practitioners: A review of actors who make a difference in governing. *Administrative Theory and Praxis, 33*(1), 120-142.

van Hulst, M., de Graaf, L., & van den Brink, G. (2012). The work of exemplary practitioners in neighborhood governance. *Critical Policy Stuides, 6*(4), 434-451.

Van Slyke, D. M. (2003). The mythology of privatization in contracting for social services. *Public Administration Review, 63*(3), 296-315. doi: 10.1111/1540-6210.00291

Van Slyke, D. M. (2007). Agents or stewards: Using theory to understand the government-nonprofit social service contracting relationship. *Journal of Public Administration Research & Theory, 17*, 157-187.

von Bertalanffy, K. L. (1969). *General system theory*. New York, NY: G. Braziller.

Waring, J., Currie, G., Crompton, A., & Bishop, S. (2013). An exploratory study of knowledge brokering in hospital settings: Facilitating knowledge sharing and learning for patient safety? *Social Science & Medicine, 98*(0), 79-86. doi: http://dx.doi.org/10.1016/j.socscimed.2013.08.037

Weerts, D. J. (2005a). Facilitating knowledge flow in community-university partnerships. *Journal of Higher Education Outreach and Engagement, 10*(3).

Weerts, D. J. (2005b). Validating institutional commitment to outreach at land-grant universities: listening to the voices of community partnerships. *Journal of Extension, 43*(5).

Weerts, D. J., & Sandmann, L. (2008). Building a two-way street: challneges and opportunities for community engagement at research universities. *The Review of Higher Education, 32*(1), 73-106.

Weerts, D. J., & Sandmann, L. (2010). Community engagement and boundary-spanning roles at research universities. *Journal of Higher Education, 81*, 632-657.

Westphal, J. D., & Zajac, E. J. (1994). Substance and symbolism in CEO's long-term incentive plans. *Administrative Science Quarterly, 39*(3), 367-390.

Westphal, J. D., & Zajac, E. J. (1998). The symbolic management of stockholders: Corporate governance reforms and shareholder reactions. *Administrative Science Quarterly, 43*(1), 127-153. doi: 10.2307/2393593

Williams, P. (2002). The competent boundary spanner. *Public Administration, 80*(1), 103.

Williams, P. (2011). The life and times of the boundary spanner. *Journal of Integrated Care, 19*(3), 26-33.

Williams, P. (2013). We are all boundary spanners now? *International Journal of Public Sector Management, 26*(1), 17-32.

Williamson, O. E. (1975). *Markets and hierarchies, analysis and antitrust implications : a study in the economics of internal organization*. New York: Free Press.

Williamson, O. E. (1979). Transaction-cost economics: The governance of contractual relations. *Journal of Law and Economics, 22*(2), 233-261.

Williamson, O. E. (1996). *The mechanisms of governance*. New York: Oxford University Press.

Wilson, E. (2010). Gates unveils strategy to cut costs, boosts efficiency. Retrieved October 12, 2012, from http://www.defense.gov/News/NewsArticle.aspx?ID=60854

Yanow, D. (2004). Translating local knowledge at organizational peripheries. *British Journal of Management, 15*(S1), S9-S25. doi: 10.1111/j.1467-8551.2004.t01-1-00403.x

Zaret, D. (1980). From Weber to Parsons and Shutz: The eclipse of history in modern social theory. *American Journal of Sociology, 85*(5), 1180-1180-1201.

Zheng, J., Roehrich, J. K., & Lewis, M. A. (2008). The dynamics of contractual and relational governance: Evidence from long-term public–private procurement arrangements. *Journal of Purchasing and Supply Management, 14*(1), 43-54. doi: 10.1016/j.pursup.2008.01.004

APPENDICES

APPENDIX A

CONTENT OF THE SURVEY INSTRUMENT

The subsequent pages are facsimiles from the online collection tool.

THE UNIVERSITY OF GEORGIA

Thank you so much for your consideration to complete this brief survey.
We appreciate you contributing to not only our study but also to
our ability to understand how university employees engage
with the military community.
Thank you again for your time.

You will not be able to return to this survey if you are not able to complete it in one session.

This is notification of consent for the research study titled *Boundary Spanning Roles of University Employees Engaged with the Military Community* The purpose of this research is to explore the roles and activities of university employees engaged with military communities by leveraging university expertise and resources. Please know this research activity is being conducted by the individual below under the direction of Lorilee Sandmann and the results may be published.

Casey D. Mull
University of Georgia
319 Hoke Smith Annex
Athens, GA 30602

As a participant in this study, you will complete an online 50 question survey about your roles and activities as a university employee working with the military community. There are no foreseen risks to your participation. Your participation is voluntary. You may refuse to participate or withdraw at any time without penalty or loss of benefits which you would otherwise be entitled, or skip any questions that you feel uncomfortable answering. It should take approximately 20 minutes to complete the online questionnaire. By completing this brief questionnaire, you will be contributing to a group effort to develop an understanding of boundary spanning roles as individuals work within and between communities and organizations.

All of your responses will be confidential. Your questionnaire response may be assigned a "cookie" that has no meaning outside the survey website. If you do not complete this survey in one sitting, you will not be able to return to it and complete it at another time.

Internet communications may be less secure and there is a limit to the confidentiality that can be guaranteed to the technology itself. However, once the completed survey is received by the researcher, standard confidentiality procedures will be followed including removing email address and/or IP addresses after data collection. In addition, only summary data will be reported.

If you have any questions, do not hesitate to ask now or at a later date. You may contact Casey D. Mull, Study Director, at or or Lorilee Sandmann at

By clicking the arrow below to continue, you are agreeing to participate in the above described research project. Please print this letter for your records.

Additional questions or problems regarding your rights as a research participant should be addressed to IRB Chairperson, Institutional Review Board, University of Georgia, Boyd Graduate Studies Research Center, Athens, Georgia 30602; Telephone (706) 542-3199; Email address IRB@uga.edu

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THE UNIVERSITY OF GEORGIA

Before beginning the study, we need some additional information in order to tailor the study specific to your experiences with the military community.

Select any of the statements below that apply to you:

- [ ] I work for a university
- [ ] As a part of my job, I work on a military installation regularly.
- [ ] As a part of my job, I work with military service members or military family members.
- [ ] As a part of my job, I interact with military service members or military family members.
- [ ] As a part of my job, I conduct research with military audiences.
- [ ] As a part of my job, I am interested in doing more work with military audiences.
- [ ] As a part of my job, I am NOT involved in any way with military service members or military family members.

>>

THE UNIVERSITY OF GEORGIA

Section I: Task and Activities

In this section, you will read about the tasks or things that you do as a part of your role in your university and the military community. Read each statement and click on the button that best describes the frequency to which you conduct the activity.

	Never	Rarely	Sometimes	Often	Usually	Always
1.) I build capacity among individuals.	○	○	○	○	○	○
2.) I identify expertise in individuals.	○	○	○	○	○	○
3.) I manage projects.	○	○	○	○	○	○
4.) I design processes for projects.	○	○	○	○	○	○
5.) I determine solutions for challenges.	○	○	○	○	○	○
6.) I apply my skills to new situations.	○	○	○	○	○	○
	Never	Rarely	Sometimes	Often	Usually	Always
7.) I resolve conflict among other individuals.	○	○	○	○	○	○
8.) I negotiate power among individuals.	○	○	○	○	○	○
9.) I support others in their accomplishments and challenges.	○	○	○	○	○	○
10.) I identify issues in communication.	○	○	○	○	○	○
11.) I maintain relationships with a variety of individuals.	○	○	○	○	○	○
12.) I broker resources among individuals or groups.	○	○	○	○	○	○
	Never	Rarely	Sometimes	Often	Usually	Always
13.) I build trust with people I interact with.	○	○	○	○	○	○
14.) I facilitate meetings between individuals or groups.	○	○	○	○	○	○
15.) I identify resources to support projects.	○	○	○	○	○	○
16.) I identify barriers to success.	○	○	○	○	○	○
	Never	Rarely	Sometimes	Often	Usually	Always

>>

THE UNIVERSITY OF GEORGIA

Section II: Perspectives towards Military Community and your University

In this section, you will read about perspectives towards your organization (your university) which you represent and the military community with which you work. Read each statement and click on the button that best describes the frequency to which you conduct the activity.

	Never	Rarely	Sometimes	Often	Usually	Always
17.) I find ways to meet ***community*** needs with ***organization*** partners.	○	○	○	○	○	○
18.) I find ways to meet ***organization*** needs with ***community*** partners.	○	○	○	○	○	○
19.) I identify expertise in the ***organization*** to support the ***community***.	○	○	○	○	○	○
20.) I identify expertise in the ***community*** to support the ***organization***.	○	○	○	○	○	○
21.) I communicate the ***community's*** interests to others.	○	○	○	○	○	○
22.) I communicate the ***organization's*** interests to others.	○	○	○	○	○	○
	Never	Rarely	Sometimes	Often	Usually	Always
23.) I develop partnerships that benefit the ***community***.	○	○	○	○	○	○
24.) I develop partnerships that benefit the ***organization***.	○	○	○	○	○	○
25.) I translate ***organizational*** information to the ***community***.	○	○	○	○	○	○
26.) I translate ***community*** information to the ***organization***.	○	○	○	○	○	○
27.) I represent the ***community's*** perspective.	○	○	○	○	○	○
28.) I represent the ***organization's*** perspective.	○	○	○	○	○	○
	Never	Rarely	Sometimes	Often	Usually	Always
29.) I advocate for ***organizational*** policy that supports the ***community***.	○	○	○	○	○	○
30.) I advocate for ***community*** policy that supports the ***organization***.	○	○	○	○	○	○
31.) I utilize information to support the ***community***.	○	○	○	○	○	○
32.) I utilize information to support the ***organization***.	○	○	○	○	○	○
	Never	Rarely	Sometimes	Often	Usually	Always

THE UNIVERSITY OF GEORGIA

Section III: Program and Personal Information

This last section requests demographic information about you, your position and your work within your university.

What is your gender?

- Male
- Female

In what year were you born? (Provided the year in the four digit format. For example: 1965)

Approximately how many years have you been in your current position?

Approximately how many years have you been employed by your university?

What is your highest received degree?

What is your experience of serving in the military or being a part of a military family? (Select any or all that apply)

	Army *	Marine Corps *	Navy *	Air Force *	Coast Guard *	Guard *	Reserve *	Did not serve
I served in the:								

	Army	Marine Corps	Navy	Air Force	Coast Guard	Guard	Reserve	Did not serve
If applicable, my current spouse/partner serves or served in the:								
Another Immediate Family Member (Parent / Sibling / Child) serves or served in:								

>>

THE UNIVERSITY OF GEORGIA

Section III: Program and Personal Information

This last section requests demographic information about you, your position and your work within your university.

What role(s) best describe your current position in your workplace? (Select any that apply)

- ☐ 4-H Military Liaison
- ☐ Operation: Military Kids Coordinator
- ☐ Academic Professional
- ☐ Classified Staff (non-faculty)
- ☐ Tenure Track Faculty
- ☐ Faculty, but non-tenure track
- ☐ Field or county based faculty
- ☐ Military and Veterans Center Staff
- ☐ State Extension Specialist
- ☐ University Administrator
- ☐ Other

With what frequency do you engage in the following activities:

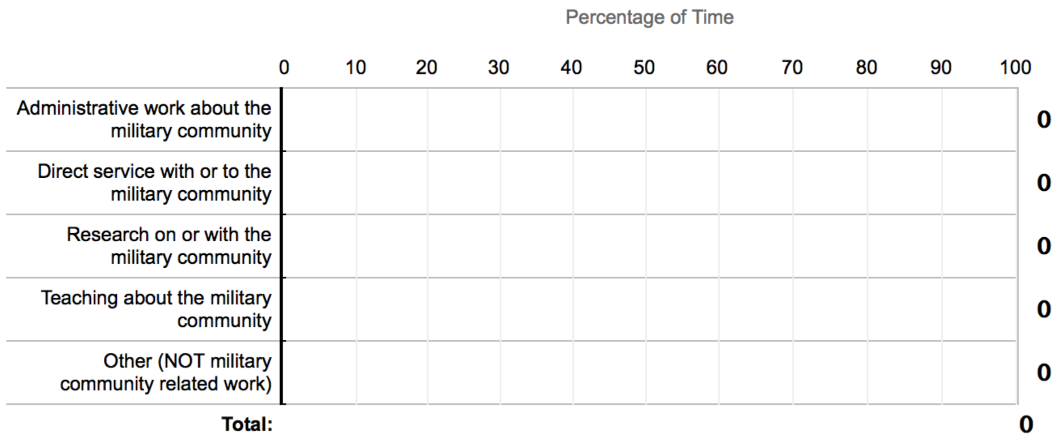
	Never	Rarely	Sometimes	Often	Usually	Always
Visit a military installation	○	○	○	○	○	○
Visit a national guard armory or other reserve facility	○	○	○	○	○	○
Meet face to face with military members or dependents	○	○	○	○	○	○
Meet face to face with military family professionals	○	○	○	○	○	○

With what frequency do you communicate in any form with individuals representing the following entities?

	Never	Rarely	Sometimes	Often	Usually	Always
Army (Active Component)	○	○	○	○	○	○
Army National Guard	○	○	○	○	○	○
Army Reserve	○	○	○	○	○	○
Marine Corps (Active Component)	○	○	○	○	○	○
Marine Corps Reserve	○	○	○	○	○	○
Navy (Active Component)	○	○	○	○	○	○
Navy Reserve	○	○	○	○	○	○
Air Force (Active Component)	○	○	○	○	○	○
Air National Guard	○	○	○	○	○	○
Air Force Reserve	○	○	○	○	○	○
Coast Guard (Active Component)	○	○	○	○	○	○
Coast Guard Reserve	○	○	○	○	○	○

What is the approximate distance (in miles) from your worksite to the closest military installation with which you work regularly? If your regular work location is on a military installation, enter the number zero (0).

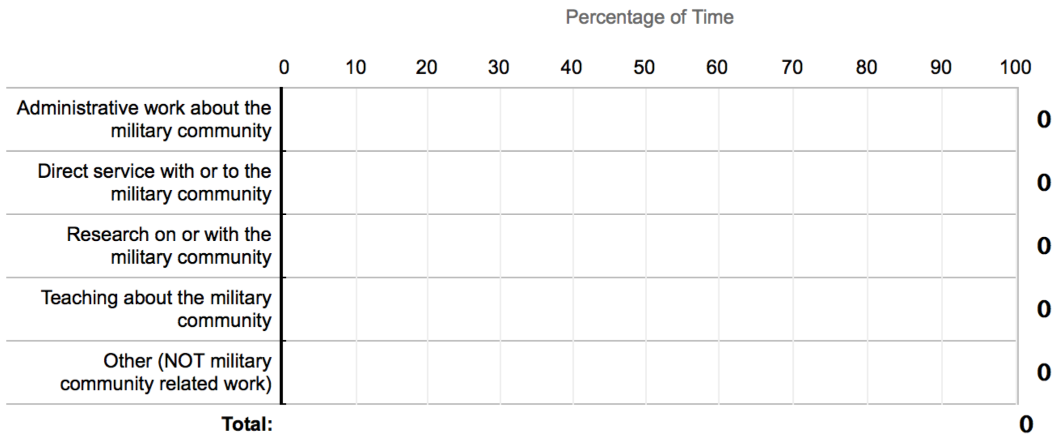
What percentage of time is your position **BUDGETED** to work with the following activities? (Drag the sliders below to equal 100% of your time or click in the area underneath the percentage desired)



Percentage of Time

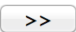
	0	10	20	30	40	50	60	70	80	90	100	
Administrative work about the military community												**0**
Direct service with or to the military community												**0**
Research on or with the military community												**0**
Teaching about the military community												**0**
Other (NOT military community related work)												**0**
Total:												**0**

What is your best estimate of the **percentage of TIME SPENT** with the following activities? (Drag the sliders below to equal 100% of your time or click in the area underneath the percentage desired)



Percentage of Time

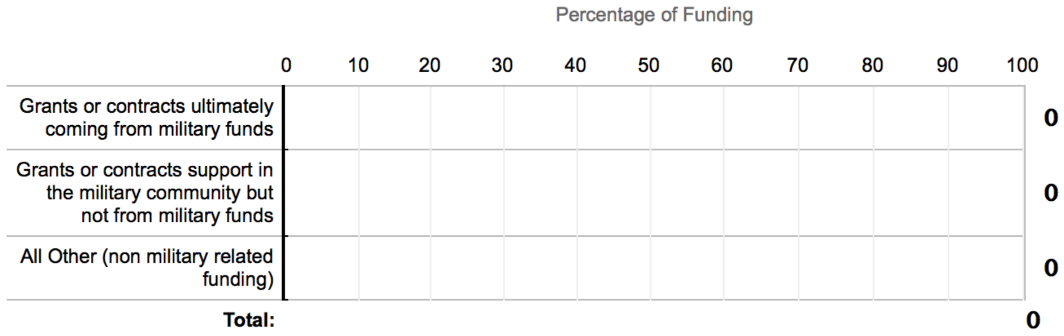
	0	10	20	30	40	50	60	70	80	90	100	
Administrative work about the military community												**0**
Direct service with or to the military community												**0**
Research on or with the military community												**0**
Teaching about the military community												**0**
Other (NOT military community related work)												**0**
Total:												**0**



Section III: Program and Personal Information

This last section requests demographic information about you, your position and your work within your university.

What is your best estimate of the percentage of your annual salary from the following sources? (Drag the sliders below to equal 100% of your time or click in the area underneath the percentage desired)



Percentage of Funding

	0	10	20	30	40	50	60	70	80	90	100	
Grants or contracts ultimately coming from military funds												0
Grants or contracts support in the military community but not from military funds												0
All Other (non military related funding)												0
Total:												0

Please rate how ***supportive*** each of the following are of your work with the military community:

	Not at all supportive	A little bit supportive	Somewhat supportive	Quite Supportive	Very Supportive	Extremely supportive
Your university						
Home department, center, program area, or unit						
Supervisor						
Colleagues						
External military community partners you work with						

Please rate how ***valued*** you feel each of the following is of your work with the military:

	Not at all valued	A little bit valued	Somewhat valued	Quite valued	Very valued	Extremely valued
Your university	○	○	○	○	○	○
Home department, center, program area, or unit	○	○	○	○	○	○
Supervisor	○	○	○	○	○	○
Colleagues	○	○	○	○	○	○
External military community partners you work with	○	○	○	○	○	○

How would you classify your college or university?

Degree Granting Status

Control

Land-Grant Status

What is the approximate number of faculty and staff of your college/university?

At your higher education institution, counting yourself, approximately how many faculty and staff members work with the military community as any part of their job (in full-time or part-time positions)?

Please type the state in which your university is primarily located in the box below:

>>

APPENDIX B

IRB APPROVAL FOR THE PILOT STUDY

REQUEST FOR PARTICIPATION IN THE PILOT SURVEY

REMINDER FOR PARTICIPATION IN THE PILOT STUDY

PILOT STUDY IRB APPROVAL FACSIMILE

The University of Georgia

Phone 706-542-3199 Fax 706-542-3660

Office of the Vice President for Research
Institutional Review Board

APPROVAL OF PROTOCOL

October 28, 2013

Lorilee Sandmann

Dear Lorilee Sandmann:

On 10/28/2013, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Boundary Spanning Roles of Individuals working in Organizations and Communities
Investigator:	Lorilee Sandmann
IRB ID:	STUDY00000459
Funding:	None
Grant ID:	None

The IRB approved the protocol from 10/28/2013.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Larry Nackerud, PhD
University of Georgia
Institutional Review Board Chairperson

629 Boyd Graduate Studies Research Center
Athens, Georgia 30602-7411
An Equal Opportunity/Affirmative Action Institution

Dear [Name of Subject],

One of the lines of the Extension Professionals' Creed states "I Believe that Extension is a link between the people and the ever-changing discoveries in the laboratories." We know that our profession is important because we have impact on both the communities in which we serve and on our higher education organizations, the University of Georgia and Fort Valley State University. While we have one of the most rewarding jobs in this country, we also have one of the most challenging. One of our primary roles is to maintain a balance between the university and our communities. This happens very differently for each and every Extension professional. Therefore, it is critical to identify the roles and activities of Extension professionals that lead to success for our communities and our universities.

We write to request your participation in a research study to identify the roles and activities of Cooperative Extension employees in spanning the boundaries between our communities and our universities. The results will benefit the field as we will become better equipped to train and develop Extension professionals in serving the people of our state. We recognize the value of your time. Your participation is completely voluntary. The survey consists of 50 questions and is designed to take about 15 minutes to complete. Your input is valuable to the study and we appreciate your consideration.

To complete the survey, simply follow the link for online completion. We personally guarantee the confidentiality of your responses.

Survey Link: [survey link]

This link is uniquely tied to this survey and your email address; please do not forward the message for other individuals to complete.

With appreciation,

Jenny Jordan & Casey Mull
Doctoral Candidates, Adult Education

Additional questions or problems regarding your rights as a research participant should be addressed to IRB Chairperson, Human Subjects Office, University of Georgia, 629 Boyd Graduate Studies Research Center, Athens, Georgia, 30602; Telephone (706) 542-3199; E-mail Address IRB@uga.edu .

TO: Georgia Cooperative Extension Faculty and Staff

This is just a reminder about a note we sent on [insert date] about our exciting study to examine the roles and activities you undertake in serving our clientele.

We want to ensure that your input is included. We are wrapping up data collection now and the last date that we can accept data is [insert date], 2013.

I hope you will find the time to help us with this study. The link to the survey is below.

Survey Link: [survey link]

Thanks so much,

Jenny W. Jordan	Casey D. Mull
Senior Public Service Associate	Public Service Associate

APPENDIX C

IRB APPROVAL FOR PARTICIPATION IN THE STUDY

REQUEST FOR PARTICIPATION IN THE STUDY

STUDY IRB APPROVAL FACSIMILE

The University of Georgia

Phone 706-542-3199

Office of the Vice President for Research
Institutional Review Board

Fax 706-542-3660

APPROVAL OF PROTOCOL

February 4, 2014

Dear Lorilee Sandmann:

On 2/4/2014, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Boundary Spanning Roles of Individuals Engaged with Military Family Services
Investigator:	Lorilee Sandmann
IRB ID:	STUDY00000449
Funding:	None
Grant ID:	None

The IRB approved the protocol from 2/4/2014.

To document consent, use the consent documents that were approved and stamped by the IRB. Go to the Documents tab to download them.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Larry Nackerud, Ph.D.
University of Georgia
Institutional Review Board Chairperson

629 Boyd Graduate Studies Research Center ◆ Athens, Georgia 30602-7411
An Equal Opportunity/Affirmative Action Institution

Dear [Name of Subject],

The role of the university in making our communities better cannot be understated. We chose this profession because we know the research in our laboratories on campus can make life better for those residing in our communities, state and nation. Particularly with the President of the United States' call to support military members, veterans, and their families, we know that the higher education system is doing just that. The military community is just as complex as our campuses. We need to know more about the leaders such as yourself who facilitate change in communities such as the military community.

I am writing to request your participation in a research study to identify the roles and activities influencing community engagement, or university-community partnerships. You have been chosen as one of the university faculty or staff members whose input will represent higher education and its role in improving the military community for the more than 2.2 million service members and their families. The results will benefit the field as we will become better equipped to develop partnerships between our universities and communities and train leaders to facilitate these partnerships.

As a public service faculty member myself, I recognize the value of your time. Your participation is voluntary. The survey consists of 50 questions and is designed to take about 20 minutes to complete. Your input is valuable to the study and I appreciate your consideration.

To complete the survey, simply follow the link for online completion. I personally guarantee the confidentiality of your responses.

I would also ask that you do forward this request to any other faculty or staff members working directly with or supporting the military community to any degree in your or any other institution of higher education. This would include county extension staff and other field faculty and staff or campus based individuals.

Survey Link: [survey link]

With appreciation,

Casey Mull
Doctoral Candidate, Adult Education, College of Education
Public Service Faculty, Cooperative Extension,
College of Agricultural & Environmental Sciences
University of Georgia

Lorilee R. Sandmann
Professor, Adult Education, Learning and Organization Development
College of Education, University of Georgia

APPENDIX D

IMPLIED CONSENT FORM

IMPLIED CONSENT FORM

Thank you so much for your consideration of completing this important study.

This is notification of implied consent for the research study titled [Insert name of study]. The purpose of this research is to understand roles and activities of individuals facilitating university-community partnerships with the military community. Please know that this research activity is being conducted by the below individual, under the supervision of Dr. Lorilee R. Sandmann, and the results may be published.

Casey D. Mull
Study Director
University of Georgia
319 Hoke Smith Annex
Athens, GA 30602

As a participant in this study, you will complete an online 50 question survey about your roles and activities as a university employee working with the military community. There are no foreseen risks to your participation. Your participation is voluntary. You may refuse to participate or withdraw at any time without penalty, or skip any questions that you feel uncomfortable answering. It should take approximately 20 minutes to complete the online questionnaire.

All of your responses will be confidential and will not be associated with your name or email address after the initial review of data; however, a unique number will be assigned to each respondent through use of a "cookie" that has no meaning outside of the survey website. If necessary, this will allow each respondent to return to an incomplete survey and be taken directly to the point of exit. If the survey remains incomplete, it cannot be accessed by the researcher and the answers will not be used as part of the study.

Please note the following:
Internet communications are insecure and there is a limit to the confidentiality that can be guaranteed due to the technology itself. However, once the completed survey is received by the researcher, standard confidentiality procedures will be followed. In addition, only summary data will be reported.

If you have any questions, do not hesitate to ask now or at a later date. You may contact Casey D. Mull, Study Director, at or

Additional questions or problems regarding your rights as a research participant should be addressed to IRB Chairperson, Institutional Review Board, University of Georgia, 629 Boyd Graduate Studies Research Center, Athens, Georgia, 30602; Telephone (706) 542-3199; E-mail Address IRB@uga.edu.

APPENDIX E

SECOND REQUEST FOR PARTICIPATION

Dear [Name of Subject],

You and others at your university make a tremendous impact on the over 2.2 million military members and their families through your outreach and service. I understand how busy this time can be and wanted to send a follow up to an email you received on [insert initial date] requesting your participation in a survey of university faculty and staff working with the military community.

You have been chosen as one of the university faculty or staff members whose input will represent higher education and its role in improving the military community. The results will benefit the field, as we will become better equipped to develop partnerships between our universities and communities and train leaders to facilitate these partnerships. As a public service faculty member, I recognize the value of your time. Your participation is completely voluntary. The survey consists of 50 questions and is designed to take about 20 minutes to complete. Your input is valuable to the study and I appreciate your consideration.

To complete the survey, simply follow the link for online completion. I personally guarantee the confidentiality of your responses.

Also, please forward this request to other field or campus based faculty and staff at your or other colleges and universities who support military connected individuals whether it is a formal or informal part of their job responsibility.

Survey Link: [survey link]

With appreciation,

Casey Mull
Doctoral Candidate, Adult Education, College of Education
Public Service Faculty, Cooperative Extension,
College of Agricultural & Environmental Sciences
University of Georgia

Lorilee R. Sandmann
Professor, Adult Education, Learning and Organization Development
College of Education, University of Georgia

APPENDIX F

FINAL REQUEST FOR PARTICIPATION

Dear [Name of Subject],

The military encompasses only 1% of our country's population but it ensures the national security of 100% of the population. As a university employee engaged with the military community, you make a difference every day in the lives of these service members and their families and subsequently, our entire nation. It is important that we continue to understand the roles and activities you assume so that we can continue to improve university's service and outreach to this important community.

As a public service faculty member engaged with the military community on both state and national levels, I understand how "full your plate" can be. However, I'm writing to bring your attention to a survey participation request you received on [date of original message] You have been chosen as one of the individuals whose input will represent the impact of the higher education systems in improving the quality of life for military service members and their families; therefore, your input is very valuable.

I am currently conducting a research study to identify the activities and roles that university employees working with the military engage that supports the university and the military community. This study is part of my doctoral studies at the University of Georgia, under the supervision of Lorilee Sandmann.

The results will benefit the field, as we will become better equipped to develop partnerships between our universities and communities and train leaders to facilitate these partnerships. As a public service faculty member, I recognize the value of your time. Your participation is completely voluntary. The survey consists of 50 questions and is designed to take about 20 minutes to complete. Your input is valuable to the study and I appreciate your consideration.

To complete the survey, simply follow the link for online completion. I personally guarantee the confidentiality of your responses.

Also, please forward this request to other field or campus based faculty and staff at your or other colleges and universities who support military connected individuals whether it is a formal or informal part of their job responsibility.

Survey Link: [survey link]

With appreciation,

Casey Mull
Doctoral Candidate, Adult Education, College of Education
Public Service Faculty, Cooperative Extension,
College of Agricultural & Environmental Sciences
University of Georgia

Lorilee R. Sandmann
Professor, Adult Education, Learning and Organization Development
College of Education, University of Georgia

APPENDIX G

FREQUENCIES OF INDIVIDUAL BOUNDARY SPANNING ITEMS

Descriptive Statistics of Individual Boundary-Spanning Behaviors (n = 178)

	M	SD	Min	Max
1.) I build capacity among individuals.	4.48	1.23	1	6
2.) I identify expertise in individuals.	4.04	1.31	1	6
3.) I manage projects.	4.94	1.20	1	6
4.) I design processes for projects.	4.48	1.31	1	6
5.) I determine solutions for challenges.	4.70	1.13	1	6
6.) I apply my skills to new situations.	4.99	1.06	1	6
7.) I resolve conflict among other individuals.	3.52	1.33	1	6
8.) I negotiate power among individuals.	3.29	1.35	1	6
9.) I support others in their accomplishments and challenges.	4.93	1.06	1	6
10.) I identify issues in communication.	4.45	1.23	1	6
11.) I maintain relationships with a variety of individuals.	5.44	0.89	1	6
12.) I broker resources among individuals or groups.	4.56	1.31	1	6
13.) I build trust with people I interact with.	5.34	0.90	1	6
14.) I facilitate meetings between individuals or groups.	4.88	1.13	1	6
15.) I identify resources to support projects.	5.04	1.09	1	6
16.) I identify barriers to success.	4.69	1.15	1	6
Technical Practical Orientation	38.29	7.51	8	48
Socio Emotional Orientation	35.49	7.05	8	48
17.) I find ways to meet community needs with organization partners.	4.27	1.24	1	6
18.) I find ways to meet organization needs with community partners.	4.01	1.35	1	6
19.) I identify expertise in the organization to support the community.	4.24	1.27	1	6
20.) I identify expertise in the community to support the organization.	3.81	1.44	1	6
21.) I communicate the community's interests to others.	4.38	1.34	1	6
22.) I communicate the organization's interests to others.	4.51	1.27	1	6
23.) I develop partnerships that benefit the community.	4.54	1.19	1	6
24.) I develop partnerships that benefit the organization.	4.63	1.12	1	6
25.) I translate organizational information to the community.	4.58	1.22	1	6
26.) I translate community information to the organization.	4.26	1.26	1	6
27.) I represent the community's perspective.	4.02	1.46	1	6
28.) I represent the organization's perspective.	4.79	1.17	1	6
29.) I advocate for organizational policy that supports the community.	4.32	1.40	1	6
30.) I advocate for community policy that supports the organization.	3.76	1.60	1	6
31.) I utilize information to support the community.	4.70	1.20	1	6
32.) I utilize information to support the organization.	4.76	1.15	1	6
Community Orientation	35.06	8.68	8	48
Organizational Orientation	34.54	8.43	8	48

Frequency Tables – Individual Boundary-Spanning Behaviors

1.) I build capacity among individuals.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	4	2.2	2.2	2.2
	Rarely	4	2.2	2.2	4.5
	Sometimes	32	18.0	18.0	22.5
	Often	43	24.2	24.2	46.6
	Usually	52	29.2	29.2	75.8
	Always	43	24.2	24.2	100.0
	Total	178	100.0	100.0	

2.) I identify expertise in individuals.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	7	3.9	3.9	3.9
	Rarely	17	9.6	9.6	13.5
	Sometimes	35	19.7	19.7	33.1
	Often	42	23.6	23.6	56.7
	Usually	56	31.5	31.5	88.2
	Always	21	11.8	11.8	100.0
	Total	178	100.0	100.0	

3.) I manage projects.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	1.7	1.7	1.7
	Rarely	3	1.7	1.7	3.4
	Sometimes	19	10.7	10.7	14.0
	Often	28	15.7	15.7	29.8
	Usually	49	27.5	27.5	57.3
	Always	76	42.7	42.7	100.0
	Total	178	100.0	100.0	

4.) I design processes for projects.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	5	2.8	2.8	2.8
	Rarely	12	6.7	6.7	9.6
	Sometimes	19	10.7	10.7	20.2
	Often	44	24.7	24.7	44.9
	Usually	53	29.8	29.8	74.7
	Always	45	25.3	25.3	100.0
	Total	178	100.0	100.0	

5.) I determine solutions for challenges.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	6	3.4	3.4	3.9
	Sometimes	20	11.2	11.2	15.2
	Often	42	23.6	23.6	38.8
	Usually	58	32.6	32.6	71.3
	Always	51	28.7	28.7	100.0
	Total	178	100.0	100.0	

6.) I apply my skills to new situations.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	3	1.7	1.7	2.2
	Sometimes	12	6.7	6.7	9.0
	Often	36	20.2	20.2	29.2
	Usually	55	30.9	30.9	60.1
	Always	71	39.9	39.9	100.0
	Total	178	100.0	100.0	

7.) I resolve conflict among other individuals.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	8	4.5	4.5	4.5
	Rarely	34	19.1	19.1	23.6
	Sometimes	56	31.5	31.5	55.1
	Often	32	18.0	18.0	73.0
	Usually	34	19.1	19.1	92.1
	Always	14	7.9	7.9	100.0
	Total	178	100.0	100.0	

8.) I negotiate power among individuals.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	13	7.3	7.3	7.3
	Rarely	42	23.6	23.6	30.9
	Sometimes	52	29.2	29.2	60.1
	Often	36	20.2	20.2	80.3
	Usually	22	12.4	12.4	92.7
	Always	13	7.3	7.3	100.0
	Total	178	100.0	100.0	

9.) I support others in their accomplishments and challenges.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	4	2.2	2.2	2.8
	Sometimes	9	5.1	5.1	7.9
	Often	45	25.3	25.3	33.1
	Usually	53	29.8	29.8	62.9
	Always	66	37.1	37.1	100.0
	Total	178	100.0	100.0	

10.) I identify issues in communication.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	1.7	1.7	1.7
	Rarely	7	3.9	3.9	5.6
	Sometimes	32	18.0	18.0	23.6
	Often	42	23.6	23.6	47.2
	Usually	53	29.8	29.8	77.0
	Always	41	23.0	23.0	100.0
	Total	178	100.0	100.0	

11.) I maintain relationships with a variety of individuals.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Sometimes	8	4.5	4.5	5.1
	Often	14	7.9	7.9	12.9
	Usually	43	24.2	24.2	37.1
	Always	112	62.9	62.9	100.0
	Total	178	100.0	100.0	

12.) I broker resources among individuals or groups.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	4	2.2	2.2	2.2
	Rarely	10	5.6	5.6	7.9
	Sometimes	26	14.6	14.6	22.5
	Often	31	17.4	17.4	39.9
	Usually	56	31.5	31.5	71.3
	Always	51	28.7	28.7	100.0
	Total	178	100.0	100.0	

13.) I build trust with people I interact with.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	1	.6	.6	1.1
	Sometimes	5	2.8	2.8	3.9
	Often	20	11.2	11.2	15.2
	Usually	53	29.8	29.8	44.9
	Always	98	55.1	55.1	100.0
	Total	178	100.0	100.0	

14.) I facilitate meetings between individuals or groups.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	4	2.2	2.2	2.8
	Sometimes	18	10.1	10.1	12.9
	Often	37	20.8	20.8	33.7
	Usually	50	28.1	28.1	61.8
	Always	68	38.2	38.2	100.0
	Total	178	100.0	100.0	

15.) I identify resources to support projects.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	3	1.7	1.7	2.8
	Sometimes	11	6.2	6.2	9.0
	Often	30	16.9	16.9	25.8
	Usually	55	30.9	30.9	56.7
	Always	77	43.3	43.3	100.0
	Total	178	100.0	100.0	

16.) I identify barriers to success.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	3	1.7	1.7	2.8
	Sometimes	25	14.0	14.0	16.9
	Often	41	23.0	23.0	39.9
	Usually	54	30.3	30.3	70.2
	Always	53	29.8	29.8	100.0
	Total	178	100.0	100.0	

17.) I find ways to meet community needs with organization partners.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	12	6.7	6.7	7.3
	Sometimes	40	22.5	22.5	29.8
	Often	47	26.4	26.4	56.2
	Usually	41	23.0	23.0	79.2
	Always	37	20.8	20.8	100.0
	Total	178	100.0	100.0	

18.) I find ways to meet organization needs with community partners.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	1.7	1.7	1.7
	Rarely	24	13.5	13.5	15.2
	Sometimes	44	24.7	24.7	39.9
	Often	31	17.4	17.4	57.3
	Usually	49	27.5	27.5	84.8
	Always	27	15.2	15.2	100.0
	Total	178	100.0	100.0	

19.) I identify expertise in the organization to support the community.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	16	9.0	9.0	10.1
	Sometimes	33	18.5	18.5	28.7
	Often	46	25.8	25.8	54.5
	Usually	48	27.0	27.0	81.5
	Always	33	18.5	18.5	100.0
	Total	178	100.0	100.0	

20.) I identify expertise in the community to support the organization.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	9	5.1	5.1	5.1
	Rarely	28	15.7	15.7	20.8
	Sometimes	40	22.5	22.5	43.3
	Often	37	20.8	20.8	64.0
	Usually	38	21.3	21.3	85.4
	Always	26	14.6	14.6	100.0
	Total	178	100.0	100.0	

21.) I communicate the community's interests to others.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	1.7	1.7	1.7
	Rarely	18	10.1	10.1	11.8
	Sometimes	24	13.5	13.5	25.3
	Often	37	20.8	20.8	46.1
	Usually	55	30.9	30.9	77.0
	Always	41	23.0	23.0	100.0
	Total	178	100.0	100.0	

22.) I communicate the organization's interests to others.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	11	6.2	6.2	7.3
	Sometimes	27	15.2	15.2	22.5
	Often	41	23.0	23.0	45.5
	Usually	49	27.5	27.5	73.0
	Always	48	27.0	27.0	100.0
	Total	178	100.0	100.0	

23.) I develop partnerships that benefit the community.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	6	3.4	3.4	4.5
	Sometimes	30	16.9	16.9	21.3
	Often	39	21.9	21.9	43.3
	Usually	57	32.0	32.0	75.3
	Always	44	24.7	24.7	100.0
	Total	178	100.0	100.0	

24.) I develop partnerships that benefit the organization.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	3	1.7	1.7	2.8
	Sometimes	25	14.0	14.0	16.9
	Often	42	23.6	23.6	40.4
	Usually	62	34.8	34.8	75.3
	Always	44	24.7	24.7	100.0
	Total	178	100.0	100.0	

25.) I translate organizational information to the community.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	9	5.1	5.1	5.6
	Sometimes	28	15.7	15.7	21.3
	Often	36	20.2	20.2	41.6
	Usually	55	30.9	30.9	72.5
	Always	49	27.5	27.5	100.0
	Total	178	100.0	100.0	

26.) I translate community information to the organization.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	15	8.4	8.4	9.6
	Sometimes	37	20.8	20.8	30.3
	Often	35	19.7	19.7	50.0
	Usually	59	33.1	33.1	83.1
	Always	30	16.9	16.9	100.0
	Total	178	100.0	100.0	

27.) I represent the community's perspective.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	10	5.6	5.6	5.6
	Rarely	22	12.4	12.4	18.0
	Sometimes	30	16.9	16.9	34.8
	Often	39	21.9	21.9	56.7
	Usually	47	26.4	26.4	83.1
	Always	30	16.9	16.9	100.0
	Total	178	100.0	100.0	

28.) I represent the organization's perspective.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	1.1	1.1	1.1
	Rarely	5	2.8	2.8	3.9
	Sometimes	20	11.2	11.2	15.2
	Often	34	19.1	19.1	34.3
	Usually	57	32.0	32.0	66.3
	Always	60	33.7	33.7	100.0
	Total	178	100.0	100.0	

29.) I advocate for organizational policy that supports the community.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	5	2.8	2.8	2.8
	Rarely	16	9.0	9.0	11.8
	Sometimes	32	18.0	18.0	29.8
	Often	34	19.1	19.1	48.9
	Usually	46	25.8	25.8	74.7
	Always	45	25.3	25.3	100.0
	Total	178	100.0	100.0	

30.) I advocate for community policy that supports the organization.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	17	9.6	9.6	9.6
	Rarely	29	16.3	16.3	25.8
	Sometimes	34	19.1	19.1	44.9
	Often	28	15.7	15.7	60.7
	Usually	40	22.5	22.5	83.1
	Always	30	16.9	16.9	100.0
	Total	178	100.0	100.0	

31.) I utilize information to support the community.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	7	3.9	3.9	4.5
	Sometimes	25	14.0	14.0	18.5
	Often	35	19.7	19.7	38.2
	Usually	54	30.3	30.3	68.5
	Always	56	31.5	31.5	100.0
	Total	178	100.0	100.0	

32.) I utilize information to support the organization.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.6	.6	.6
	Rarely	5	2.8	2.8	3.4
	Sometimes	23	12.9	12.9	16.3
	Often	35	19.7	19.7	36.0
	Usually	56	31.5	31.5	67.4
	Always	58	32.6	32.6	100.0
	Total	178	100.0	100.0	

Technical Practical Orientation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	1	.6	.6	.6
	16	1	.6	.6	1.1
	17	1	.6	.6	1.7
	18	1	.6	.6	2.2
	21	2	1.1	1.1	3.4
	22	2	1.1	1.1	4.5
	24	2	1.1	1.1	5.6
	25	2	1.1	1.1	6.7
	26	1	.6	.6	7.3
	27	2	1.1	1.1	8.4
	28	2	1.1	1.1	9.6
	29	5	2.8	2.8	12.4
	30	2	1.1	1.1	13.5
	31	5	2.8	2.8	16.3
	32	6	3.4	3.4	19.7
	33	4	2.2	2.2	21.9
	34	6	3.4	3.4	25.3
	35	8	4.5	4.5	29.8
	36	10	5.6	5.6	35.4
	37	11	6.2	6.2	41.6
	38	8	4.5	4.5	46.1
	39	9	5.1	5.1	51.1
	40	10	5.6	5.6	56.7
	41	8	4.5	4.5	61.2
	42	15	8.4	8.4	69.7
	43	6	3.4	3.4	73.0
	44	7	3.9	3.9	77.0
	45	7	3.9	3.9	80.9
	46	8	4.5	4.5	85.4
	47	9	5.1	5.1	90.4
	48	17	9.6	9.6	100.0
	Total	178	100.0	100.0	

Socio Emotional Orientation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	1	.6	.6	.6
	15	1	.6	.6	1.1
	17	1	.6	.6	1.7
	18	1	.6	.6	2.2
	19	1	.6	.6	2.8
	21	2	1.1	1.1	3.9
	23	1	.6	.6	4.5
	25	4	2.2	2.2	6.7
	26	4	2.2	2.2	9.0
	27	4	2.2	2.2	11.2
	28	6	3.4	3.4	14.6
	29	6	3.4	3.4	18.0
	30	11	6.2	6.2	24.2
	31	5	2.8	2.8	27.0
	32	8	4.5	4.5	31.5
	33	15	8.4	8.4	39.9
	34	6	3.4	3.4	43.3
	35	11	6.2	6.2	49.4
	36	5	2.8	2.8	52.2
	37	7	3.9	3.9	56.2
	38	13	7.3	7.3	63.5
	39	12	6.7	6.7	70.2
	40	7	3.9	3.9	74.2
	41	9	5.1	5.1	79.2
	42	8	4.5	4.5	83.7
	43	6	3.4	3.4	87.1
	44	6	3.4	3.4	90.4
	45	4	2.2	2.2	92.7
	46	6	3.4	3.4	96.1
	47	4	2.2	2.2	98.3
	48	3	1.7	1.7	100.0
	Total	178	100.0	100.0	

Community Orientation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	1	.6	.6	.6
	15	1	.6	.6	1.1
	16	2	1.1	1.1	2.2
	17	1	.6	.6	2.8
	18	1	.6	.6	3.4
	19	1	.6	.6	3.9
	20	5	2.8	2.8	6.7
	21	1	.6	.6	7.3
	22	4	2.2	2.2	9.6
	23	6	3.4	3.4	12.9
	24	5	2.8	2.8	15.7
	25	4	2.2	2.2	18.0
	26	5	2.8	2.8	20.8
	27	2	1.1	1.1	21.9
	28	1	.6	.6	22.5
	29	4	2.2	2.2	24.7
	30	9	5.1	5.1	29.8
	31	7	3.9	3.9	33.7
	32	4	2.2	2.2	36.0
	33	8	4.5	4.5	40.4
	34	3	1.7	1.7	42.1
	35	2	1.1	1.1	43.3
	36	10	5.6	5.6	48.9
	37	10	5.6	5.6	54.5
	38	5	2.8	2.8	57.3
	39	7	3.9	3.9	61.2
	40	17	9.6	9.6	70.8
	41	7	3.9	3.9	74.7
	42	9	5.1	5.1	79.8
	43	6	3.4	3.4	83.1
	44	7	3.9	3.9	87.1
	45	4	2.2	2.2	89.3
	46	2	1.1	1.1	90.4
	47	7	3.9	3.9	94.4
	48	10	5.6	5.6	100.0
	Total	178	100.0	100.0	

Organizational Orientation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	1	.6	.6	.6
	14	1	.6	.6	1.1
	16	1	.6	.6	1.7
	20	3	1.7	1.7	3.4
	21	4	2.2	2.2	5.6
	22	5	2.8	2.8	8.4
	23	5	2.8	2.8	11.2
	24	5	2.8	2.8	14.0
	25	4	2.2	2.2	16.3
	26	6	3.4	3.4	19.7
	27	4	2.2	2.2	21.9
	28	8	4.5	4.5	26.4
	29	7	3.9	3.9	30.3
	30	10	5.6	5.6	36.0
	31	5	2.8	2.8	38.8
	32	6	3.4	3.4	42.1
	33	5	2.8	2.8	44.9
	34	6	3.4	3.4	48.3
	35	3	1.7	1.7	50.0
	36	9	5.1	5.1	55.1
	37	7	3.9	3.9	59.0
	38	6	3.4	3.4	62.4
	39	8	4.5	4.5	66.9
	40	8	4.5	4.5	71.3
	41	5	2.8	2.8	74.2
	42	10	5.6	5.6	79.8
	43	8	4.5	4.5	84.3
	44	7	3.9	3.9	88.2
	45	3	1.7	1.7	89.9
	46	3	1.7	1.7	91.6
	47	4	2.2	2.2	93.8
	48	11	6.2	6.2	100.0
	Total	178	100.0	100.0	