ABSTRACT

DANFORD, HOLLY MELISSA. Understanding Potential Resistance to Gender Integration: The Role of Institutional Norms and Organizational Culture in Army Infantry Units. (Under the direction of Dr. Jerrell Coggburn).

The federal combat exclusion policy, which excludes women from serving in combat positions, was overturned in January 2013. This change stems from American cultural expectations of gender equality and political pressure to make infantry units more homogenous with other units in the military. While studies conducted on gender integration might focus on the physical traits of women and their ability (or lack thereof) to pass the stringent physical fitness requirements necessary to gain assignment to an infantry unit, focusing solely on the physical component makes the assumption that if women were to pass the physical requirements there would be no further issue integrating them into the infantry. This assumption ignores the infantry’s unique organizational culture, developed through a well-established institutional socialization process. This concept is studied using an institutional framework that examines how infantry units, whose source of perceived legitimacy comes from their informal cultural norms, (i.e. unit cohesion and male bonding), will resist gender integration based on perceived deviation from those informal norms. The primary research question being addressed is: What factors influence attitudes towards gender integration in Army Infantry units? This dissertation examines three possible explanations: the cultural norms of the infantry, perceptions of unit cohesion and the contact hypothesis. This dissertation addresses this question through a survey based analysis of U.S. Army Infantry members. The analysis includes a test of hypotheses from organizational culture literature, cohesion literature and the contact hypothesis literature. The key findings include that perceptions of culture change (perceptions of changes to male bonding, in
particular) impact attitudes toward gender integration for both infantry and non-infantry members. Other factors found to influence attitudes towards gender integration include perceptions of task cohesion survival for both infantry and non-infantry members, perceptions of unit efficiency for infantry members and contact with the opposite sex for non-infantry members.
Understanding Potential Resistance to Gender Integration: The Role of Institutional Norms and Organizational Culture in Army Infantry Units

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DEDICATION

This dissertation is dedicated to my children: Tyler, Joey and Colby. Everything that I have done in life has been for them.
Holly Melissa Danford was born in Beaufort, South Carolina, spending her childhood on various Marine Corps bases around the world. As the daughter of a U.S. Marine, she attended 9 different elementary schools, 2 middle schools and 2 high schools. Following high school, Holly joined the U.S. Air Force and served on active duty for almost 7 years. Her assignments included Kadena AFB, Okinawa Japan, and Tyndall AFB, Panama City, FL.

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CHAPTER 1
INTRODUCTION

American military identity has always been built upon the idea of the male combat unit, which can be characterized by men risking their lives, doing whatever it takes to defend the nation, while working in a cohesive group tasked with a common mission. According to military historian Martin van Creveld, war is “the highest proof of manhood” and combat is “the supreme assertion of masculinity” (2000, p. 2). In his Afghanistan war memoir, United States Army Infantry Officer Andrew Exum described the infantry as “one of the last places where that most endangered of species, the alpha male, can feel at home” (2005, p. 35). Because these narratives depict men as the protectors of the nation, women are often portrayed as “potential spoilers to military culture.” There are fears that the integration of women into the military—particularly into combat roles—“feminizes” and weakens the military” (Mackenzie 2015). The combat exclusion policy reflected these narratives and assumed that women were “not natural soldiers, were physically inferior to men, and would ruin the bonds necessary for combat missions” (Mackenzie, 2015).

1.1 Statement of the Research Problem

The Federal combat exclusion policy, which excluded women in all branches from serving in combat positions, was reversed in January 2013. The reversal stemmed from evolving American cultural expectations of gender equality and growing political pressure to make infantry units more homogenous with other units in the military. Many existing studies on gender integration focus on the physical traits of women and their ability or lack thereof to pass the stringent physical fitness requirements necessary to gain assignment to an infantry
unit (Eden, 2015; King, 2014; Cone, 2016; Yanovich et al. 2008; Van Creveld, 2000; Sasson-Levy and Katz; Boldry, Wood and Kashy, 2001; Cohn, 2000; Dandeker and Segal, 1996; Snyder, 2003 and Miller, 1998). Focusing solely on the physical component, as these studies do, assumes that if women were to pass the physical requirements there would be no further issue with integrating them into the infantry. This assumption ignores the infantry’s unique institutional socialization process, which is a key component in the shaping of the infantry’s organizational culture. This concept of organizational culture is studied in this dissertation using an institutional framework that examines how infantry units, whose source of perceived legitimacy comes from their informal cultural norms (i.e. unit cohesion and male bonding), will resist the coercive pressure to integrate based on the perception of deviation from those informal norms. Although the exclusion policy has been overturned, infantry unit commands had the opportunity to request exceptions until January 2016. Numerous studies (discussed in detail in Chapter 2) were conducted (prior to the policy reversal). These survey-based studies identified military members’ perceptions about women serving in combat and concerns they felt would be most prevalent if the policy were to be reversed. These surveys are used to identify areas of concern in infantry units pertaining to women integrating into those forces; i.e. whether formal standards versus informal norms are the prevailing concerns. Previous experience with gender integration, it is argued, will prove different from integration in infantry units as the organizational culture of the Army infantry is unique and serves as the basis for resistance.

1.1.2 Research Statement

Given the reversal of the combat exclusion policy and the limited focus of gender integration research, there is a need to examine which factors may impact gender integration
into the military, and how. This dissertation considers an important phenomenon: attitudes toward gender integration in Army infantry units. In contrast to most work on gender integration, this dissertation looks specifically at organizational factors, including aspects of military organizational culture and socialization change, military culture and unit cohesion.

The specific research question addressed in this dissertation is: What factors influence attitudes towards gender integration in Army Infantry units?

1.2 Conceptual Definitions

In developing a theoretical model of attitudes toward gender integration, this dissertation makes use of a number of important concepts. For clarity, this section offers the following definitions of key concepts.

- **Institutional Socialization**- Socialization is a process that begins with recruitment and selection of new members into a group. It also includes the process by which the group brings new members in and ensures that they have the right set of assumptions, values and beliefs. In this dissertation, institutional socialization refers specifically to the process that takes place when new members are brought into infantry units and typically involves hazing and other hypermasculine, homoerotic behaviors that are meant to increase male bonding.

- **Institutional Environment**- For the purposes of this dissertation, the institutional environment is the infantry unit. This also represents the setting in which institutional socialization occurs.

- **Informal Cultural Norms**- Informal norms are rules that govern human behavior and are a result of the groups’ culture. These are not formal, written policies but rather informal standards that the group has come to see as being normal behavior. In the
infantry unit, these cultural norms involve concepts such as male bonding, loyalty, and the concept of “no man left behind.”

- **Male Bonding**- The formation of close, personal relationships among male group members. In infantry units, this process of male bonding is what creates the relationship that fosters the willingness to fight and die for/with each other.

- **Unit Cohesion**- The most commonly cited definition of military unit cohesion "the bonding together of soldiers in such a way as to sustain their will and commitment to each other, the unit, and mission accomplishment, despite combat or mission stress" and has come to be associated with ideas of shared identities (Mackenzie 2015). Cohesion is made up of many different factors to include shared group membership, attitude similarity, success experiences, shared threat and leadership/training. (MacCoun and Hix, 2010). In this dissertation, unit cohesion will be separated into task and social cohesion. Task cohesion is defined as “the extent to which members of a team work well together to accomplish a task or mission” while social cohesion is defined as “the extent to which members of a unit socialize with one another” (RAND, 2016).

- **Member Identification**- This term comes out of the organizational culture literature cited by Schein (1990) where he describes methods in which culture is created. Member identification is a way that culture is created when individuals in a group identify with organization leaders and begin to internalize their values and assumptions. They realize that some of the leaders’ beliefs are practical and “work” while others do not. The group then learns which of those beliefs work for the group and this is how assumptions are created.
• **Perceived Legitimacy** - This is the idea that infantry unit members share a common assumption that they are unique in their experiences in infantry units and those unique experiences (unique to the tasks that they perform as infantrymen) are what makes them stand out from other units. These experiences are what they perceive gives them legitimacy as infantry, male combat fighting units.

• **Primary Groups** - As described by Shils and Janowitz (1948), a primary group is the small group of infantry soldiers that is held together by “spatial proximity, the capacity for intimate communication, the provision of paternal protectiveness by NCO’s and junior officers, and the gratification of certain personality needs, e.g. manliness, by the military organization and its activities.” For the purposes of this dissertation, the primary group is the individual infantry unit.

• **Gender Integration** - This is the concept of introducing women into infantry units that were previously closed to women, and entails socialization into the hypermasculine culture and its associated norms and values.

• **SHARP** - This is the acronym used by the Army to describe its Sexual Harassment/Assault Response and Prevention program. This acronym is found in survey respondents’ write in comments where they express concern with an increase in SHARP complaints following gender integration.

1.3 Contextual Background

1.3.1 History of the Combat Exclusion Policy

Throughout U.S. history, women have served their military with distinction in both war and contingency operations. Dating back to the Revolutionary War, women have long served as nurses and in other caregiving roles. These roles have evolved to include almost
every other military occupational specialty (MOS) (including combat pilots), with the notable
exception of combat infantry positions. The Women’s Armed Forces Integration Act of 1948
permitted no more than 2 percent of the Army’s enlisted ranks to be women, which provided
severe limitations to the numbers of women that could serve and, importantly, the types of
positions that they could hold. This cap was lifted in 1967 after the U.S. became involved in
the Vietnam War (Keenan, 2008). The withdraw of the U.S. from Vietnam in 1973 saw a
return from the draft to an all-volunteer force, a change that was accompanied by legislation
that allowed women to serve but excluded them from serving in combat units. This policy is
commonly known as the “Combat Exclusion Policy.”

Over the years, several legislative changes modified the combat exclusion policy in
various ways. In 1988, the “risk rule” codified the combat exclusion policy by setting the
standard for evaluating positions and units from which women could be excluded (Keenan,
2008). This included non-infantry positions that could expose women to direct combat,
hostile fire, or capture by the enemy. One of the most important legislative changes to date
was the 1992 Defense Authorization Act which revoked the prohibition of women’s
assignments to combat aircraft in the Navy, Air Force and Marines. Finally, in 1994, the
“risk rule” was rescinded as it was determined that all military members are “at risk” while in
the theater of operations, regardless of military occupational specialty (Putko, 2008, Keenan,
2008).

The wars in Iraq and Afghanistan brought about further shifts in American attitudes
regarding women serving in combat, including the realization that the combat exclusion
policy was not being held up entirely. According to Burelli (2013), women found themselves
serving in combat, even though they were not technically “assigned” to combat roles. As of
August 2015, the *Washington Post*’s “Faces of the Fallen,” reported that 160 women were killed in action since the initiation of the wars in Iraq and Afghanistan in 2003, despite the combat exclusion policy.

These realizations served to change American public opinion regarding women in combat and the more common American cultural expectation of gender equality has begun to replace the previous mindset. Previous research shows that Americans support women in combat at a rate of 72 percent (Putko, 2008), a rate that has remained steady since the reversal of the combat exclusion policy. In contrast, when only veterans are surveyed, just 54 percent of them favor women in combat roles compared to 73 percent of non-veterans (Blanton, 2013). This gap suggests the potential effect of organizational culture on infantry members/veterans’ perceptions, which is argued here to be the basis for resistance to gender integration in combat units. Despite the apparent difference of views between veterans and non-veterans, the general cultural expectation of gender equality, coupled with political pressure to make infantry units more homogenous with other units in the military, contributed to a reversal of the combat exclusion policy in January 2013.

The United States military has had other experiences with cultural/demographic change in addition to gender integration. The United States Military also has a history with racial integration and policy concerning homosexuals and their military service. “Taken together, the general pattern across all waves of integration- the integration of women, African Americans, and openly gay and lesbian soldiers in the armed forces- is that, prior to integration, U.S. military personnel tended to be strongly opposed. However, their attitudes became more accepting of integration after a decision to allow individuals from these groups” (RAND, 2016 p. 31). These topics, while not identical, both show how
unit members’ attitudes toward policy change is shaped by perceptions of cultural change, especially perceived changes to unit cohesion.

1.3.2 Previous Experience- Racial Integration in the United States Military

While gender integration in the United States military has been “politically contentious” and has been faced with substantial opposition from those both inside and outside the military, women are not the only “out-group” that have faced resistance and hostility in such integration efforts. (RAND, 2016) This section will parallel the integration experiences of African Americans in the United States military, as well as offer some insight into how racial integration differs from gender integration (in regard to attitudes by service members towards the out-groups).

While African Americans in the United States military have served in every conflict with which the military has been engaged, they remained in segregated units until the 1948 when President Harry Truman signed Executive Order 9381 which started the process of desegregation in the United States military. Unlike the integration of women which is partly opposed due to perceptions of women’s performance on physical standards, racial integration was partly opposed due to the perceived effects that African Americans performance on aptitude testing would have on the effectiveness of the military (RAND, 2016).

During the World War II era, attitudes regarding racial integration varied sharply from attitudes during the Korean war (84% of while soldiers opposed to racial integration versus 36% of white soldiers opposed) (RAND, 2016). This can partly be explained by the fact that the Korean War was the period when racial integration started to take effect and African American soldiers were put into units with white soldiers are much larger rates. The preference for racially segregated units was almost 20% lower among while soldiers who
were serving in racially integrated units (Segal, et al., 2016). The contact hypothesis posits that attitudes regarding certain out-groups become more favorable with more personal and frequent contact with members of the out-group (Allport, 1954). The contact hypothesis (which will be discussed in Chapter 2) is a probable explanation for this varied difference in attitudes.

While experiences with racial integration can be paralleled with those of gender integration due to perceived effects of integration on performance and effectiveness of military units, the perceived impact on military effectiveness stems from very different arguments from these two groups. The primary argument against racial integration stemmed from the lower aptitude testing scores of African Americans on the U.S. Army’s aptitude classification system (RAND, 2016; Moskos, 1966). Arguments against gender integration include the perceived inferior physical abilities of women (meeting an increased physical standard is necessary in combat units), perceived increases in sexual assault due to women being exposed to the hypermasculine, aggressive culture of the infantry, and concerns regarding privacy (during times of combat there are not facilities available to separate men and women for showering, sleeping, etc.) (Moskos, 1998). Because African American men did not threaten the culture of the infantry units to which they were being assigned (i.e., fears of assault and exposure to the hypermasculine behavior), there are distinct differences in the attitudes regarding integration. Since this dissertation is interested in examining how perceptions of cultural changes will impact attitudes toward gender integration, this distinction is important.
1.3.3 Previous Experience- The Repeal of the Don’t Ask Don’t Tell Policy

United States military policy with regard to gay and lesbian members has evolved since as far back as 1776 when the first discharge for sodomy took place under command of General George Washington (Shilts 2014). Military policy concerning homosexual personnel has primarily focused on sexual behaviors of the individual (sodomy) rather than the sexual identity of the service member. At that time, military policy was to separate from military service any member found to be homosexual. The policy was changed in 1994 when the Department of Defense adopted the “Don’t Ask Don’t Tell” policy under President Bill Clinton. “Under the DADT policy, the military distinguished between sexual identity and sexual behaviors. The military would no longer discharge soldiers solely based on suspicion of the former, but would discharge homosexuals who expressed their sexuality in public” (RAND, 2016, p. 34). Before the DADT was repealed, military members expressed similar concerns to those now expressed for repeal of the combat exclusion policy. Indeed, for many, “this issue is not whether gays and lesbians are good soldiers as individuals, but instead, the effect of these individuals on the group” (Kier 1998, p.6) The 2010 Don’t Ask Don’t Tell (DADT) Repeal Act removed these restrictions on military members’ ability to serve as openly gay service members.

Just like the debate on gender integration in Army combat units, concern about the effect that a homosexual would have on combat effectiveness and unit cohesion was the primary debate prior to the reversal of the DADT. RAND completed a study in 1993, which was updated in 2010, that examined the effects of the repeal of DADT policy. (Some of the arguments made in their study are relevant to this dissertation all will be discussed in greater detail in Chapter 2). For example, RAND discusses the distinction between social and task
cohesion, noting that “It is not necessary to like people in order to work with them, so long as members share a commitment to the group’s objectives” (RAND 2010). The concepts of social and task cohesion and their impacts on performance will be discussed in detail in Chapter 2 because similar concerns about cohesion are shown in RAND’s findings from their study on the repeal of the DADT policy as it pertains to unit cohesion and performance:

“Research since 1993 continues to support RAND’s earlier finding that the performance of a group influences its cohesion more than cohesion influences its performance. Studies also suggest that interpersonal liking is not essential to effective unit performance; what is important is shared commitment to the unit’s task-related goals. Personal trust in one’s comrades is distinct from personal liking, and professionals can develop this kind of trust rapidly in intense performance situations. Cohesion in combat stems not from shared values and attitudes but from the shared danger of combat. Our research suggests little reason to expect that ending DADT would produce any notable deterioration in unit performance. This conclusion is borne out by the experiences of military and other organizations that have adopted nondiscrimination policies” (RAND, 2010, pg. sum xxii)

While this dissertation does not compare the repeal of the DADT policy with that of the combat exclusion policy, the United States military’s experience in regard to homosexuals openly serving in the military is an interesting and similar phenomenon that offers certain parallels to gender integration.

1.3.4 Foreign Countries History with Women in the Military

In addition to insight gained from the literature on racial integration and homosexual/sexual orientation, the experiences of other nations with gender integration in the military is informative. Cawkill et.al (2009) examines the experiences of several foreign countries regarding gender integration in their militaries. That work notes that numerous foreign nations have employed women in combat roles for many years. Comparing the experiences of those nations based on perceived cultural changes (the main idea in this dissertation) with our potential experience in the United States is beyond the scope of this
dissertation. However, a brief overview of some of the countries that allow women to serve in combat provides some context and potential lessons learned for the United States.

Canada

Canada began integrating women into all Canadian Force (CF) combat roles in 1989, following a decision by the Canadian Human Rights Commission (CHRC) Tribunal. In 2001, the only remaining restriction- women serving on submarines, was also removed (Cawkill, et al., 2009). Many of the ideas in this dissertation (impact of gender integration on unit cohesion and military effectiveness) were also issues for the CF. The CF experienced resistance to gender integration based on perceptions that it would impact military effectiveness, attitudes that were perpetuated by beliefs that the military is a “uniquely male culture.” This resulted in women serving in combat roles being exposed to gender stereotyping (Cawkill et al., 2009). The Army Lessons Learned Center (1998) presented a number of relevant findings for understanding the implications of gender integration in the United States military. The Center found that:

“…unit cohesion of mixed gender combat units was a leadership challenge. In a non-homogenous environment, there needed to be a search for common ground or a point on which all team members could identify, and it was considered a leadership responsibility to provide the framework and common ground to facilitate team building. The cause of breakdown in unit cohesion, especially where gender was concerned, was reported to stem from the following: Inequitable leadership and discipline- Favoritism or harassment of distinct groups- Fraternization (especially within the chain of command)- Isolation and segregation of distinct groups” (Cawkill et.al, 2009, p. 18)

The Center also found that “successful integration of women required all members of the Army to achieve one standard that met operational requirements and that everyone was treated equitably” (Cawkill et al., 2009, p. 18). Findings like this are especially important because they offer potential insights into the attitudes of United States Army infantry soldiers
who participated in the survey that is used in this dissertation. Many survey respondents focused on physical standards in their write-in survey responses and their concerns that physical standards should not be changed or lowered, and that all infantry members (regardless of gender) be held to the same standard.

Israel

Israel is often referred to as the standard for comparison when it comes to women serving in combat roles, but its experience is not without issue. Israel has employed women in combat positions since 1995, but still only approximately 88% of military positions are open to women (Cawkill et.al, 2009). Specifically, the documentary, Company Jasmine, highlights how Israeli women in infantry units report discrimination and harassment as it pertains to their perceived weakness and detrimental effects on military effectiveness and unit cohesion. Women are permitted to serve in infantry units, however, the units that contain female soldiers are referred to as “pussy units” by the units containing only male soldiers. Women subsequently attempt to hide their feminine traits and some even start to speak in a deeper tone of voice to appear stronger and less feminine to the other soldiers (Katzir, 2001). Similar to the experiences of the Canadian Forces, Israeli forces have found that womens’ successful integration into male units is greatly dependent on unit leadership. If unit leadership expresses a belief in their abilities and treats them equitably, they eventually become “one of the gang” (Cawkill et.al, 2009, p. 26).

Other Nations: Netherlands, New Zealand, Norway, Romania and Sweden

The Netherlands does employ women in combat roles, but women are still restricted from serving in the Marine Corps and Submarine Service based on perceived deficiencies in physical requirements and combat effectiveness (Nielsen, 2001; Cawkill et.al, 2009).
**New Zealand**

New Zealand employs women in all combat positions and has no restrictions on roles for women in its defense forces. Legislation was passed in 2001 that fully rescinded all policies prohibiting women from serving in combat roles.

Chief of Defense Force. Air Marshal Adamson, noted that while he recognised that section 33 of the Human Rights Act 1993 allowed preferential treatment in favour of men, he had decided not to use the provision as it would allow the Services to adopt ‘a more inclusive approach to the employment of women in combat roles’ He attributed his decision to a variety of factors including changes to the nature of the operational service, cultural moves, funding levels, demographics and a more positive attitude to the employment of women in non-traditional roles (Cawkill et.al, 2009, p. 27)

No studies could be found where New Zealand has examined the effectiveness of mixed gender combat units.

**Norway**

Norway became the first NATO country to open all combat roles to women in 1985 when it passed equal opportunity legislation. “Recent communication with the Norwegian Defence Force has established that although there have been no formal assessments of the effect of mixed gender teams in the combat role, the general opinion is that female representation will increase operational effect. No incidents have been reported to indicate that cohesion will decrease and operational effectiveness be compromised” (Cawkill et.al. 2009, p. 28)

**Romania**

Romania does not make any distinctions between men and women when it comes to service in combat roles in the military. “The Romanian Armed Forces have not encountered
any difficulties relating to women’s employment in combat roles or environments, nor have they experienced any impact on operational performance. Team cohesion is not reported to suffer as a result of having mixed gender combat team and the general view is that missions undertaken by these teams have been successfully achieved” (Cawkill et al. 2009, p. 29)

Sweden

Sweden also employs women in all areas of military service and has no restrictions on combat positions. In fact, in 2017 Sweden instituted a military draft for all men and female citizens (Fox News, 2017).

As this brief overview of some other countries’ experiences with gender integration shows, it is not a problem unique to the United States military. Gender integration is an important topic for scholarly research and this dissertation will add to the conversation by examining the concept from a different perspective: the role of perceived changes to the established infantry culture.

1.4 Summary and Overview of Dissertation

This chapter has shown that gender integration represents an important area for research. This dissertation examines gender integration (or attitudes towards gender integration) because most empirical studies on gender integration conducted thus far have focused solely on the physical attributes of women. This study contributes to the larger conversation of gender integration in Army infantry units by taking a different approach to understanding potential resistance to gender integration that examines organizational and institutional explanations. The empirical data for this study are drawn from a survey of two Brigades at Fort Bragg North Carolina. These Brigades are comprised of infantry as well as non-infantry military occupational specialties, men and women, all ranks and various levels
of education, time in service and deployment status. This variation offers a sample that is roughly representative of the Army as a whole. The results promise to shed light on an area of attitudes toward gender integration that has not yet been studied, at least not in any way other than anecdotally, contributing to understanding what road blocks will stand in the way of a gender integrated Army.

The dissertation is organized into five chapters. The introductory chapter provides a historical overview on the combat exclusion policy, noted parallel developments in other countries and framed the research question. Chapter two reviews previous research on gender integration, including research on organizational and military culture, institutional theory, previous experiences with integration, the contact hypothesis and the history and importance of unit cohesion and informal culture norms in the infantry. The chapter presents a series of research hypotheses emerging from the literature that represent potential answers to this dissertation’s main research question. Chapter three presents the research methodology. This includes the operational definitions of the concepts included in the research model and discussion of the quantitative (OLS) and qualitative methods employed. Chapter four presents the estimated results of the model and discusses findings. And, finally, Chapter five discusses the dissertation’s academic and practical implications, as well as its limitations. It concludes by framing questions for future research on gender integration in the United States military.
CHAPTER 2
LITERATURE REVIEW

The previous chapter introduced gender integration in the military as an important phenomenon. It provided an historical overview, conceptual definitions, and the dissertation’s main research question. In this chapter, focus shifts to the existing scholarly research related to gender integration, including the subset of that literature devoted to the military. Drawing upon the literature, the chapter frames a set of research hypotheses for the dissertation. The hypotheses presented are drawn from three separate areas of literature; 1.) Organizational culture and change literature, to include subsections on institutional theory, specific military culture, unit cohesion and infantry informal norms and unit culture and gender integration in the infantry, 2.) Literature on the relationship between cohesion and performance to include social and task cohesion literature and 3.) Contact hypothesis literature. This chapter will be organized by these three areas, with corresponding hypotheses to follow each section.

2.1 Organizational Culture and Change

There is well developed literature on organizational culture and cultural change, including work that attempts to define and measure the concept, identify its antecedents, and assess its effects on important organizational outcomes. For this review, the literature will be organized into sections on organizational theory in general, cultural change and antecedents, and the intersection of organizational culture and institutional theory. This general discussion is followed by a separate review of work focused specifically on military culture.

Individuals understand that they would not act in the same manner at a symphony as they would at a rock concert. This is because as human beings, we have shared values, ideals
and rituals that we place into certain contextual situations that govern how we behave in that environment. This is because the culture of these settings is quite different. This is an easy concept to understand but individuals have a harder time grasping the concept of organizational culture.

Before one can understand these concepts surrounding organizational culture, a definition of organizational culture must first be attempted. Although it has been defined in several ways, organizational culture is defined here as the social or normative glue that holds an organization together and expresses the values and social ideals that organization members come to share. These values are manifested by symbolic devices such as myths, rituals, stories, legends and specialized language (Smircich, 1983). Organizational culture becomes hard to define and this stems from the fact that the concept of the organization itself is ambiguous. The problem is that “we cannot start with some cultural phenomena and then use their existence as evidence for the existence of a group. We must first specify that a given set of people has had enough stability and common history to have allowed a culture to form” (Schein 1990). Because of this, some organizations will not have a very strong culture in that they have not existed long enough to develop one or members come and go too frequently to develop one. However, having a long shared history or common intense experiences can lead to a strong organizational culture, just as seen in combat units (Schein 1990). Important to the understanding of the research question in this dissertation is the idea expressed by Schein that the “deepest level of culture will be the cognitive in that the perceptions, language, and thought processes that a group comes to share will be the ultimate casual determinant of feelings, attitudes, espoused values, and overt behavior” (1990). Perhaps one of the most well-known and cited definitions of organizational culture comes from Schein:
(a) a pattern of basic assumptions, (b) invented, discovered, or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore (e) is to be taught to new members as the (f) correct way to perceive, think and feel in relation to those problems (1990, p. 111).

Also, important to our understanding of organizational culture is the concept of levels of culture. These are the various levels at which the culture of an organization manifests itself. According to Schein, culture exists simultaneously on three levels: (1) artifacts are found at the surface and include the things that individuals see and feel upon entering the organization (physical layout, dress code, the way people address each other, etc.); (2) values, which can be studied and assessed through interviews, surveys and questionnaires, and finally, at the core (3) basic assumptions, which determine feelings, behaviors and the way people in the organization think and perceive. Schein recognized that artifacts, while the most easily observed and palpable, are the hardest to decipher accurately if inferences are made about them without connecting them to the underlying assumptions (Schein 1990).

Hatch (1993) builds on Schein’s model by introducing symbols as a new element and by stating that the elements of culture (artifacts, assumptions, values and symbols) are made less central so that the focus becomes the relationships that link these elements together (Hatch 1993). This distinction will become critical later as this dissertation establishes how different units in the military, while all part of the military establishment, have their own unique cultures and that these cultures are derived from the relationships that govern their artifacts, assumptions, values and symbols.
Having different cultures that govern artifacts, assumptions, values and symbols of the organization is a direct result of the creation of that culture and how it is formed and preserved. Because culture is learned, Schein asserts that learning models should be adequate for understanding how culture is created, however, since there are not many models in existence that inform us of how groups learn, it is challenging to ascertain how culture is created initially - how those norms, beliefs and assumptions initially come into being. We know that once norms, beliefs and assumptions exist, organizational leaders will “embed them in group activity” but we first must understand how members learn this culture and then share it with others. One of the first methods of learning and sharing new culture involves norm formation around critical incidents (Schein 1990). Schein asserts that training groups are the place where we frequently observe this phenomenon:

One can see in such groups how norms and beliefs arise around the way members respond to critical incidents. Something emotionally charged or anxiety producing may happen, such as an attack by a member on the leader. Because everyone witnesses it and because tension is high when the attack occurs, the immediate next set of behaviors tends to create the norm” (1990, p. 115).

Culture creation may also occur as a result of member identification with group or organization leaders. Members of the organization will “identify with them and internalize their values and assumptions.” Members will come to the realization that some of these beliefs, as they are put into practice, are practical while others are not. Some “work out” while others don’t. As the group learns which parts of these “founders” belief systems work for the group, assumptions are subsequently created. “One can hypothesize that as cultures evolve and grow, two processes will occur simultaneously: a process of differentiation into various kinds of subcultures that will create diversity, and a process of integration, or
tendency for the various deeper elements of the culture to become congruent with each other because of the human need for consistency” (Schein 1990, p. 115).

Understanding culture creation, while only partially understood through the use of learning models, is important to the overall understanding of organization culture in general. But, arguably more important, is cultural preservation through socialization.

“Culture perpetuates and reproduces itself through the socialization of new members entering the group. The socialization process really begins with recruitment and selection in the organization is likely to look for new members who already have the “right” set of assumptions, beliefs and values. If the organization can find such presocialized members, it needs to do less formal socialization.”(p. 115) Schein highlights 7 dimensions in which institutional socialization processes may occur and vary.

1. Group versus individual- the degree to which the organization processes recruits in batches, as in boot camps, or individually, as in professional offices.
2. Formal versus informal- the degree to which the process is formalized, as in set training programs, or is handled through apprenticeships, individual coaching by the immediate supervisor, or the like.
3. Self-destructive and reconstructing versus self-enhancing- the degree to which the process destroys aspects of the self and replaces them, as in boot camp, or enhances aspects of the self, as in professional development programs.
4. Serial versus random- the degree to which role models are provided, as in apprenticeship or mentoring programs, or are deliberately withheld, as in sink-or-swim kinds of initiations in which the recruit is expected to figure out his or her own solutions.
5. Sequential versus disjunctive- the degree to which the process consists of guiding the recruit through a series of discrete steps and roles versus being open-ended and never letting the recruit predict what organizational role will come next.
6. Fixed versus variable- the degree to which stages of the training process have fixed timetables for each stage, as in military academies, boot camps or rotational training programs, or are open-ended, as in typical promotional systems where one is not advanced to the next stage until one is “ready.”
7. Tournament versus contest- the degree to which each stage is an “elimination tournament” where one is out of the organization of one fails or a “contest” in which one builds up a track record and batting average.

Schein makes clear that “though the goal of socialization is to perpetuate the culture, it is clear that the process does not have uniform effects.” (1990, p. 116) This argument proves important to the main ideas addressed in this dissertation. Specifically, this work suggests that infantry members have a unique organizational culture, shaped through institutional socialization processes, that are geared toward the preservation of that culture.

2.1.1 Cultural Change and Antecedents

Because this dissertation examines how perceptions of cultural change impact attitudes toward gender integration, it is necessary to first understand how cultural change occurs and what the antecedents are for that process. “Every group and organization is an open system that exists in multiple environments. Changes in the environment will produce stresses and strains inside the group, forcing new learning and adaptation. At the same time, new members coming into the group will bring in new beliefs and assumptions that will influence currently held assumptions” (Schein, 1990, p.116) Because of this, there is pressure on existing cultures to continuously grow and evolve. “But just as individuals do not easily give up the elements of their identity or their defense mechanisms, so groups do not easily give up some of their basic underlying assumptions merely because external events or new members disconfirm them.” (Schein, 1990, p.116) This idea is critical to the main discussion presented in this dissertation and points to a key reason why gender integration may be resisted.

So what, then, are some of the antecedents of cultural change in organizations? While scholars have differing views on what causes an organizational culture to shift or change,
there are some basic antecedents to change that many seem to agree on (Kondar and Hurst, 2009; Schein, 1990; Boonstra, 2013). Specifically, organizations change for a number of different reasons, including: leadership change, crisis, performance gaps, new technology, identification of opportunities, reaction to internal and external pressure and mergers and acquisitions.

Leadership Change: When organizations undergo a change in leadership, it may cause many other organizational changes. Different leaders possess varying visions for an organization and how to go about making the organization more effective and efficient. Different leaders may also have differing views for the culture of the organization which can entail changes in everything from employee policies and procedures to dress code.

Crisis: One only need to think of an example of a crisis situation to understand how they can cause changes in an organization. The attacks on the Pentagon and World Trade Center on September 11, 2001 are dramatic examples of a crisis which caused countless organizations, and even industries such as airlines and travel, to change. A less extreme example would be financial crisis in the country which also creates many changes in the financial services industry as organizations attempt to survive.

Performance Gaps: When an organization's goals and objectives are not being met or other organizational needs are not being satisfied, changes may become necessary in order to close these gaps.

New Technology: When organizations identify new technological advancements that lead to more efficient and economical methods in work performance, organizations must change and implement these new technologies or face similar risks.
Identification of Opportunities: Organizations may identify opportunities in the market place that they wish to pursue in order to increase effectiveness and competitiveness in the market. They may identify industry best practices that they wish to implement to stay relevant.

Reaction to Internal & External Pressure: Both Managers and employees may often exert pressure for change. External pressures can come from many areas, including customers, competition, changing government regulations, shareholders, financial markets, and other factors in the organization's external environment.

Mergers & Acquisitions: The dynamics of an organization change in many ways during a merger. Combining different companies means blending the employee pool as well as corporate philosophies. Employees can feel confused and threatened when unfamiliar approaches, attitudes and prioritizing techniques develop.

As this shows, there are a number of factors that may compel organizations to change. Two recent reports from RAND (1993, 2010) looked at cultural change in a military context, and offers insights on how the Army can handle cultural changes that are a result of various initiatives including gender integration. RAND Corporation (Meredith, et.al, 2017) has recently published a study entitled “Identifying Promising Approaches to US Army Institutional Change: A Review of the Literature on Organizational Culture and Climate” that discusses of the implications of several current Army challenges, to include gender integration in combat units, increasing incidents of sexual assault, and openly serving transgender service members, all of which require adjustment to current demographics, and/or culture.

The U.S. Army is facing challenges stemming from behavioral health issues, misconduct, and adjustment to changing demographics. Long-term solutions to these
problems very likely require changes in the Army's organizational culture and climate, but institutional change in large organizations is typically very difficult. To deal with these challenges, researchers identify promising approaches to institutional change from the literature on organizational culture and climate.

While RAND addresses the fact that culture change in the Army will be difficult, they do not discuss, specifically, how perceptions of culture change may impact attitudes toward gender integration or what the other potential factors are for explaining support for gender integration. This dissertation will explain those factors and then come back to this RAND report during Chapter 5 when discussing potential implications for research and practice.

Many scholars have tested these theories of culture and change in organizations. For example, MacIntosh and Doherty (2010) examined the relationships between organizational culture and job satisfaction/intention to leave an organization. They are among many scholars who look at the relationship between culture/culture change and aspects of job satisfaction (Adkins & Caldwell, 2004; Johnson & McIntyre, 1998; Lund, 2003; Silverthorne, 2004) and higher retention rates among personnel (Egan et al., 2004; MacIntosh & Doherty, 2005; Sheridan, 1992). “Egan et al. (2004) found the strongest support for a mediated model whereby organizational culture impacted job satisfaction which significantly impacted employee turnover intention. However, they noted that the direct impact of culture on employees’ turnover intention in their study may have been compromised by poor scale reliabilities (Egan et al., 2004). They recommended further examination of the relationships between culture, job satisfaction and turnover intention” (cited in MacIntosh and Doherty, 2010, p. 108). These findings are relevant to this dissertation because they establish the importance of considering the effects of organizational culture on important organizational outcomes.
Institutional theory will be discussed in detail in the subsequent section, including a discussion of the institutional processes and how they manifest itself in the infantry. This process, as discussed, is intended to create a shared culture among members that will be passed down to future members to help facilitate and preserve the culture of the organization (Schein 1990; DiMaggio and Powell 1983). While this process is helpful in creating and preserving culture, it becomes problematic when the culture of the organization faces change (Kondra and Hurst, 2008; Rick, 2013). Kezar and Eckel (2002) address the fact that “Organizational research in the 1980s illustrated the impact of culture on many aspects of organizational life (Peterson & Spencer, 1991). Yet, there have been few empirical studies examining how institutional culture affects change processes and strategies” (2002, p. 436). They examine the role that organizational culture has on the change processes of organizations. Their main finding (relevant to this dissertation) is that “where strategies for change violate cultural norms, change most likely will not occur” (Eckel et al., 1998; Schein, 1985). As this dissertation is examining how perceptions of changes to cultural norms will impact attitudes towards gender integration (the cultural change), this point is important.

Most work on change in organizations take an organizational perspective rather than an individual perspective (Bovey and Hede, 2001), focusing on the technical elements of change rather than human elements (Levine, 1997; Huston, 1992; Steier, 1989; Arendt et al., 1995; Tessler, 1989; New and Singer, 1983). Because this dissertation examines how and why infantry members may resist gender integration based on the culture of the infantry (established during institutional socialization), it is important to understand why some members of organizations resist cultural change. Rick (2013) discusses several reasons why members of an organization resist change to organizational culture:
1. There isn’t any real need for the change  
2. The change is going to make it harder for them to meet their needs  
3. The risks seem to outweigh the benefits  
4. They don’t think they have the ability to make the change  
5. They believe the change will fail  
6. Change process is being handled improperly by management  
7. The change is inconsistent with their values  
8. They believe those responsible for the change can’t be trusted (Rick 2013)  

For purposes of this dissertation, it is likely that male soldiers may exhibit some of these same justifications for resisting change.

Adding to the discussion of resistance to organizational change is the critical discussion of individual readiness for change. Choi and Ruona (2011) build on the work of Golembiewski, Lewin and Kotter, among others, and their assertion that the role of the individual is critical to successful organizational development.

The main idea underlying this approach is that “change in the individual organizational member’s behavior is at the core of organizational change” (Porras & Robertson, 1992, p. 724, as cited in Choi and Ruona, 2011). According to the researchers, organizations only change and act through their members, and successful change will persist over the long term only when individuals alter their on-the-job behaviors in appropriate ways (George & Jones, 2001; Porras & Robertson, 1992, as cited in Choi and Ruona, 2011). Choi and Ruona also make the important point that “many change efforts fail because change leaders often underestimate the central role individuals play in the change process” (2011, p. 49).

Most important to this dissertation is the statement by Choi and Ruona that “...some recent research studies have also shown that individuals’ attitudes toward a change initiative influence their behavioral support for it. Since this dissertation is assessing individuals’
attitudes towards gender integration, (the dependent variable in this dissertation) this is particularly important (2011, p. 49).

Choi and Runoa state that the researchers that they have studied agree that “individual readiness for organizational change involves an individual’s evaluation about the individual and organizational capacity for making a successful change, the need for a change, and the benefits the organization and its members may gain from a change” (2011, p. 51). The relevance of this statement will be seen clearly in the results section in chapter 4 where the written comments from infantry members clearly question whether there will any benefits from gender integration and the assertions that gender integration is merely a product of political influence and not based on perceived increases in effectiveness or efficiency.

While individual readiness for change is a topic that is worthy of a complete dissertation of its own, this discussion is being limited to these key concepts that can help to explain attitudes to gender integration, the organizational change in the Army infantry.

Choi and Ruona (2011) build on the seminal organizational change literature by Lewin 1947, 1997) and Kotter (1995) to explain how many organizations fail in their attempts to change. “In particular, the failures are often attributed to the organization’s inability to provide for an effective unfreezing process (Lewin, 1947/1997b) before attempting a change induction (Kotter, 1995). Lewin, one of the seminal authors on organizational development and change, is known for his writing on “unfreezing’ and how this step is necessary in successful change management. Choi and Ruona, while building upon this work by Lewin, describe the unfreezing step as one that, in terms of the “organizational change context includes the process by which organizational members’ attitudes about a change initiative are altered in a way that they perceive the change as
necessary and likely to be successful. In this respect, when individuals become ready for a change initiative, this indicates that the unfreezing step has been successful” (2011, p. 47).

Because this dissertation is not focusing on implementation of gender integration, or making recommendations for how leaders should implement the policy, a detailed discussion of the unfreezing process will not be provided here but will be addressed again the in the practical implications section of chapter 5.

Also relevant to this dissertation, is the work by Golembiewski, et al. on Organizational Development (OD) in the public sector. Golembiewski states that one of the “largest employers of OD perspectives, designs and personnel include the U.S. military services, whose base-values provide a very difficult target for penetration by OD” (1981, p. 679) They describe the 8 classes of OD activities that can be employed by organizations. The activity that is used most often (51 instances out of the 270 cases that they evaluated in their study-19%) are team building activities which are “meant to increase the efficiency and effectiveness of intact task groups” (1981, p. 681). Golembiewski et al. found that the success of these OD applications yielded “highly positive and intended effects” (41% of the time) and a “Definite Balance of Positive and Intended Effects” (43% of the time) as opposed to “No Appreciable Effect” (7%) and “Negative Effects” (9%). These OD applications (team building activities, specifically) can be applied to the concept of task cohesion which is described in great detail later in this chapter. Because this concept (team building activities) are ways in which the organization can employ change, this would be a potential implementation strategy for the U.S. Army. Since this dissertation is examining factors that may lead to resistance towards gender integration, and not specific implementation strategies, this topic will be discussed in greater detail in chapter 5 in the practical implications section.
2.1.2 Intersection of Organizational Culture and Institutional Theory.

This dissertation uses two theories/frameworks to help explain why infantry/combat units in the Army may be resistant to gender integration within their units. Organizational culture, which has been described in this section, and institutional theory, which will be described in a military context later in this chapter, are typically two theories that are dealt with in separate context. However, Kondra and Hurst (2009) describe why organizational culture can be viewed in terms of institutional processes. Similarly, Zilber and Hatch (2012) suggest that institutional theory is relevant to the study of organizational culture and how the two theories can intersect. Zilber focuses on “three potential contributions of institutional theory in this current form to cultural studies; contextualization of organizational cultural in the wider environment, dynamics of organizational culture, and the political aspects of organizational theory culture” (2012, p. 89). Cameron and Freeman describe how culture can be considered as an institutional form:

We suggest that organizational culture is experienced by individuals as a confluence of complex, interacting factors. These may be underwritten or written (physical artefacts) expectations, in taken-for-granted or explicit form and sanctioned or unsanctioned by the organization or peer group. The benefits of examining culture are quite often considered, yet there is no doubt that the study remains difficult. Culture can be considered as an institutional form though difficult to assess and understand due to the taken-for-granted nature of shared assumptions operating beneath the conscious level” (Cameron and Freeman, 1991).

“Collective views embedded in culture are reinforced though forms of organizational and social control aligning assumptions and preferences to organizational expectations” (Berger and Luckman, 1967). Because organizational culture can be explained by using various conceptual forms of institutional theory, it can also be used to help explain change. This is
accomplished by using an institutional explanation of culture that allows for agreement on shared meanings and behavior through coercive, mimetic, and normative means.

2.1.3 Military Organizational Culture

As defined in Chapter 1, organizational culture is the social or normative glue that holds an organization together and expresses the values and social ideals that organization members come to share. These values are manifested by symbolic devices such as myths, rituals, stories, legends and specialized language (Smircich, 1983). Culture, defined in this way, fulfills several important functions that enhance the understanding of its importance in infantry units. Culture conveys a sense of identity for organizational members, facilitates the generation of commitment to something larger than the self, enhances the social system stability and serves as a sense-making device that can guide and shape behavior (Smircich, 1983). These functions enhance the realization that culture gives military members a sense of participating in something larger than themselves and helps them to make sense of a job that requires them to give their lives if necessary.

The military, “historically a predominantly male institution, has consistently been seen as an ’entirely masculine activity’ and the military experience as an initiation into manhood. The military establishment, more than any other institution, is based on and derives its identity from the idea of masculinity” (Titunik, 2000, p. 240). A number of studies have examined how masculine organizational culture influences the segregation of women. A study that reviewed integration of female workers into Japanese companies used the same theoretical arguments that are being introduced here. Nemoto (2013) used workplace masculinity as an analytical framework to examine how organizational cultures and beliefs in Japanese firms continue to isolate and constrain women in the workplace. She
argues that the application of the concept of organizational masculinity to the case of Japanese firms enables us to see that, more than expectation of marriage or track hiring, it is a set of gendered beliefs and practices in the workplace that disadvantages and marginalizes women workers and thus shapes sex segregation (Nemoto, 2013). In these Japanese firms, it is the “homosocial bonds, often bolstered by ‘locker-room’ or adolescent behaviors such as attending sporting events, engaging in sexual banter and making jokes, that provide men with a sense of power, identity, competition and solidarity” (Nemoto, 2013, p. 157).

For infantry units, the predominant culture stems from institutional socialization activities meant to establish and perpetuate the infantry culture. Part of this cultural creation is a focus on unit cohesion. Understanding unit cohesion and its development is critical to understanding how resistance will develop as a perception of deviation from these cultural norms.

2.1.4 History and Importance of Unit Cohesion and Informal Norms in the U.S.

Infantry.

The primary proposition in this dissertation regarding resistance of infantry units to gender integration based on deviation from informal norms must be prefaced with not only a thorough examination of cohesion as a military concept but also how cohesion in infantry units is developed. It is argued here that the culture in the infantry develops during the institutional socialization process and its purpose is enhancing unit cohesion. The traditions and established norms that encompass unit cohesion will be critical to the understanding of how deviations from these concepts will be the primary basis of resistance to gender integration into combat/infantry units.
Unit cohesion has been used as a concept to establish that individual motivation among military members results from “special bonds of comradeship and close personal relations” (King, 2013, p. 1). King’s premise is that because people like each other, they are willing to do things that they would not do independently. The primary focus of his argument is that it is important to understand cohesion as collective combat performance, not a special form of motivation.

Regarded as the seminal work on unit cohesion in the military, Shils and Janowitz’s (1948) article on unit cohesion and disintegration of German units during World War II provides a comprehensive understanding of the importance of unit cohesion in infantry units in the military. Their work sought to identify the special social factors that generated a high level of tenacity in German units that continued to fight long after defeat was inevitable. They argued that the performance of the German soldiers was ultimately a result of the cohesiveness of its infantry groups, which they referred to as “primary groups” (Shils & Janowitz, 1948). Primary groups, consisting of small groups of soldiers, are held together by “spatial proximity, the capacity for intimate communication, the provision of paternal protectiveness by NCO’s and junior officers, and the gratification of certain personality needs, e.g., manliness, by the military organization and its activities” (Shils & Janowitz, 1948, p. 315).

More important to the understanding of resistance based on perceptions of deviation from established culture, is the understanding of how culture develops, as this is where the informal traditions and established norms (the culture of the infantry) are found embedded in the institutional context. These can be described as rites of passage, or even more informally, hazing rituals. Cimino (2011) defines hazing as “…the abuse of new or prospective group
members, collectively, ‘newcomers’” (2011, pg.241) and further as “generation of induction costs (i.e., part of the experiences necessary to be acknowledged as a “legitimate” group member) that appear unattributable to group-relevant assessments, preparations, or chance” (2011, pg. 242). While hazing is often thought of as a form of punishment and considered demeaning to the individual, Army Infantry units typically expect and often welcome the initiation that comes with acceptance into the unit. As an example, newcomers into many military units are often expected to “qualify” on certain weapons systems, physical standards, and the like, which means that they must demonstrate that they meet a certain standard. Army Infantry units also sometimes require new members to “Koala-fy” upon arrival to the unit. “Getting koalafied requires that the Soldiers shimmy up a tree upside down and then to cling to the tree head down (like a Koala Bear), trying to see who can stay on the tree longest” (AR-15, 2007). This type of initiation is expected and not seen as demeaning by the individual. (And if members do find it demeaning, they do not admit that this is the case). It is considered a practice that helps to aid in male bonding. “The creation of a cohesive unit is best accomplished upon its initial formation requiring re-socialization processes and rites of passage” (Henderson, 1985, p.18).

Winslow’s (1999) ethnographic research in Canadian Airborne units shows that hypermasculine behavior is often associated with the rituals in infantry units. She shows that these informal rituals were a critical part of the creation of an “extreme fraternity” and that the paratroopers “hazed” initiates into the regiment and regularly participated in liminal practices in order to assert their shared masculinity. “Airborne units would do things which were often associated with homosexuality. Parties would involve soldiers dancing erotically, men in drag and mock sodomizations” (Winslow, 1999, p.97). Soldiers who were unable to
socialize into this group identity were excluded. Winslow concludes that the intense personal solidarity of these soldiers could not be doubted and that it generated very high levels of motivation that were the cause of the soldiers being willing to do things that most other people would refuse (Winslow, 1999). Units in which infantry members are seen as “enthusiasts for military life, had definite homo-erotic tendencies and accordingly placed a high value on ‘toughness,’ manly comradeliness, and group solidarity” (Shils & Janowitz, 1948). Where cohesiveness develops as a result of hypermasculine behavior and rites of passage, integration of female members into the group could easily generate concerns.

These institutional socialization practices have become the established norm for the infantry and form the basis of its culture. Once culture is established, it only survives by existing members teaching it to newcomers (Schein, 1992). If male infantry unit members foresee that women will find their current rituals and practices inappropriate or even obscene, they may come to the realization that they will be unable to socialize women into the unit in the same way that they do men. This means that the culture of the infantry will change and may be resisted.

This study will examine if the culture the infantry has established over the years (and is reinforced and perpetuated through institutional socialization processes) is associated with resistance to gender integration. Perceived deviation from this established culture may prove problematic for male infantry members since the informal norms that are associated with the culture have become established socialization techniques. In addition to understanding the importance of culture and its role in resistance, there must also be discussion into the antecedents of policy reversal. Institutional theory is argued here to be the appropriate framework with which to explain policy decisions, including reversal.
2.1.5 Institutional Theory and the Role of Coercive Pressure and Informal Norms in a Military Context

A definition of the institution naturally leads the discussion of Institutional Theory and the role of coercive pressure and informal norms as they pertain to infantry units’ resistance to gender integration. Institutions are not merely the formal structures of organizations but rather are best understood as a collection of norms, rules, understandings and perhaps most importantly, routines (March & Olsen, 1989, p.21-6). In addition, institutions are collections of interrelated rules and routines that define appropriate actions in terms of relations between roles and situations and are defined by their ability to influence the behavior of members for generations (March & Olsen, 1989, p. 21-2). Finally, institutions are argued to possess an almost inherent legitimacy that commits their members to behave in ways that may even violate their own self-interest (March & Olsen, 1989, p. 22-3).

The military has been understood to be an institution in these same definitional ways since its inception. DiMaggio and Powell’s concept of an organizational field is important for this dissertation, as infantry units can be defined as an organizational field in the military institution. Organizational fields are “those organizations that, in aggregate, constitute a recognized area of institutional life” (1983, p. 148). An expectation in institutional theory is that these fields “will have institutional logics that underpin the organizing principles for the organizations within them” (Friedland and Alford, 1991, as cited in Ashworth et al., 2007). For the purposes of this study, military units are defined as an organizational field, with infantry units comprising a subset of this field.

“Fields only exist to the extent that they are institutionally defined. The process of institutional definition, or ‘structuration,’ consists of four parts: an increase in the
extent of interaction among organizations in the field; the emergence of sharply defined interorganizational structures of domination and patterns of coalition; an increase in the information load with which organizations in a field must contend; and the development of a mutual awareness among participants in a set of organizations that they are involved in a common enterprise” (DiMaggio & Powell, 1983, p. 148).

Institutional theory, as described by DiMaggio and Powell, seeks to address why organizations come to be homogenous over time. They describe organizations as forms with variation in the beginning stages of their life cycles and that over time, once the organizational field becomes well established, there is a considerable push towards homogenization (1983). “Once disparate organizations in the same line of business are structured into an actual field (as we shall argue, by competition, the state, or the professions), powerful forces emerge that lead them to become more similar to one another” (DiMaggio & Powell, 1983, p. 148).

The military has become an established institution and the organizational fields that make up the military (different occupational units) are becoming increasingly similar in multiple ways, including the development of professional standards, training practices and promotion regulations. Prior to January 2013, infantry units stood out from other units in this organizational field in that they did not allow women to serve in their ranks. This distinction set women apart and made it more difficult for women to earn promotions, as combat experience is frequently a promotion trigger. Infantry units are also set apart in their institutional socialization practices as discussed previously. The variation seen in this particular line of organizational field set the stage for change to occur. Institutional theory proposes that any variation in the organization field will lend itself to the introduction of isomorphic pressure that will encourage homogenization.
DiMaggio and Powell discuss three types of isomorphic pressures in institutional theory: coercive, normative and mimetic. This study will focus on primarily coercive pressure. Normative isomorphism is primarily a result of professionalization, whereas mimetic isomorphism results from standard responses to uncertainty (i.e. organizations with unclear technologies or goal ambiguity will model themselves after other organizations). The more relevant type of isomorphic pressure to the military (or infantry) organizational field is coercive, which “stems from political influence and the problem of legitimacy” (DiMaggio & Powell, 1983, p. 150). Defined more clearly by DiMaggio and Powell, coercive isomorphism “results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent and by cultural expectations in the society within which the organizations function” (1983, p. 150). The authors offer some potential examples of coercive isomorphism including: government mandates, organizations that employ affirmative action officers to fend off discrimination allegations, and hiring more staff to conform with state standards. Infantry units are faced with isomorphic coercive pressure not only in the form of government mandates, but they are also pressured by American cultural expectations of gender equality. Other units in the military have allowed females to serve honorably for decades, without major issue, which has resulted now in the infantry to become more homogenized with these other organizational occupational fields in the military.

Oliver (1991) hypothesizes the mechanisms of strategic responses to institutional processes and states that avoidance is the “organizational attempt to preclude the necessity of conformity; organizations achieve this by concealing their nonconformity, buffering themselves from institutional pressures, or escaping from institutional rules or expectations”
This suggests that infantry units will likely show resistance to gender integration through such avoidance. Infantry unit leadership had the ability to seek exceptions to policy until January 2016. During that period, women who successfully passed their initial infantry training were being assigned to further training instead of being assigned directly to infantry units like their male counterparts (Marine Corps Times, 2014). The leadership in infantry units delayed the process by assigning females to additional training so that they were not technically in violation of the new law but they avoided the full policy implementation (assigning women to the units) until they have the ability to request exceptions. This resistance represents a form of avoidance as defined by Oliver. Oliver describes the mechanism for this response: “organizations that are highly cohesive and that have strong internal cultures may be more prone to resist external expectations and beliefs” (1991, p. 173). As discussed previously, the internal culture of the infantry is the basis of their resistance to isomorphic institutional pressure.

2.1.6 Unit Culture and Gender Integration in Infantry Units.

This chapter has reviewed literature on all of the key concepts that will be used to form and test hypotheses: organizational culture, military culture, unit cohesion and institutional theory. This section focuses on literature that examines infantry unit culture, specifically, and its effect on gender integration. This area of research is relatively undeveloped in the United States, as gender integration in combat units has only recently been established through policy. Schaefer, Wegner, Kavanagh, Wong, Oak, Trail and Nichols (2015) present an empirical analysis of the effects of culture and unit cohesion in Marine Corps Infantry units, specifically. Their article is a practical assessment that offers advice to infantry unit leadership for integration. They review the literature on integration
efforts in foreign militaries, as well as compare gender integration experiences of fire and police departments. Most relevant to this dissertation is their section on the importance of unit culture for successful gender integration.

As previously discussed, the idea of hypermasculine behavior in infantry units and how this behavior is the norm. Koeszegi et.al. describe the fact that, starting from basic training in the military, “performance criteria adhere to male norms, and denigration of femininity is institutionalized in rituals and rites. Moreover, male peer support condones severe violence against women” (2014, p. 233). They state that systematic aggression in the form of bullying is a basis of resistance to the integration of women. They expect that women in training centers and combat units will be exposed to more forms aggressive acts as these units share “hypermasculine values concomitant with resistance against the integration of women and sexual harassment have already been demonstrated” (2014, p. 233). Schaefer et al. state that the impact of integrating women on the cohesion of male groups depends on the culture of the group. “Research examining the integration of women into Army units showed that the impact of integration on cohesion varied by the degree of hypermasculine culture exhibited by the unit” (2015, p. 22). They find that groups more hostile towards women experienced lower cohesion after gender integration than groups that were less hostile towards women. Rosen, Knudson and Fancher (2003) conducted a study on this same phenomenon and found that hypermasculinity (being a key cultural variable in infantry units) was associated with more cohesion in all-male units and less in mixed-gender units. Since, up until policy reversal, infantry units were all male, an increased hypermasculine culture and increased unit cohesion due to this culture, would not be an issue. Now that gender integration is a reality and given research showing that unit cohesion is decreased in mixed-
gender environments where there is a hypermasculine culture, the question of how to integrate infantry units becomes crucial. The argument is made that “the hypermasculine environment engendered in many military units is necessary for unit cohesion in combat units- that masculinity is an important element in holding the unit together and making it a well-functioning team” (Schaefer et al., 2015, p.23). If this is the commonly accepted belief, the norm, in infantry units, then the perception that this will change with the integration of women may serve as the basis for resistance to gender integration.

2.1.7 Key Hypotheses Related to Perceived Cultural Change

Based upon the review of literature surrounding organizational culture and change, the following hypothesis is suggested:

**Hypothesis 1: Perceived threats to organizational culture and norms will be negatively related to support for gender integration.**

This hypothesis represents the main proposition of this dissertation. In particular, because key institutional socialization processes are meant to increase male bonding, greater perceptions of change in male bonding due to gender integration will be associated with more negative views of gender integration. The mechanism for this proposition is that organizations that have strong internal cultures, as well as institutional socialization practices that have been established as the norm, will be more prone to resist external institutional pressure.
2.2. Social and Task Cohesion

In addition to macro-organizational factors, as presented above, another area being explored in this dissertation that contains factors that could impact attitudes toward gender integration is unit cohesion (on the micro level) and the differences between the types of cohesion on their impacts on group performance. Scholars have been writing about the effects that unit cohesion has on military performance since immediately after WW II (Shilz and Janowitz, 1948; MacCoun and Hix, 2010) and have come to the conclusion that “unit cohesion is essential to military effectiveness” (MacCoun and Hix, 2010, p 141). While there is little doubt that personal bonds can play an important role in combat motivation, understanding the full meaning of the term cohesion, what influences it, how it relates to performance, and how changes in group composition affect it are central to understanding how the introduction of women into military combat units will impact military performance.

Griffith (2007) examined cohesion and its impact on performance in military settings. Ultimately, Griffith concluded that there is an indirect relationship between cohesion and performance, in that cohesion acts as a moderator of performance rather than having a direct effect. He finds that cohesion helps to maintain military performance during times of extreme stress, such as during battle, and increases solidarity which enables members to perform effectively during those times of stress. However, cohesion serves as a performance enabler, not enhancer. Cohesion is a moderator that serves to facilitate group maintenance, which in turn, supports the efforts of the group, but not necessarily their performance. This effect, however, is particularly important for infantry units, whose main function is battle.

Wong, Kolditz, Millen and Potter (2003) conducted a study that examines why soldiers are
willing to fight (and possibly die) and concluded that “cohesion, or the strong emotional bonds between soldiers, continues to be critical factor in combat motivation” (2003, p. 25). They discovered that it is the strength of interpersonal bonds that motivates soldiers to perform (fight) rather than a shared commitment to a given task. However, MacCoun, Kier and Belkin (2006) criticized the study by Wong, et al. claiming that their research design was weak and that they have little evidence to support their claims. MacCoun et al then go on to stress the distinction between social and task cohesion and argue that it is a shared commitment to task, rather than social cohesion, that accounts for the variance in relationship between cohesion and performance. These distinctions are discussed in detail below.

Since the initial discussion of cohesion and its importance, further academic inquiries into cohesion have distinguished various types of cohesion as a means to better understanding how interpersonal dynamics impact the performance of small organizations. Scholars have identified two types of cohesion as they pertain to performance: task cohesion and social cohesion. Task cohesion is defined as “shared commitment among members to achieving a goal that requires the collective efforts of the group. A group with high task cohesion is composed of members who share a common goal and who are motivated to coordinate their efforts as a team to achieve that goal” (MacCoun and Hix, 2010, p. 139). Social cohesion is defined as the “extent to which group members like each other, prefer to spend their social time together, enjoy each other’s company, and feel emotionally close to one another” (MacCoun and Hix, 2010, p. 139).

MacCoun and Hix examined the relationship between social and task cohesion on military performance as a result of the 1993 policy change regarding Don’t Ask Don’t Tell.
They used a 1993 report by RAND to review literature on the nature of unit cohesion, its effects on military performance, and the ways in which the presence of known gay men and lesbians might affect cohesion and performance. They also examine the effects of heterogeneity in member characteristics (sexual orientation, race and gender) on group cohesion. Their work is relevant to this dissertation and indicates potentially important relationships regarding support for gender integration.

The MacCoun and Hix study examines the effects of different types of cohesion, effects of performance on cohesion, effects of cohesion on coping and other outcomes, and the role of cohesion in combat and crisis. Due to the nature of this dissertation, the most relevant parts of their work focus on cohesion in combat and crisis situations, as these are specific to gender integration in combat units. All of the studies that they cite (Mullen and Cooper 1994, Beal et.al 2003, Oliver et al. 1999, etc.) report that task cohesion is “the most important determinant of group performance” (MacCoun and Hix, 2010, p.141), however, they acknowledge that scholars have long established that “social cohesion within the soldier’s primary group is essential to military effectiveness” (Shils and Janowitz 1948). This suggests a distinction between the effects of social and task cohesion when it comes to combat and crisis situations. Previous discussions of infantry culture contribute to this theory. MacCoun and Hix also examine the association between unit cohesion ratings and gender differences in military units. While they “did not find differences related to the gender mix in units… they report that some respondents attributed perceived cohesion problems to gender-related issues- in particular, perceived differential standards and treatment for men and women, segregated housing and couples who were placing their relationship ahead of the good of the unit” (MacCoun and Hix, 2010, p. 151). They conclude
that “if there are effects of either racial or gender composition of unit members on military cohesion, they might be weak and fleeting” but then go on to acknowledge that “gender integration appears to have more noticeable effects; it may pose somewhat different challenges because some male soldiers perceive, rightly or wrongly, that women differ in fighting ability or are treated differently by the organization” (p. 151). They, however, do not attempt to study this effect as the focus of their study was Don’t Ask Don’t Tell policy. This leaves prime space for this dissertation to fill a knowledge gap in this area.

Koeszegi et al. further examine the relationship between combat effectiveness and social and task cohesion as a function of socialization practices as seen in infantry units specifically:

Combat morale and task and social cohesion are believed to lie at the heart of operational effectiveness of (small) combat units. Empirical studies suggest, however, that social cohesion is not a prerequisite for effectiveness, but rather a result of the stern socialization process during basic training, where combat morale and separation from old civilian values is trained. Bureaucracy overload like excessive rules and regulations depersonalizes the responsibility for violence, which enables new members to distance themselves from the moral dimension of their behavior and old civilian values. Moreover, soldiers are depersonalized with severe psychological and physical stress tests including constant monitoring and punishment to indoctrinate new combat values of obedience and endurance. This struggle, consequently, fosters bonding between cadets. The exclusivity culture with distinctive uniforms, values and rites promotes cohesion and separation from outside-military life (2012, p. 229)

Ahronson and Cameron (2007) adapted the Group Environment Questionnaire (GEQ) created by Carron, Widmeyer and Brawley (1985) originally for use in sports teams and tailored it for a military sample in an attempt to evaluate how group cohesion relates to job performance, job satisfaction and psychological distress. Because “the military maintains that cohesive groups engender effectiveness in combat situations” (Ahronson and Cameron 2007), this same scale can be useful to ascertaining how infantry unit members perceive unit
cohesion should their units be gender integrated. In lieu of examining how perceptions of social and task cohesion impact perceptions of job performance, this dissertation will examine how perceptions of social and task cohesion impact attitudes toward gender integration. Using the above literature, the following hypothesis is presented:

2.2.2 Key Hypotheses Related to Cohesion and Performance

**Hypothesis 2:** Unit cohesion is directly related to support for gender integration.

**Hypothesis 2a:** Because task cohesion is the “most important determinant of group performance” task cohesion will be more important than social cohesion in determining attitudes towards gender integration.

**Hypothesis 2b:** Because unit members do not have to like each other to get the job done, social cohesion will be less important than task cohesion in determining support for gender integration.

2.2.3 Effectiveness and Efficiency - Separating out the Measures of Performance

As discussed above, social and task cohesion are important concepts to study in regard to the relationship between performance and support for gender integration. Cohesion is believed to contribute to military performance, and the ideas of effectiveness and efficiency were mentioned briefly above in the discussion of social and task cohesion. It is also important to look specifically at effectiveness and efficiency, breaking out these concepts into distinct variables, to define these concepts, and discuss what potential role these measures of performance might have on support for gender integration.
In general, organizations are deemed to be effective when they have produced an intended result or outcome, while efficiency is about performing in the best manner— with minimal resources and effort expended to achieve the desired outcome. Millett, Murray and Watman (1986) distinguish the types of effectiveness in military organizations: political, strategic, and tactical. These distinctions are beyond the scope of this dissertation. For the purposes of this dissertation, effectiveness is not being broken down into its’ various classifications, but is simply being discussed as a general indicator of performance.

Since this dissertation addresses effectiveness and efficiency as performance measures in infantry units that can potentially explain support (or resistance) for gender integration, an understanding of what infantry unit members think about when they talk about effectiveness is essential. Egnell (2013) writes about potential reductions in effectiveness as an argument against gender integration in the Army infantry and discusses the point that is being made by many who are opposed to integration: “...the idea that women, in general, are not fit for war; that their often lower physical abilities and/or supposed lack of mental toughness put at risk the combat effectiveness of the units” (p. 33). Egnell goes on to describe, in further detail, that those who oppose gender integration are under the assumption that political leaders (those they feel are forcing the issue of integrating women into the infantry) are trying to change the culture of the infantry to one that more closely matches one of civilian values, or would eliminate many of the norms that might seem offensive to women should they be integrated. He describes that this conceptualization “...assumes that military adjustments to civilian values necessarily undermine military effectiveness, and that the focus on military effectiveness must certainly mean decreased civilian control or military nonadherence to the values of civil society” (p. 39) These comments further the discussion to
help explain how infantry members feel regarding gender integration as it pertains to military
effectiveness.

Egnell (2013) also helps to shed some light into how perceptions of efficiency may
differ from those of effectiveness. While, as mentioned previously, effectiveness is tied to
physical standards, efficiency is tied to increased communications during combat operations.
Even though females are not currently serving in infantry units, some females have deployed
to Iraq and Afghanistan in support roles, and in particular, in Female Engagement Teams
(FET). The purpose of these teams is for the female soldier to go out into the community of
interest and to talk to the women in the community. This is something that is typically
forbidden for the male soldiers to do because of the local culture. When the female soldiers
are participating in the military operation in this way, there are sometimes communications
made by the local women that lead to the capture of assailants or the discovery of weapons
etc. Infantry soldiers see that these increased communications help to make their missions
more efficient. Also, having a female soldier participate in the mission in this way is not a
threat to the culture of the infantry, as these female soldiers are not infantrymen and don’t
have to meet the same physical standards that they would if they were assigned to an infantry
unit and participating in the actual combat portion of the mission. RAND (2016) also helps
to distinguish between effectiveness and efficiency when they state that certain tasks can best
predict the relationship between performance and efficiency especially “when the tasks
involve a high degree of reciprocity and/or collaboration between group members” (p. x)

Beal, Cohen, Burke and McLindon (2003) also examined the relationship between
cohesion and performance. Their meta-analysis of 64 studies found that there are three
aspects of cohesion that are positively related to performance; interpersonal attraction, group
pride and task commitment. Most importantly, they found that cohesion contributes to efficiency but not to effectiveness of achieving an outcome.

Based on a review of the literature pertaining to military effectiveness and efficiency, the following research hypotheses are presented:

**Hypothesis 3:** Support for gender integration will be related to perceived effects on performance.

**Hypothesis 3a:** Perceived unit efficiency will be more important than perceived unit effectiveness in determining support for gender integration.

### 2.3 Previous Experience with Integration and the Contact Hypothesis

While the military has increasingly opened previously closed occupational specialties to women over the years, it is argued here that integration into combat units will prove different due to the nature of the combat, war fighting unit, as opposed to other non-combat positions.

As discussed in detail previously, the military has been historically seen as male dominated institution with focus on masculine activities that socialize men into believing that masculinity is a value necessary for military performance. Many opponents of gender integration in the military discuss the nature of military culture as one that “necessarily fosters hostility towards women” (Morris, 1996). Titunik explains that one of the reasons we as a society assume the culture of the military to be hostile towards women is “because the idea seems intuitively correct or conforms with our accepted social construction of what war is and the characteristic it calls forth. The military is a business of killing, so we assume that it fosters qualities of aggressiveness and violence…” (2000,p.237). Building on the earlier
discussion of military and infantry unit culture, the argument here is that infantry culture is unique and provides reason for gender integration into those units to be particularly problematic.

Since the infantry culture is about male bonding and macho, hypermasculine activity, racial integration was still about men. Many researchers have explored the degree to which prejudice towards a group is reduced with higher contact with those group members. This is known as the contact hypothesis (Allport in 1954). The contact hypothesis, also known as Intergroup Contact Theory, states that under appropriate conditions, interpersonal contact is one of the best ways to improve relationships among groups that are experiencing conflict. One of these groups typically has experienced some form of prejudice (considered the outgroup) and the other group is considered the in-group. The idea is that when the groups have close personal contact and are able to communicate, they are better able to understand and appreciate alternative views and experiences. In order for the theory to be effective, optimizing conditions must first be met. Forsyth (2009) states that these optimizing conditions are as follows:

- **Equal Status**- Any differences among group members should be minimized; i.e. status, rank, academic background, wealth, skill etc. Group members should also engage equally in the relationship.

- **Common Goals**- The groups must be working together to accomplish a common goal or task, combining their efforts and resources.

- **Intergroup Cooperation**- Group members should work together without competition
• Personal Interaction- The contact situation should involve personal communication, informal interaction so that group members can learn more about each other personally.

• Support of authorities, law or customs- The groups should acknowledge and support established authority that governs the interactions with the groups.

Racial integration in the United States began in earnest during the Korean War in 1950. Since survey research came of age during World War II, there were survey results available during that time period showing that there was a “general resistance among White soldiers to the idea of serving with Black soldiers” (Segal et.al. 2016, p. 32) and the Army used these survey results as an argument against racial integration. However,

“the major exploration of the impact of diversity and relations among soldiers is found in analyzing the experience when Black platoons were placed in White companies. Over 80% of the white soldiers surveyed felt that Black and White soldiers "should be in separate units. However, white soldiers who had more contact with Black soldiers were less opposed to integration than those who had less contact with Blacks. These findings served as one basis of Allport's postwar ‘contact hypothesis’” (Segal et.al, 2016, p.32).

Segal et al. (2016) showed that integrated units were perceived to perform better than segregated units. “Surveys showed that preference for segregated units was more than 10% lower among white infantry soldiers serving in all-white units than it had been in World War II, and almost 20% lower among those serving in racially integrated units. By this time, leadership attitudes had changed. The results made resegregation of the Army impossible after the war” (Segal et.al. 2016, p.32).

This same underlying logic can be applied to gender integration by asking if the contact hypothesis will hold true for females assigned to combat units. Segal et al. (2016) report that a recent United States Army Report to the Defense Advisory Committee on
Women in the Services (2013) shows male soldiers assigned with women soldiers have more favorable attitudes towards allowing women to serve alongside them. This is an important result but it’s relevance to the infantry is an open question. This dissertation is specifically interested in attitudes of infantry service members and since infantry unit soldiers (specifically) were not assigned with women soldiers at the time of that survey, Segal et al.’s results could be misleading. Infantry unit soldiers may work with female soldiers, but those soldiers are not serving in a combat capacity. This is the main focus of this dissertation.

The contact hypothesis, however, can be used to make sense of gender integration problems that occurred in the military service academies. These conditions have been shown to hold in military situations, including integrating women into previously all-male units and organizations. In the admission of women to the service academies, the integration process was made problematic by the lack of many of the optimizing conditions (Forsyth 2009). For example, the newly integrated women were all "plebes," the lowest cadet status. Women were spread out into the cadet companies, so that most companies had few women; thus, successful women could be seen by men as exceptions, thereby maintaining negative stereotypes of women in general as not suited to the academies. (Segal et.al. 2016, p.29).

As this suggests, the contact hypothesis may represent an important explanation of attitudes toward gender integration. Based on the literature provided on the contact hypothesis and alternative literature on infantry culture, the following alternative hypothesis is provided for testing:

2.3.1 Hypothesis 4: More frequent interpersonal workplace contact between male and female soldiers will be associated with more support for gender integration.
2.4 Conclusion

This chapter has reviewed literature on factors that may impact attitudes toward gender integration in the military. The literature has been presented in three key focal areas: organizational culture and change, unit social and task cohesion and the contact hypothesis. A series of testable research hypotheses were derived from the existing body of knowledge for application to the specific context of the United States Army infantry and support for gender integration. In the following chapter, survey methodology and data collection procedures will be identified, operational definitions of dependent and independent variables will be presented and proposed methodology will be discussed.
CHAPTER 3
METHODOLOGY

The previous two chapters provided background and historical development of women in the military and introduced gender integration in the military as an important phenomenon for study. Chapter two provided an examination of the relevant scholarly literature on gender integration, organizational/military culture and institutional theory. The literature provides the framework from which the key variables and hypotheses are derived. In this chapter, the chosen methodology will be discussed, as well as the survey instrument and key variables along with their corresponding operationalizations. The research question being addressed is: What factors influence attitudes towards gender integration in Army Infantry units?

3.1 Data and Survey Methods

This dissertation uses a nonexperimental/survey research design. The original, 30 question instrument was developed by the author and includes items related to support/resistance for gender integration, key military cultural components and, borrowing from the work of Ahronson and Cameron (2007), social and task cohesion in a military context. This survey was administered electronically through Qualtrics to two United States Army Brigades stationed at Fort Bragg, North Carolina. These units, chosen after several meetings with Brigade leadership, included one infantry and one non-infantry Brigade. The choice of one infantry and one non-infantry Brigade was intentional. Given the timing of the survey (2015), the infantry was not yet integrated. Since integration had not yet begun, infantry units were all male, whereas non-infantry units contained females. Because this dissertation examines infantry culture resulting from the unique institutional socialization
process, the researcher wanted to obtain response from a Brigade that would not have the same institutional socialization process, as differences in response would be expected. The survey was sent to the infantry battalion in the 2 Brigade Combat Team and the 285th Sustainment brigade which, together, total approximately 1000 soldiers. The instrument was sent out via anonymous email link through the Personnel Officer for the respective units, who then sent it to the individual members of the Brigade. The email script and survey are included as Appendix A of this dissertation. Participants were informed that the survey was completely voluntary and anonymous. The survey was approved by the North Carolina State Institutional Review Board (IRB) prior to survey deployment. The IRB approval is included in Appendix B of this dissertation. The first Brigade (2 BCT) completed the survey in late September through early October of 2015. The second Brigade (285th Sustainment Brigade) completed the survey in the Spring of 2016. When the first Brigade completed the survey, it was known that infantry positions would eventually become open to women, but the actual decision had not been made. At the time that the second Brigade completed the survey, the decision to fully integrate had been announced, but implementation had not begun. (Because these two Brigades completed the survey at different times during policy development, a dummy variable will be created to identify the difference in the two time periods that the survey was completed). The questions posed to these soldiers were “what if” scenario type questions. A total of 398 surveys were completed, including 391 men and only 7 women. Of these, 327 of those responses were valid and useable responses. Although more data from women would be useful for understanding why women may want to join an infantry unit (e.g., there are separate questions that ask about motivations/desire to serve), the overall
analysis is not impacted negatively by the absence of women respondents because male infantry members’ resistance to gender integration represents the true target of the analysis.

3.2. Dependent Variable: Support/Resistance for Gender Integration

The dependent variable for this study, support for gender integration, is measured as a final survey item that asks “Finally, overall, on a scale from 1 to 100 (1 being no support and 100 being total support) what is your level of support for integrating women into combat units? Respondents used a drop-down box to assign the value corresponding to their level of support.

3.3 Independent Variables

3.3.1 Independent Variables that Address Perceptions of Cultural Change

Because it is argued that infantry culture is comprised of informal norms, the key independent variables which address perception of cultural change (male bonding, hazing/initiating, loyalty, concept of no man left behind,” keepers of the “warrior ethos,” mental and physical toughness and expertise in task), are operationalized with survey items that ask, “How likely will the following norms change if infantry/combat units are fully integrated?” Perceptions of change to these norms represent anticipated change in the established infantry culture. Since the prompt question asks about perceptions of change to the Army Infantry culture, the variables are presented on a macro level. The norms are then listed with responses on a 7 point Likert scale ranging from 1-(won’t change at all) to 7- (will change significantly).

It has been argued previously that informal cultural norms in the infantry are the essence of infantry culture. The seven factors used in the survey represent perceptions of culture change and were identified from several sources. Although found in numerous places
in the literature, the fundamental point here is that these ideas are ingrained into the individual soldier by the institution, during the socialization process. Through the Infantryman’s Creed and Army Core values- one of them being the Warrior Ethos- these ideas are implanted from basic training and advanced infantry training, with infantry members even reciting as a group in some instances. Infantrymen are taught that the infantry is the single most important piece on the battlefield- every other job or service is there to support the role of the infantry. These ideas are expressed in the phrase “Queen of Battle” which is also referenced in the Infantryman’s Creed. This idea comes from chess and the role that the queen plays in the game.

**Infantryman’s Creed**

I am the Infantry. I am my country’s strength in war. her deterrent in peace. I am the heart of the fight- wherever, whenever. I carry America's faith and honor against her enemies. I am the Queen of Battle. I am what my country expects me to be- the best trained soldier in the world. In the race for victory I am swift, determined, and courageous, armed with a fierce will to win. Never will I betray my country's trust. always I fight on- through the foe, to the objective, to triumph over all, If necessary, I will fight to my death.

By my steadfast courage, I have won 200 years of freedom. I yield not to weakness, to hunger, to cowardice, to fatigue, to superior odds, for I am mentally tough, physically strong, and morally straight. I forsake not- my country, my mission my comrades, my sacred duty. I am relentless. I am always there, now and forever. I AM THE INFANTRY! FOLLOW ME

The infantry’s cultural norms are also expressed in the United States Army’s statement of core values. The specific tenets in the core values statement are used to operationalize the independent variables for this dissertation:

**Army Values- Warrior Ethos**

I will always place the mission first
I will never accept defeat
I will never quit
I will never leave a fallen comrade
And finally, a Commanders Note, taken from the 1998 May-August edition of Infantry magazine, clearly depicts how these values (independent variables) dominate the infantry culture and everyday thought process ingrained into these soldiers.

“We are the keepers of the Warrior Ethos. Our disposition and our very character must embody the mental and physical toughness required to dominate the personal and brutal close fight. This means the infantry, more than any other branch, finds its focus and fundamental values completely on the individual soldier.”

The concept of male bonding, while also ingrained through the institutional socialization process, is discussed more thoroughly in the scholarly literature than some of the other chosen variables (i.e. Warrior Ethos, Loyalty etc.). Male bonding, for example, is discussed as far back as Shilz and Janowitz (1948) WWII-era article up to the present day by Mackenzie (2015), who effectively connects male bonding with cohesion:

“Finally, troop cohesion, which was largely defined as men’s ability to trust each other and form social bonds, became synonymous with combat effectiveness following the Vietnam War. Major Brendan McBreen explains ‘Improving infantry cohesion is more than important than any combination of doctrinal, organizational training or equipment improvements.’ Kingsley Browne describes the gendered nature of cohesion and the problem women pose to it: ‘Men fight for many reasons, but probably the most powerful one is the bonding- ‘male bonding’- with their comrades… Perhaps for very fundamental reasons women do not evoke in men the same feelings of comradeship and fellowship that men do.” In turn, combat cohesion was heralded as essential to troop effectiveness, but was also defined largely as male bonding, which be definition excluded women from cohesion” (2015, p.14).

Although the concepts of male bonding and unit cohesion can be connected, the concepts will be studied independently in this dissertation and held separately in the regression model so as to isolate their individual effects on attitudes towards gender integration. As mentioned previously, the organizational cultural factors (male bonding, hazing, etc.) were measured on a macro level and were measured as perceptions of change in culture. As will be discussed below, unit cohesion was separated into concepts of social versus task cohesion. In contrast
to the other cultural factors, social and task cohesion concepts were measured on a micro
level and ask about perceived cohesion existence or “survival” following gender integration,
rather than change.

3.3.2 Independents Variables: Cohesion and Performance: Effectiveness and Efficiency

As indicated in the literature review (Chapter 2), there is ample research on the
relationship between performance and attitudes toward gender integration. Two survey items
will be used to assess the relationship between performance and support for gender
integration. These variables are operationalized with survey items that asked respondents
“Gender Integration in Infantry/Combat units will increase unit effectiveness” and “Gender
Integration in Infantry/Combat units will increase unit efficiency.” These are recorded on a 7
point Likert scale ranging from 1-strongly disagree to 7-strongly agree.

3.3.3 Independent Variables: Social and Task Cohesion

The concepts of social and task cohesion will be used as two independent variables in this
study. They are operationalized with survey items that were adapted from the GEQ
(Ahronson and Cameron, 2007) and tailored with language to reflect military units (in place
of sports teams) and the situation of gender integration. These variables are focused on a
micro, individual infantry unit level. The following statement was provided on the survey:
“Please answer the next set of statements regarding unit social and task cohesion as if women
have already been integrated into combat units. If you are male, you are answering what you
think it would be like to be in a combat unit with women. If you are female, you are
answering how you think the unit environment will be if you, or other females, are with a
combat unit.” The survey then lists 8 statements with responses all recorded on a 7 point
Likert scale ranging from 1-strongly disagree to 7-strongly agree. The items alternate between task cohesion (statements a, c, e, and g) and social cohesion (b, d, f and h.) The statements are as follows:

**Task Cohesion**
- (a) My unit will be united in trying to reach its goals for its mission
- (c) All unit members will take responsibility for any mission loss or poor performance by the unit
- (e) Our unit members will have conflicting aspirations for the unit's performance
- (g) If members of the unit should have personal problems, everyone will want to help them so that we function better as a team

**Social Cohesion**
- (b) Members of my unit will prefer to go out on their own rather than get together as a unit
- (d) Our unit will rarely socialize together
- (f) Our unit will enjoy spending time together away from work
- (h) Members of our unit will not stick together outside of work

These items will represent perceived “survival” of social and task cohesion (separately) following gender integration.

### 3.3.4 Independent Variable: Contact with members of the opposite sex

The final exploratory variable, contact with members of the opposite sex, is used to test the contact hypothesis. This measure is operationalized with a single survey item asking: “What is the lowest level in which you have experience working with members of the opposite sex?” Choices are: Brigade level, Battalion level, Company/Battery/Troop level,
Platoon Level and Squad level. Based on the nature of military structure and function, contact occurring at the lower levels (i.e. platoon and squad level) would indicate more frequent contact and most likely contact with peers, as opposed to contact at the Brigade level, which would indicate contact with leadership, (i.e. with commanders), that does not occur as frequently. There is also a write in question where respondents were asked “In your own words, how did you feel about your personal experience deploying with members of the opposite sex?” The written response will be used to provide some context after data analysis has taken place.

3.3.5 Control Variables

Other variables that will be used as controls include gender, marital status, age, time in service, rank, education level, type of unit, whether the respondent has children, military occupational specialty (MOS) and previous deployment experience.

There is also a control variable in the non-infantry model called “Wave.” As data was collected for this dissertation during two separate time periods, the Wave variable was created to test for any potential threats to validity based on the timing of data collection. There were no major changes in gender integration policy in between the two survey time periods, an internal that was less than a year in duration. However, despite this belief that there would be no difference in response based on time, the variable was created. This variable is only included in the non-infantry model, as the infantry model only contains data from Wave 1. However, there were non-infantry respondents in both Wave 1 and Wave 2 so the non-infantry model will control for time with the wave dummy.
3.4 Methodology

As mentioned previously, the primary research question being addressed is: What factors influence attitudes towards gender integration in Army Infantry units? Those variables that represent perceptions of deviation from cultural norms, perceptions of social and task cohesion after gender integration, and contact with members of the opposite sex are the key independent variables of interest in assessing support for gender integration (the dependent variable). Regression analysis using multiple linear regression is used to estimate results of the model. Initial analysis will show whether a transformation of the data needs to take place to account for any data skew present. Conceptually, this model can be represented as shown in Figure 3.1.

**Figure 3.1:** A Model of Support for Gender Integration

The independent variables will yield semi-partial coefficients, which will explain the specific portion of variation that they provide to predicting the dependent variable.
3.5. Qualitative Data

This dissertation contains both quantitative and qualitative analysis components. Although not a true mixed method design, this dissertation will make use of qualitative data gathered during the survey. There were two opportunities for respondents to write in comments on the survey. These were provided on survey items 15 and 22. The essay prompts were as follows (respectively): “In your own words, how did you feel about your personal experience deploying with members of the opposite sex,” and “In your own words, please describe your feelings regarding women being fully integrated into all combat units. What challenges and/or positive benefits do you foresee, if any?” Initial analysis shows that these comments offer interesting insight into the thought process of infantry versus non infantry soldiers regarding opinions on gender integration. Moreover, the qualitative information helps to explain why some of the quantitative results, hence it will be used during the results discussion section in Chapter 4.

3.6 Data Analysis

The sample

The survey instrument was distributed via email as a Qualtrics email link. It was sent out to members of both the 2 Brigade Combat Team (2 BCT- Infantry) and the 52th Sustainment Brigade (525th SBG- Non-infantry) by the Brigade leadership working with the researcher of this dissertation. The researcher created the survey participation request language, which was distributed by Brigade leadership via email along with a link to the Qualtrics survey. That language is contained in Appendix A of this dissertation, along with the survey itself. Brigade leadership involvement ended with the distribution of the survey
email. From that point, the researcher was able to track and manage responses directly through Qualtrics. Brigade leadership at Fort Bragg was no longer involved in the project. As several years have gone by since the survey was deployed, this leadership has since experienced a permanent change of station and cannot be reached for further information. Unfortunately, the researcher is unable to verify the exact number of emails to which the survey was sent. Because of this, only a conservative response rate can be estimated, which is based on the total population of soldiers in each of these units. The 2BCT (infantry battalion) and the 525th BGD are comprised of a total of approximately 1000 soldiers. Responses were received from 398 soldiers. Of those, only 327 surveys were complete. The remaining 71 individuals returned the instrument, checking only the first item (a consent item), indicating they did not consent to complete the survey. These 71 individuals, along with 602 others who did not return the survey at all, were treated as non-respondents. Thus, the estimated response rate was $\frac{327}{1000} = 32.7\%$.

**Treatment of missing values**

A missing values analysis (MVA) was completed in SPSS for the 327 valid responses. This process was used to check for the extent of and patterns in item non-response and to see if missingness was completely at random (MCAR). By default, if data are missing for given items, statistical packages implement listwise deletion, which drops all cases with missing values from the analysis. By common rule of thumb, listwise deletion is acceptable if 5% of cases would be dropped by listwise deletion (i.e., if cases with missing values are 5% of the sample or less). If this criterion is not met, listwise deletion is still acceptable if missingness if found to be random by Little’s MCAR test. (Garson, 2015, p.11)
When data are missing completely at random (MCAR) it means that the “missing values are randomly distributed across all observations. Missingness in a given variable does not depend on any other variable, whether observed or unobserved” (Garson 2015, p.11). “Little’s MCAR test is the most common test for missing cases being missing completely at random. If the p value for the Little’s MCAR test is not significant, then the data may be assumed to be MCAR and missingness is assumed not to matter for the analysis. Listwise deletion of observations with missing values is appropriate provided the number of missing values is not very large” (Garson, 2015 p. 12).

Little’s MCAR test was conducted in SPSS. Results are listed below in Table 3.1. Little’s MCAR test showed a significance value of .254 which is not significant. This indicates that the missing data are not significantly different from random and therefore the default of listwise deletion of missing cases is considered appropriate.

Table 3.1: Little’s MCAR Test for Missingness

<table>
<thead>
<tr>
<th>Little’s MCAR test for missingness</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Little’s MCAR test: Chi-Square = 135.037, DF = 125, Sig. = .254</td>
</tr>
</tbody>
</table>

Testing the Assumptions of Linear Regression.

Linear Relationship. Before completing the analysis, the data were checked to ensure that the chosen statistical procedure is appropriate for the data to be used. Because multiple linear regression (OLS) is the chosen methodology for this dissertation, the assumption of linearity must be assessed. Meyers, Gamst and Guarino recommend using the ANOVA test for linearity (2016, p. 104). The ANOVA test for linearity shows that almost all of the variables do not have a nonlinear component when predicting attitudes towards gender.
integration on a bivariate basis (using all of the main independent variables) as indicated by non-significant p values.). The only two variables that have a significant nonlinear component are the infantry dummy variable, which does not require linearity testing as it only contains values of 0 and 1 leading to our ignoring ANOVA results for this variable. The second problematic variable was Change_expertise, where the ANOVA test for linearity was weakly significant at a p value of .041. This too was ignored since a nonlinear model would only be recommended if there were marked departures from linearity (Garson, 2012), which was not the case in this instance.

**Independence of Observations.** Independence of observations is an assumption of OLS regression and is normally tested using the Durbin-Watson (d) statistic. The two critical values that a researcher wants to remain between are 1.5<d<2.5. This test was run for both non-infantry and infantry models and Durbin-Watson statistics of 2.184 and 1.882 were obtained, respectively. This shows a clear independence of observations. Table 3.2 shows the results from this test.

**Table 3.2: Regression Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Infantry</td>
<td>.777*</td>
<td>.603</td>
<td>.453</td>
<td>28.679</td>
<td>2.184</td>
</tr>
<tr>
<td>Infantry</td>
<td>.633*</td>
<td>.401</td>
<td>.338</td>
<td>26.249</td>
<td>1.882</td>
</tr>
</tbody>
</table>

**Factor Analysis and Reliability Analysis.** While survey questions related to social and task cohesion were borrowed from Ahronson and Cameron (2007) who adapted the Group Environment Questionnaire (GEQ) created by Carron, Widmeyer and Brawley (1985), factor
analysis was conducted to confirm the validity of the measures. There were 8 questions on the survey that conceptualized social and task cohesion. Task Cohesion was measured with the following items:

- My unit will be united in trying to reach its goals for its mission
- (c) All unit members will take responsibility for any mission loss or poor performance by the unit
- (e) Our unit members will have conflicting aspirations for the unit’s performance
- (g) If members of the unit should have personal problems, everyone will want to help them so that we function better as a team

And Social Cohesion was measured with the following items:

- (b) Members of my unit will prefer to go out on their own rather than get together as a unit
- (d) Our unit will rarely socialize together
- (f) Our unit will enjoy spending time together away from work
- (h) Members of our unit will not stick together outside of work

All eight items were submitted to factor analysis with a varimax rotated solution. The results yielded a simple two factor structure without sizeable cross-loadings (Table 3.3 below).

However, the social and task items did not load quite as intended. Items loading on Factor 1 were Social B, Social D, Task E, and Social H. Task A, Task C, Social F, and Task G loaded on the second factor. Because of this, Task E and Social F were deleted from the scales. This leaves two unidimensional scales for analysis. Finally, a reliability analysis was completed for both three-item scales. The Social cohesion scale yielded a Cronbach's alpha of .815. The Task cohesion scale yielded a Cronbach's alpha of .808. By this criterion, both
are strong scales suitable for confirmatory analysis (Nunnally, 1978). The remaining factors were combined additively, resulting in two variables– one that measures task cohesion survival and one that measures social cohesion survival. The original Likert scale (1- strongly disagree to 7- strongly agree) now becomes a potential response from a minimum result of 3 (no cohesion survival) to a maximum possible result of 21 (complete cohesion survival). These results will be discussed in detail in Chapter 4.

**Table 3.3**: Rotated Component Matrix Results

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task A</strong></td>
<td>My unit will be united in trying to reach its goals for its mission</td>
<td>-.082</td>
</tr>
<tr>
<td><strong>Social B</strong></td>
<td>Members of my unit will prefer to go out on their own rather then get together as a unit</td>
<td>.828</td>
</tr>
<tr>
<td><strong>Task C</strong></td>
<td>All unit members will take responsibility for any mission loss or poor performance by the unit</td>
<td>-.068</td>
</tr>
<tr>
<td><strong>Social D</strong></td>
<td>Our unit will rarely socialize together</td>
<td>.842</td>
</tr>
<tr>
<td><strong>Task E</strong></td>
<td>Our unit members will have conflicting aspirations for the unit’s performance</td>
<td>.789</td>
</tr>
<tr>
<td><strong>Social F</strong></td>
<td>Our unit will enjoy spending time together away from work</td>
<td>-.197</td>
</tr>
<tr>
<td><strong>Task G</strong></td>
<td>If members of the unit should have personal problems, everyone will want to help them so that we function as a team</td>
<td>-.149</td>
</tr>
<tr>
<td><strong>Social H</strong></td>
<td>Members of our unit will not stick together outside of work</td>
<td>.790</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 3 iterations.

**Table 3.4**: Reliability Analysis Results- Task Cohesion Scale

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's Alpha</td>
<td>.808</td>
</tr>
<tr>
<td>N of Items</td>
<td>3</td>
</tr>
</tbody>
</table>
Table 3.5: Reliability Analysis- Social Cohesion Scale

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's Alpha</td>
<td>0.815</td>
</tr>
<tr>
<td>N of Items</td>
<td>3</td>
</tr>
</tbody>
</table>

Use of Qualitative Data. In addition to quantitative regression results, this dissertation will also use qualitative data to analyze the relationship between perceptions in cultural change and support/resistance for gender integration in combat units. Survey respondents were asked the following open-ended question in the survey: “In your own words, please describe your feelings regarding women being fully integrated into all combat units. What challenges and/or positive benefits do you foresee, if any?” Responses from this question will be used in the findings section to help further explain the quantitative results. These comments written in by survey respondents will yield greater understanding of how and why the data present as they do.

3.7 Conclusion. The purpose of this chapter was to present the research methodology of the dissertation. The discussion included a description of the survey instrument used to gather data for the analysis, procedures for administering the survey, operationalization of the dependent and independent variables, evidence of the appropriateness of the chosen regression model, data cleaning procedures, results from factor analysis and reliability analysis, a brief model summary and explanation of the use of qualitative as well as quantitative data. The following chapter will present the findings in the form of regression tables and a discussion of the statistical and substantive significance of the results.
CHAPTER 4
RESULTS/FINDINGS

Chapter 3 of this dissertation developed a model to explain observed differences in support for gender integration. In this chapter, the model will be tested for two sets of respondents; infantry and non-infantry. This chapter begins with a detailed discussion of all quantitative results, supplemented by qualitative data from survey respondents’ written comments. A summary of descriptive statistics by variable will be provided, followed by a presentation of the regression. A discussion of the findings will be presented by hypothesis, as well as other significant findings that were revealed in the model.

4.1 Descriptive Statistics for Key Variables

Table 4.1 (p. 73) presents descriptive statistics for the key variables that are used in the regression model for this dissertation. The first variable shown, GI_Attitude, is the dependent variable, and was measured as a scale from 0-100, where 0 means the respondent has no support for gender integration and 100 equates to total support for gender integration. The descriptive statistics show that infantry members, on average, have a low support level of 24.62, while non infantry respondents show a more moderate level of support at 45.31. This shows that the level of support for gender integration among non-infantry respondents, which is relatively low, is nearly double that of infantry respondents. Since non infantry members do not undergo the same institutional socialization process as infantry members these initial results may reflect differences in unit culture. As these are the hypothesized factors that create resistance to gender integration, this basic descriptive statistic supports this idea. The full regression model will examine this hypothesis in much greater detail in the proceeding section.
The next variable in Table 4.1, Work_Opp_Sex, measures respondents contact with members of the opposite sex. As described in detail in Chapter 3, Level 1 represents contact at the brigade level (the most infrequent and formal level of contact) to Level 5 which represents squad level contact (the daily, personal contact). As shown in Table 4.1, infantry members, on average, have most frequent contact with females at the Battalion level (2.28), while the non-infantry members in the Brigade surveyed for this dissertation have the most contact with females at somewhere between the Company and Platoon levels (3.48). Non-infantry respondents have more frequent and personal contact with members of the opposite sex so we might expect to see a great effect for this group. This will be described in detail later in this Chapter and also in Chapter 5 in the limitations section.

While all statistically significant results will be discussed in detail in the following section, the differences between the means of the variables “Task” and “Social” are also worth mentioning. These variables measured the components of task and social cohesion (separately) and assessed respondents’ perceptions of task and social cohesion survival following gender integration. Recall from chapter 3 that task and social cohesion variables are indices created from multiple survey items. The items used to create the indices were measured with a Likert scale, ranging from 1- strongly disagree (no survival) to 7- strongly agree (cohesion survival). As discussed in detail in Chapter 3, following a factor analysis of these variables, the components were combined additively. This results in a scale for both cohesion variables with a minimum possible score of 3 (lowest possible score- no cohesion survival) to a maximum possible score of 21 (highest possible score- complete cohesion survival). As it pertains to task cohesion, non-infantry members perceive task cohesion will survive at greater levels (mean=14) relative to non-infantry (mean=11.07), while social
cohesion had the opposite result with infantry members having greater perceptions of social cohesion survival (mean=11.98 versus mean=9.97). These results will be discussed in detail in the following results section. Only task cohesion is perceived to survive following gender integration among non-infantry respondents (mean=14). Perceptions of task cohesion among infantry members (mean=11.07), as well as perceptions of social cohesion among both groups (mean=11.98 and mean=9.97) are not expected to survive following gender integration as all results are below the mean.

While a review of the descriptive statistics by variable is helpful at making some basic connections between the variables and stated hypotheses, a more detailed statistical analysis reveals which of the results are statistically significant. This dissertation uses a linear regression model to test the effects of the variables in Table 4.1 on support for gender integration. The following section provides model summary results, as well as a discussion of statistically significant results by hypothesis.

4.2 Regression Results.

This dissertation uses a basic linear regression model to examine the relationship between perceptions of organizational cultural change, unit cohesion, and male-female contact in the infantry and support/resistance for gender integration. The data used in this regression were split (i.e., using the data split file option in SPSS) to isolate infantry unit member responses from those who are not serving in infantry units. Regression results are split between infantry response (represented by a 1 in the infantry dummy variable) and non-infantry member response (represented by a 0 in the infantry dummy variable). As discussed previously, the dependent variable used in this study is support for gender integration and is measured as a final survey item that asks “Finally, overall, on a scale from 1 to 100 (1 being
Table 4.1: Descriptive Statistics for Key Variables

<table>
<thead>
<tr>
<th>Variable Names</th>
<th>GI_Attitude</th>
<th>Work_Opp_sex</th>
<th>Change_Bonding</th>
<th>Change_Hazing</th>
<th>Change_Loyalty</th>
<th>Change_NMLB</th>
<th>Change_Keeprs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infantry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>24.62</td>
<td>2.28</td>
<td>5.51</td>
<td>4.84</td>
<td>4.17</td>
<td>3.73</td>
<td>3.41</td>
</tr>
<tr>
<td>StdDv</td>
<td>32.371</td>
<td>1.114</td>
<td>1.987</td>
<td>2.246</td>
<td>2.135</td>
<td>2.286</td>
<td>2.187</td>
</tr>
<tr>
<td>Variance</td>
<td>1047.893</td>
<td>1.24</td>
<td>3.947</td>
<td>5.045</td>
<td>4.557</td>
<td>5.226</td>
<td>4.785</td>
</tr>
<tr>
<td><strong>Non Infantry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>45.31</td>
<td>3.48</td>
<td>5.22</td>
<td>4.91</td>
<td>3.64</td>
<td>3.14</td>
<td>3.01</td>
</tr>
<tr>
<td>StdDv</td>
<td>38.694</td>
<td>1.468</td>
<td>2.015</td>
<td>2.14</td>
<td>2.097</td>
<td>2.185</td>
<td>2.103</td>
</tr>
<tr>
<td>Variance</td>
<td>1497.229</td>
<td>2.156</td>
<td>4.062</td>
<td>4.58</td>
<td>4.399</td>
<td>4.776</td>
<td>4.424</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>30</td>
<td>2.59</td>
<td>5.44</td>
<td>4.86</td>
<td>4.05</td>
<td>3.59</td>
<td>3.32</td>
</tr>
<tr>
<td>StdDv</td>
<td>35.246</td>
<td>1.325</td>
<td>1.994</td>
<td>2.218</td>
<td>2.134</td>
<td>2.273</td>
<td>2.171</td>
</tr>
<tr>
<td>Variance</td>
<td>1242.261</td>
<td>1.756</td>
<td>3.977</td>
<td>4.918</td>
<td>4.556</td>
<td>5.167</td>
<td>4.712</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Names</th>
<th>Change_Physical</th>
<th>Change_Expt</th>
<th>TASK</th>
<th>SOCIAL</th>
<th>GI_Efficiency</th>
<th>GI_Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infantry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>5.21</td>
<td>4.12</td>
<td>11.07</td>
<td>11.98</td>
<td>5.26</td>
<td>5.28</td>
</tr>
<tr>
<td>StdDv</td>
<td>1.992</td>
<td>2.218</td>
<td>4.91</td>
<td>5.024</td>
<td>2.045</td>
<td>1.972</td>
</tr>
<tr>
<td><strong>Non Infantry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>4.49</td>
<td>3.45</td>
<td>14</td>
<td>9.97</td>
<td>5.28</td>
<td>5.42</td>
</tr>
<tr>
<td>StdDv</td>
<td>2.102</td>
<td>2.095</td>
<td>4.623</td>
<td>4.539</td>
<td>1.869</td>
<td>1.752</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>5.04</td>
<td>3.96</td>
<td>11.79</td>
<td>11.49</td>
<td>5.26</td>
<td>5.32</td>
</tr>
<tr>
<td>StdDv</td>
<td>2.04</td>
<td>2.204</td>
<td>4.995</td>
<td>4.978</td>
<td>2.001</td>
<td>1.919</td>
</tr>
<tr>
<td>Variance</td>
<td>4.16</td>
<td>4.86</td>
<td>24.954</td>
<td>24.78</td>
<td>4.003</td>
<td>3.681</td>
</tr>
</tbody>
</table>
no support and 100 being total support) what is your level of support for integrating women into combat units”? Respondents used a drop-down box to assign the value corresponding to their level of support. The following independent variables (discussed in detail in Chapter 3) are used as predictors of support for gender integration in this regression model: Gender, Education, Rank, Children, Marital, Siblings, Change_Bonding, Change_Hazing, Change_Expertise, Change_NMLB, Change_Loyalty, Change_Physical, Change_Keepers, Work_Opp_sex, SOCIAL, TASK, GI_Efficiency, and GI_Effective. The results of the model summary are provided in Table 4.1 below. The non-infantry model explains almost 60 percent of the variance in the dependent variable while the infantry model explains 40 percent.

**Table 4.2: Regression Model Summary**

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Infantry</td>
<td>0</td>
<td>.777&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.603</td>
<td>.453</td>
<td>28.679</td>
</tr>
<tr>
<td>Infantry</td>
<td>1</td>
<td>.633&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.401</td>
<td>.338</td>
<td>26.249</td>
</tr>
</tbody>
</table>

**Regression Results**

The results of the regression analyses are presented in Tables 4.3 (p. 77) and 4.4 (p. 78). The first reports results for non-infantry respondents and the second for infantry respondents. Looking at the model fit statistics, the adjusted R² values indicate that both models account for a substantial portion of the observed variance in support for gender integration. Specifically, the adjusted R² value of .453 indicates that the non-infantry model explains almost 50 percent of the observed variance in support for gender integration, which the infantry model explains close to 40 percent.
4.3 Summary of statistically significant findings.

As can be seen in tables 4.3 and 4.4, support for gender integration in Army infantry and non-infantry units can be explained by perceptions in changes to male bonding, one of the key factors in Army infantry culture. The variable for unit task cohesion survival was also significant in both models. In the non-infantry model, experience working with members of the opposite sex is also significant in predicting support for gender integration. In the infantry model, whether the respondent has children or not, their rank, their perceptions to changes in the concept of “No Man Left Behind” and the effects that gender integration would have on unit efficiency were all also significant. In the infantry model, the standardized coefficient for efficiency shows that it is the strongest predictor in determining support for gender integration(standardized beta coefficient of .444). In the non-infantry model, perceptions of change in male bonding has the strongest effect with a standardized beta coefficient of -.306. The following discussion will explain each of these significant results by their corresponding hypotheses, as described in Chapter 2.

4.4 Discussion of Findings by Hypothesis.

4.4.1 Hypothesis 1: Perceived threats to organizational culture and norms will be negatively related to support for gender integration.

As discussed in chapter 2, institutional socialization processes are key to establishing the culture of infantry units. The cultural norms that are established and perpetuated through the socialization process include male bonding, hazing, loyalty, the concept of no man left behind, keepers of the warrior ethos, mental and physical toughness and expertise in task. Perceived changes to these cultural norms are being used to test Hypothesis 1. There were
several questions on the survey that asked about perceptions of change in the factors that make up the culture of the infantry on a macro level. The question asked was “How will the following norms change if infantry/combat units are fully integrated?” The questions were answered on a 7-point Likert scale ranging from 1- Won’t Change at all; 4- Neutral; 7- Will Change Significantly. The seven factors being used to represent the organizational norms in the infantry were represented by the following variables in the model: Change_Bonding, Change_Hazing, Change_Loyalty, Change_NMLB, Change_Keepers, Change_Physical and Change_Expertise. Out of these 7 variables, only Change_Bonding was statistically significant. For non-infantry members, this variable was significant with a p value of .011 level with a coefficient of -5.802. This means that a one unit increase in perceptions to change in male bonding is associated with an almost 6 percent decrease in support for gender integration. In comparison to non-infantry, results for infantry are statistically significant (p=.017) but the substantive impact appears to be less with a regression coefficient of -3.107. This means that a 1 unit increase in perceptions to changes in male bonding is associated with just over a 3 percent decrease in support for gender integration among infantry members. In addition, the standardized beta coefficients for non-infantry and infantry response were -.302 and -.173, respectively. These results are consistent with the literature on infantry culture, which dates back to the 1940’s. Specifically, male bonding is a critical component of the culture of the infantry unit. These results show that perceived threats to male bonding attributed to gender integration will significantly decrease support for gender integration; by almost 6 percent for non-infantry members and 2.5 percent for infantry members.
Table 4.3: Non-Infantry Response Regression Results

<table>
<thead>
<tr>
<th>Non-Infantry Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B Lower Bound</th>
<th>95.0% Confidence Interval for B Upper Bound</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>t</td>
<td>Sig.</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-34.181</td>
<td>42.757</td>
<td>-7.799</td>
<td>.428</td>
<td>-120.061</td>
</tr>
<tr>
<td>Marital</td>
<td>3.527</td>
<td>4.569</td>
<td>.073</td>
<td>.444</td>
<td>-5.650</td>
</tr>
<tr>
<td>Children</td>
<td>2.181</td>
<td>3.534</td>
<td>.065</td>
<td>.540</td>
<td>-4.916</td>
</tr>
<tr>
<td>Education</td>
<td>-4.119</td>
<td>5.188</td>
<td>-.143</td>
<td>.431</td>
<td>-14.539</td>
</tr>
<tr>
<td>Work Opp sex</td>
<td>5.493</td>
<td>2.838</td>
<td>.204</td>
<td>1.935</td>
<td>-2.08</td>
</tr>
<tr>
<td>Change Bonding</td>
<td>-5.802</td>
<td>2.186</td>
<td>-3.06</td>
<td>.011</td>
<td>-10.193</td>
</tr>
<tr>
<td>Change Hazing</td>
<td>2.606</td>
<td>1.854</td>
<td>.146</td>
<td>1.406</td>
<td>-1.117</td>
</tr>
<tr>
<td>Change Loyalty</td>
<td>.740</td>
<td>3.088</td>
<td>.039</td>
<td>.812</td>
<td>-5.463</td>
</tr>
<tr>
<td>Change NMLB</td>
<td>1.051</td>
<td>4.068</td>
<td>.059</td>
<td>.797</td>
<td>-7.119</td>
</tr>
<tr>
<td>Change Keepers</td>
<td>.615</td>
<td>4.934</td>
<td>.033</td>
<td>.901</td>
<td>-9.296</td>
</tr>
<tr>
<td>Change Physical</td>
<td>1.155</td>
<td>2.573</td>
<td>.063</td>
<td>.655</td>
<td>-4.013</td>
</tr>
<tr>
<td>Change Expertise</td>
<td>-2.671</td>
<td>2.890</td>
<td>-1.41</td>
<td>-.924</td>
<td>-8.476</td>
</tr>
<tr>
<td>TASK</td>
<td>1.938</td>
<td>1.062</td>
<td>.230</td>
<td>.074</td>
<td>-1.195</td>
</tr>
<tr>
<td>SOCIAL</td>
<td>-.101</td>
<td>1.003</td>
<td>-.012</td>
<td>.920</td>
<td>-2.115</td>
</tr>
<tr>
<td>Efficiency New</td>
<td>5.889</td>
<td>4.244</td>
<td>.278</td>
<td>1.388</td>
<td>-2.635</td>
</tr>
<tr>
<td>Effectiveness New</td>
<td>5.241</td>
<td>4.988</td>
<td>.228</td>
<td>1.051</td>
<td>-4.778</td>
</tr>
</tbody>
</table>
Table 4.4: Infantry Response Regression Results

<table>
<thead>
<tr>
<th>Infantry Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95.0% Confidence Interval for B</th>
<th>95.0% Confidence Interval for B</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std.Error</td>
<td></td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>B</td>
<td>Std. Error</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital</td>
<td>-0.445</td>
<td>3.447</td>
<td>-0.009</td>
<td>-1.29</td>
<td>0.897</td>
<td>-7.249</td>
<td>6.358</td>
</tr>
<tr>
<td>Children</td>
<td>4.672</td>
<td>2.062</td>
<td>0.151</td>
<td>2.265</td>
<td>0.025</td>
<td>0.601</td>
<td>8.742</td>
</tr>
<tr>
<td>Siblings</td>
<td>2.980</td>
<td>2.236</td>
<td>0.081</td>
<td>1.333</td>
<td>0.184</td>
<td>-1.434</td>
<td>7.394</td>
</tr>
<tr>
<td>Education</td>
<td>-1.142</td>
<td>2.185</td>
<td>-0.005</td>
<td>-0.065</td>
<td>0.948</td>
<td>-4.454</td>
<td>4.170</td>
</tr>
<tr>
<td>Rank</td>
<td>4.667</td>
<td>2.704</td>
<td>0.133</td>
<td>1.726</td>
<td>0.086</td>
<td>-0.671</td>
<td>10.004</td>
</tr>
<tr>
<td>Work Opp sex</td>
<td>-0.617</td>
<td>1.814</td>
<td>-0.022</td>
<td>-0.340</td>
<td>0.734</td>
<td>-4.197</td>
<td>2.962</td>
</tr>
<tr>
<td>Deployed w Opp</td>
<td>-2.143</td>
<td>4.961</td>
<td>-0.028</td>
<td>-0.432</td>
<td>0.666</td>
<td>-11.936</td>
<td>7.650</td>
</tr>
<tr>
<td>Change Bonding</td>
<td>-3.107</td>
<td>1.285</td>
<td>-0.173</td>
<td>-2.418</td>
<td>0.017</td>
<td>-5.642</td>
<td>-1.730</td>
</tr>
<tr>
<td>Change Hazing</td>
<td>-0.065</td>
<td>0.990</td>
<td>-0.004</td>
<td>-0.065</td>
<td>0.948</td>
<td>-2.020</td>
<td>1.890</td>
</tr>
<tr>
<td>Change Loyalty</td>
<td>-0.804</td>
<td>1.332</td>
<td>-0.054</td>
<td>-0.603</td>
<td>0.547</td>
<td>-3.433</td>
<td>1.826</td>
</tr>
<tr>
<td>Change NMLB</td>
<td>3.047</td>
<td>1.516</td>
<td>0.220</td>
<td>2.010</td>
<td>0.046</td>
<td>0.055</td>
<td>6.039</td>
</tr>
<tr>
<td>Change Keepers</td>
<td>-1.416</td>
<td>1.615</td>
<td>-0.097</td>
<td>-0.877</td>
<td>0.382</td>
<td>-4.603</td>
<td>1.771</td>
</tr>
<tr>
<td>Change Physical</td>
<td>-0.852</td>
<td>1.477</td>
<td>-0.050</td>
<td>-0.577</td>
<td>0.565</td>
<td>-3.766</td>
<td>2.063</td>
</tr>
<tr>
<td>Change Expertise</td>
<td>-1.952</td>
<td>1.304</td>
<td>-0.137</td>
<td>-1.497</td>
<td>0.136</td>
<td>-4.526</td>
<td>0.623</td>
</tr>
<tr>
<td>TASK</td>
<td>0.857</td>
<td>0.480</td>
<td>0.129</td>
<td>1.788</td>
<td>0.076</td>
<td>-0.089</td>
<td>1.804</td>
</tr>
<tr>
<td>SOCIAL</td>
<td>-0.379</td>
<td>0.469</td>
<td>-0.059</td>
<td>-0.808</td>
<td>0.420</td>
<td>-1.305</td>
<td>0.547</td>
</tr>
<tr>
<td>Efficiency New</td>
<td>7.410</td>
<td>1.932</td>
<td>0.444</td>
<td>3.836</td>
<td>0.000</td>
<td>3.597</td>
<td>11.222</td>
</tr>
<tr>
<td>Effectiveness New</td>
<td>-0.965</td>
<td>2.088</td>
<td>-0.054</td>
<td>-0.462</td>
<td>0.645</td>
<td>-5.086</td>
<td>3.156</td>
</tr>
</tbody>
</table>
The other cultural change variable that was statistically significant in this model was the concept of “No Man Left Behind” and how perceptions of changes to this concept will be impacted by gender integration. This variable was not significant in the non-infantry model, but in the infantry model it was significant (b=3.05, p<.05). This result indicates that a 1 unit increase in perceived change to the “No Man Left Behind” norm is associated with a 3 point decrease in support for gender integration.

As was discussed in the literature, the Army Infantry employs an institutional socialization process that is meant to preserve and perpetuate the existing culture that has long been thought to be necessary for creating a force of men who are bound to each other and willing to fight and die for that bond. Male bonding is at the heart of this cultural creation. But the literature also indicates, “while this process is helpful in creating and preserving culture, it becomes problematic when the culture of the organization is facing change” (Kondra and Hurst, 2008; Rick, 2013). This tension manifests itself in resistance to change. For example, one survey respondent addressed his concerns regarding culture and the perceived necessity for infantry men to perpetuate the culture when he states

“I feel the biggest conflict will be culture. Infantryman (sic) is vulgar and aggressive, but it’s a necessary personality for ours. it would hurt morale and cohesion if we feel we have to tip toe around female soldiers because they make take things the wrong way or assume are intentions have ulterior motives” (Anonymous Survey Respondent).

4.4.2 Hypothesis 2: Unit cohesion is directly related to support for gender integration.

Hypothesis 2a: Because task cohesion is the “most important determinant of group performance” task cohesion will be more important than social cohesion in determining attitudes towards gender integration.
Hypothesis 2b: Because unit members do not have to like each other to get the job done, social cohesion will be less important than task cohesion in determining support for gender integration.

As described in Chapter 3, Ahronson and Cameron (2007) adapted the Group Environment Questionnaire (GEQ), created by Carron, Widmeyer and Brawley (1985) for use in sports teams, for a military sample in an attempt to evaluate how group cohesion relates to job performance, job satisfaction and psychological distress. This dissertation draws upon Ahronson and Cameron’s (2007) adapted version, altering it further to ask specifically about perceptions regarding the various components making up social and task cohesion should infantry units be integrated. These items together represent perceptions of task and social cohesion “survival” following gender integration. As can be seen in the regression results table 4.3 and 4.4 above, perceptions of task cohesion survival were significant in predicting support for gender integration among both non-infantry (p value .074) and infantry members (p value .067). In contrast, the variable measuring perceptions of social cohesion following gender integration was not significant in either model.

The studies cited by MacCoun and Hix in 2010 (Mullen and Cooper, 1994; Beal et al. 2003; Oliver et al, 1999) consistently found that “task cohesion is the most important determinant of group performance” (2010, p. 141) and it is the shared commitment to task, rather than social, cohesion that accounts for the variance in the relationship between cohesion and performance. The results of this dissertation show that when non-infantry and infantry members respectively perceive that the elements that make up task cohesion will remain intact following gender integration, they are more likely to support gender integration. For non-infantry members, for each one unit increase in task cohesion
“survival,” support for gender integration increases by almost 2 percent (b= 1.938). And for infantry members, for each one unit increase in task cohesion “survival,” support for gender integration increases by just under one percent (b=.857). The relationship between task cohesion and attitudes toward gender integration is positive in both infantry and non-infantry respondents. Respondents appear to be able to make the distinction that you don’t have to like each other to get the job done (King, 2013). Respondents seem to share the concern that problems will arise when it comes to elements of social cohesion; hanging out together after work, for example, as they perceive increases in sexual harassment will become problematic:

“There will be a high number of SHARP related complaint that will alter the overall atmosphere and coping mechanisms that infantry units use” (Anonymous Survey Respondent)

“Work will suck more cause we can't joke around and have fun we will have to watch what we say/ do because they might SHARP us” (Anonymous Survey Respondent)

While not a specific question in the survey related to task and social cohesion, a look at the write in survey comments reveals an overwhelming concern regarding problems with sexual relationships and sexual assault complaints, both things that would affect social cohesion rather than task. Koeszgi et al. noted that “the fear of losing group cohesion and military effectiveness is an argument cited against the inclusion of women or homosexuals to combat, despite the fact that the effect of diversity on task cohesion and performance is widely challenged. The inclusion of women is thought to spark sexual arousal which could endanger social cohesion” (2014, p. 231). The following comments reflect such concerns:

- “The cases of sexual assault and break down in morale will be detrimental.

  Relationships are going to form then there is a huge conflict of interest, then if it
doesn't work there will be a breakdown in cohesion” (Anonymous Survey Respondent).

- “If women are aloud (sic) in the infantry it will tear platoons apart fighting over the female or if she sleeps with more than one member of the platoon destroying unit cohesion” (Anonymous Survey Respondent).

- “Females and males are biologically designed to have sex and for the most part possess the innate desire to seek out members of the opposite sex for that purpose. Due to this fact of nature, when a female is introduced to an all male combat arms unit, their presence will cause an unnecessary distraction at best and a catastrophic destruction of unit cohesion at worst” (Anonymous Survey Respondent).

These comments show the concerns that members express regarding the social aspects of cohesion. While not significant in the model, it is worth noting that among infantry members, who are socialized into this unique culture, the relationship between social cohesion “survival” and gender integration is negative. This conflicts sharply with the significant and positive relationship between task cohesion “survival” and support for gender integration.

4.4.3 Hypothesis 3: Support for gender integration will be related to perceived effects on performance.

Hypothesis 3a: Perceived unit efficiency will be more important than perceived unit effectiveness in determining support for gender integration.

As discussed in Chapter 2, the literature shows that cohesion contributes to the efficiency but not necessarily the effectiveness in achieving outcomes (Beal et al., 2003). As
can be seen in table 4.3 and 4.4 above, perceptions of increases in unit efficiency attributed to gender integration were significantly related to support for gender integration in the infantry model (p< .000, b= 7.41), but not in the non-infantry model. Perceptions of increases to unit effectiveness were not significant in either model. In fact, perceptions of how gender integration will impact unit efficiency was the strongest predictor in the infantry model, with a standardized beta coefficient of .444. This result shows that as perceptions of unit efficiency increase, support for gender integration increases. (This Likert scale was 1-7 points, from Strongly Disagree (1) to Strongly Agree (7)) For each 1 unit increase in perceptions of unit efficiency, support for gender integration in infantry units increases by just over 7 percent (regression coefficient of 7.41). While this phenomenon might seem intuitive, it seems that this result would also follow in the non-infantry response model; however, these results were non-significant. A review of the descriptive statistics, however, shows that there is general disagreement (between infantry and non-infantry) in the fact that gender integration will increase unit efficiency and/or effectiveness. (mean=5.2) While the results were not significant, the relationship between perceptions of unit effectiveness and gender integration were negative in the infantry model, indicating that members feel that unit effectiveness will decrease following gender integration. Besides seeing these results represented quantitatively, a qualitative view of how infantry members view unit effectiveness following gender integration can also be seen in the survey’s written responses. One survey responded commented that

“After being in multiple units that have both female and male and male only rosters, I can honestly say that working with women will lower the physical effectiveness of the unit. Morale will sink lower than it already is. Working with females is very hard. They are very sensitive and males are constantly on guard about being misinterpreted as harassing in nature. Basically, without giving a long winded response, we are not comfortable working with them. The army has an overly sensitive sharp program that
scares men and females will not do well in this lifestyle. (It is not a job, it is a lifestyle)” (Anonymous Survey Respondent)

Or another respondent who commented that:

There are no positive benefits to integrating women into combat units except that the politicians will have another feather in their caps for increasing "fairness." Life is never going to be fair, men and women are not the same, and women should not serve in the Infantry or Armor or selected other jobs such as Special Forces. Women are in no way inferior to men, but they are physically different, and to open jobs to them that they are physically not able to do in the name of fairness is foolish. Science tells us again and again that women tend to not be able to carry as much, they cannot carry it as far, and they tend to suffer stress fractures and other injuries at a much higher rate than men. However, in the face of good science, we as a nation are making a decision that women and men are the same and can do the same things. Everyone either knows this is a lie or they are intentionally ignorant of the truth. Women will decrease unit cohesion and they will decrease unit effectiveness. I base this assertion on the experience of friends of mine who deployed with both only-male and gender integrated units, on the recent Marine Corps study that determined integrating women into the Infantry was a bad idea, and on common sense. Women definitely have a place in the Army and there are many jobs that they are more than qualified for, but Infantry and Armor jobs are not among them.

I am okay with women being integrated into combat arms, they should be treated the same "equal rights, equal fights". Furthermore I wouldn't mind having some good looking and smelling girls around when we deploy or back here in the office. I would definitely motivate the Troopers to have some good looking girls around, maybe some of the Troopers would stop acting like girls themselves.

Meet standards and expectations of the unit. That is all. (Anonymous Survey Respondent)

These comments speak directly to perceived detrimental effects on performance associated with gender integration and seem to get at the issue of how perceived efficiency and effectiveness reductions due to gender integration will have negative impacts on support for gender integration. Respondents seemed to discuss unit effectiveness as a result of physical standards, and even though this was not mentioned in the survey prompt, the
literature identified this as a potential concern for infantry members regarding gender integration. This very important topic will be discussed in greater detail later in this chapter.

**4.4.4 Hypothesis 4: More frequent interpersonal workplace contact between male and female soldiers will be associated with more support for gender integration.**

To measure a respondent’s amount of contact with women, a survey question was created to ask about the lowest level at which the respondent has contact with women at work. As mentioned in more detail previously, the Brigade level (less frequent contact) is represented as a 1, while Squad Level contact (most frequent and personal contact) is represented as a 5. The variable Work_Opp_Sex was included in the regression model to test the contact hypothesis. This variable was not significant for infantry members, but for non-infantry members, it was significant (b= 5.49; p=.059). This result shows that for each 1 unit increase in contact (trending towards more frequent and intimate contact represented by the 5- or squad level contact), support for gender integration increases by just over 5 percent. It would make sense, intuitively, that this result would be significant only for non-infantry members, as infantry members do not currently have opportunities to work with females at the more personal, frequent levels, since at the time of the survey, gender integration was only just beginning. This could mean that the results for the infantry are an artifact related to the timing of the survey, which coincided with the end of the combat exclusion policy. (This possibility will be discussed in greater detail in Chapter 5 as potential limitations are addressed). Another possibility is that because, beginning with basic training in the military, “performance criteria adhere to male norms, and denigration of femininity is institutionalized in rituals and rites. Moreover, male peer support condones severe violence against women” (Koeszegi et al. 2014, p. 233). Koeszegi et al. (2014) note that systematic aggression in the
form of bullying is a basis of resistance to the integration of women, and women in training centers and combat units will be exposed to more forms aggressive acts as these units share “hypermasculine values concomitant with resistance against the integration of women and sexual harassment have already been demonstrated” (2014, p. 233). Men in non-infantry environments will not only have more exposure to women on more personal levels and frequency of contact, but they have also not undergone the same socialization described above (in infantry units) that is hostile to women.

4.5 Discussion: Other Significant Findings

The OLS results for the infantry model yielded a number of significant results in addition to these for the key variables of interest discussed above. Whether infantry respondents have children or not was significant with a p value of .025 and coefficient of 4.672, which indicates that respondents with children have higher levels of reported support for gender integration. This is not a theory being studied in this dissertation but the result is reported as a matter of interest and potential area for future study. Also, the control variable “Rank” was significant with a p value of .086 and coefficient of 4.667, which indicates that respondents who have attained higher ranks are associated with stronger support for gender integration. This result could indicate that members of higher ranks, because they have more time in service, have more experience (possibly more experience working with the opposite sex) and are also further removed from the hypermasculine culture that is associated with more hostility and aggression towards women.

A brief review of the written comments where respondents expressed their personal opinions of gender integration in combat units provides an interesting look into the thinking
of the male infantry (and even non-infantry) soldiers who completed this assessment. The researcher in this dissertation chose specifically not to ask about physical standards, with the exception of the variable Changes_Physical which asked about changes in mental and physical toughness, because as mentioned in the introduction, most studies conducted thus far on the topic of gender integration in infantry units have focused solely on physical standards. Not wanting respondents to focus solely on this heavily-studied phenomenon, the topic was omitted from the survey intentionally. However, a review of the written comments reveals that this topic was at the forefront of respondents’ minds, as it was mentioned more than any other topic of concern. Specifically, the terms “physical” and “standard” were mentioned a combined 154 times, while other concepts (SHARP complaints- 15 times, Effectiveness- 14 times and Culture- only 4 times) were mentioned much less frequently as issues of concern.

A number of the written comments suggest concern among male infantry respondents about female infantry members ability to meet the same physical standards as men. These concerns, in turn, were tied to performance, that is, to unit mission efficiency and effectiveness. For example, one respondent noted “There will be a lot of females that meet Army standards yet inhibit their units combat effectiveness because they are just physically weaker than men…” (Anonymous survey respondent). Other survey respondents expressed similar views:

- “Integrating women into the infantry will severely hurt our combat effectiveness. Women are not physically built for a job as rigorous as this. They lack the strength to perform these tasks and require more hygienic allowances. I'm not saying that there aren't women who could do this, there may be a few. But opening combat arms to women WILL lower the standard”
- “WHY would you accept certain lower efficiency tolerances in a combat unit? Do people not understand that War is BRUTAL, DISGUSTING, and GRUESOME? Female integration into our combat units will cause LIVES. It's becoming apparent
that the general population is so far detached from reality, when they don't want to "hurt" peoples feelings and will accept greater FATALITIES and a loss of our military's effectiveness”

• “WHY would you accept certain lower efficiency tolerances in a combat unit? Do people not understand that War is BRUTAL, DISGUSTING, and GRUESOME? Female integration into our combat units will cause LIVES. It's becoming apparent that the general population is so far detached from reality, when they don't want to "hurt" peoples feelings and will accept greater FATALITIES and a loss of our military's effectiveness”

• “Many infantryman will not be able to stay as focused on the mission and gender integration will gradually lower the physical standards with our combat arms therefore lowering our effectiveness”

4.6 Summary Table

The previous section in this chapter provided a detailed discussion of regression results by hypothesis. It contained regression coefficients and p values for each key variable and its hypothesized relationship to the dependent variable: attitudes regarding gender integration. The following table 4.5 (p. 90) presents the summary of findings by hypothesis and key variables. Unlike the previous section, this table simply presents each hypothesized relationship, the key variables being tested for that hypothesis, and whether the results were significant or not.

4.7 Conclusion.

This chapter has presented results of the regression model assessing the factors that influence support for gender integration. The discussion of the results was arranged according to the main research hypothesis. While many of the predictors entered into the model were not significant at predicting support for gender integration, several stood out in the literature as being important to infantry unit culture and behavior (e.g., male bonding, unit efficiency, task cohesion and working with the opposite sex) were found to be
significant predictors of support/resistance for gender integration in Army infantry units. These quantitative results, combined with comments from infantry unit soldiers, show the importance of these factors on predicting whether members of combat units will support females being integrated into their ranks, as well the types of issues infantry unit leadership might encounter during the gender integration process. The comments are particularly insightful in this area.

The final chapter of this discussion will expand the discussion by considering implications that the findings will have for gender integration in the Army infantry. The chapter will also discuss important limitations of this study and posit some directions for future research.
Table 4.5: Summary of Findings

<table>
<thead>
<tr>
<th>Category of Variable</th>
<th>Hypothesis</th>
<th>Non-Infantry Support</th>
<th>Infantry Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male Bonding</td>
<td>Hypothesis 1: Perceived threats to organizational culture and norms will be negatively related to support for gender integration. In particular, because key institutional socialization processes are meant to increase male bonding, greater perceptions of change in male bonding due to gender integration will be associated with more negative views of gender integration.</td>
<td>Supported</td>
<td>Supported</td>
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<tr>
<td>Unit Cohesion Variables</td>
<td>Hypothesis 2: Unit cohesion is directly related to support for gender integration. Hyperothesis 2: Because task cohesion is the “most important determinant of group performance” task cohesion will be more important than social cohesion in determining attitudes towards gender integration.</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Task Cohesion</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Social Cohesion</td>
<td>Hypothesis 2: Because unit members do not have to like each other to get the job done, social cohesion will not be important in determining support for gender integration.</td>
<td>Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Performance Variables</td>
<td>Hypothesis 3: Support for gender integration will be related to perceived effects on performance.</td>
<td>Not Supported</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Hypothesis 3: Perceived unit efficiency will be more important than perceived unit effectiveness in determining support for gender integration.</td>
<td>Not Supported</td>
<td>Supported</td>
</tr>
<tr>
<td>Efficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Hypotheses</td>
<td>Hypothesis 4: For infantry unit members who have previously had more frequent and personal contact with women at work, attitudes towards gender integration will be more favorable than for those respondents that have had less frequent and intimate contact with women at work.</td>
<td>Supported</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>
CHAPTER 5
IMPLICATIONS AND LIMITATIONS

5.1 Introduction.

This dissertation has provided the groundwork for explaining why gender integration in Army combat units is a worthy topic for discussion and exploration. This included a review of the scholarly literature and theoretical concepts that support the framework developed for this dissertation. As presented in chapter 2, this dissertation drew upon the literature relevant to gender integration to frame a series of hypotheses. The concepts were operationalized in chapter 3, where the research methodology was also presented. Chapter 4 predicted results and provided findings presented by the applicable research hypothesis. This chapter will provide discussion of both the theoretical implications for future research, and practical implications for Army leadership that will be important as they proceed forward with gender integration in their infantry units. Finally, the chapter concludes with a discussion of the dissertation’s limitations and potential avenues for future study of gender integration.

5.2 Implications for Gender Integration Research and Practice

The results of this dissertation have a number of important implications for both research and practical purposes. The discussion in this section is divided into those two sections: implications for research and practical implications. The section on research implications will focus on how this dissertation provides an important continuation into the scholarly discussion of gender integration in the Army infantry and fills a gap that this missing in the existing literature. The practical implications section will focus on the role that Army leadership will play in implementing gender integration policy and how this
dissertation can inform them of specific cultural factors that need to be considered in this process.

5.2.1 Research Implications

*Individual Readiness for Change.*

Chapter 2 introduced the concept of individual readiness for change. The work of Choi and Ruona (2011) was discussed in detail, as they built on the work of Golembiewski, Lewin and Kotter, among others, and the idea that the role of the individual is critical to successful organizational development.

Since this dissertation examines individual attitudes regarding support for gender integration, and the factors that influence those attitudes, the results from this dissertation contribute to the existing scholarly literature on individual readiness for change. Individual readiness for change is said to be “change in the individual organizational member’s behavior is at the core of organizational change” (Porras & Robertson, 1992, p. 724, as cited in Choi and Ruona, 2011). According to the researchers, organizations only change and act through their members, and successful change will persist over the long term only when individuals alter their on-the-job behaviors in appropriate ways (George & Jones, 2001; Porras & Robertson, 1992, as cited in Choi and Ruona, 2011). Choi and Ruona also make the important point that “many change efforts fail because change leaders often underestimate the central role individuals play in the change process” (2011, p. 49).

This dissertation contributes to the notion made by Choi and Ruona that “...some recent research studies have also shown that individuals’ attitudes toward a change initiative influence their behavioral support for it” (2011, p.49). This dissertation examined individuals’ attitudes towards gender integration, (the dependent variable in this dissertation)
and has shown through statistical results that individual attitudes about perceived cultural changes are important to support for gender integration. This dissertation has contributed to this existing literature by showing that individual attitudes are important to organizational change efforts. It also highlights the need for future study of the role that individual attitudes towards perceived culture change play in the organization, especially in a military context.

In addition to the individuals’ attitude about the change itself, Choi and Ruona also examined the degree that “individual readiness for organizational change involves an individual’s evaluation about the individual and organizational capacity for making a successful change, the need for a change, and the benefits the organization and its members may gain from a change” (2011, p. 51). This dissertation contributes to this literature by showing how infantry members question whether there will be any benefits from gender integration and the assertions that gender integration is merely a product of political influence and not based on perceived increases in effectiveness or efficiency. These attitudes are reflected in their written responses.

While future study will need to take place following full gender integration implementation to assess whether these ideas were present in the implementation efforts, the attitudes about gender integration (mean level of support for infantry=24, and for non-infantry=45) are useful when compared to the written comments (perceived impacts on effectiveness/efficiency, worries about change to existing culture, fears of increased sexual assault complaints) and how individual attitudes are critical in organizational change efforts.
**Changes to Existing Culture.**

At the writing of this dissertation, gender integration is just starting to occur. Assessing whether implementation is successful will most likely not take place for several years. However, this dissertation offers several contributions for both literature and practice that can be useful during implementation efforts. As this dissertation assesses perceptions of cultural change, it is critical to note the existing literature that states “where strategies for change violate cultural norms, change will most likely not occur” (Eckel et al., 1998; Schein, 1985).

Understanding if infantry units place a high value on that culture, and if so, why, and whether a change in culture is actually detrimental to unit cohesion will need to take place before women can integrate into infantry units (King, 2013). This dissertation shows that infantry and non-infantry members both place a high value on culture (male bonding, in particular) and that perceptions of change to this cultural norm have negative effects on support for gender integration.

Drawing on the literature in chapter 2, Rick (2013) identifies a number of reasons that organizational members may resist changes to organizational culture. While this dissertation did not ask these questions specifically, a review of the written comments offers insights into which of these reasons for resistance may be most relevant to infantry members. Rick states that one potential reason for resistance is that the member perceives that “there isn’t any real need for the change”. The following written survey comments exemplify this type of resistance:

- “I feel like it is a poor move based on political ambitions with no real facts about the outcome”
- “I think it is a left wing bait for female votes”
- “There are no positive benefits to integrating women into combat units except that the politicians will have another feather in their caps for increasing ‘fairness’”
• “why are we trying to complicate and "fix" a non-broken system. It’s a social experiment”

It can also be argued that comments could be examples of another reason for resistance provided by Rick (2013)- “They believe those responsible for the change can’t be trusted.” The other reasons for resistance to change posited by Rick (2013)- “The change is going to make it harder for them to meet their needs,” “the risks seem to outweigh the benefits,” “they believe the change will fail,” and the “the change is inconsistent with their values” are all shown in the comments that were described in the results section of chapter 4. Those comments (which will not be repeated here) discuss the role of changes to existing culture and the perceived decreases to unit effectiveness. This dissertation’s findings support these potential reasons for resistance to organizational change exhibited in the existing literature.

Unit Cohesion and Hypermasculine Behavior.

In chapter 2, the concept of unit cohesion was discussed in great detail. Schaefer et al. discuss the fact that the impact of integrating women on the cohesion of male groups depends on the culture of that group. They found that “the impact of integration on cohesion varied by the degree of hypermasculine culture exhibited by the unit” (Schaefer et al., 2015, p. 22). Rosen, Knudson and Fancher (2003) also found that hypermasculinity was associated with more cohesion in all-male units and less cohesion in mixed-gender units. At the same time, Schaefer et al. assert that “the hypermasculine environment engendered in many military units is necessary for unit cohesion in combat units- that masculinity is an important element in holding the unit together and making it a well-functioning team” (2015, p. 23). These assertions do not distinguish between task or social cohesion. However, the results from this dissertation provide that perceptions of task cohesion “survival” are better predictors of support for gender integration that perceptions of social cohesion “survival.”
This dissertation shows that respondents place a high value on the culture of the infantry, and also to that of perceptions of task cohesion “survival” but since, up until recently, infantry units have been all male, more study is necessary to examine whether hypermasculine behavior or any other cultural norm (male bonding) is essential to the creation of unit cohesion in infantry units.

Institutional socialization.

With the exception of the literature included in Chapter 2 that discusses the effect that institutional socialization has on organizational change (Koeszegi et al, 2014), there is a deficiency in the literature pertaining to how perceptions of cultural change in an organization will affect support for the recommended organizational change. The organizational change literature focuses on types of culture in organizations and the degree to which they are receptive to change. This dissertation fills an important gap in the literature that examines how organizations that institutionalize their culture may face problems later when cultural changes may take place. This dissertation has built upon the literature that states that the institutional socialization processes creates a culture that becomes engrained in its members (Winslow, 1999; Koeszegi et all, 2014; Schein, 1990) and advances it by empirically examining how perceived changes to the established culture will impact support or resistance towards those organizational changes.

Combating resistance to gender integration in combat roles will take an in depth understanding of why resistance takes place to begin with. This study hypothesized that the basis for resistance stems from perceived deviation from cultural norms. Understanding if infantry units place a high value on that culture, and if so, why, and whether a change in culture is actually detrimental to unit cohesion will need to take place before women can
integrate into infantry units (King, 2013). There are already organizational interventions present in the United States military, but, while effective to some extent, they are limited in their ability to transform the gender hierarchy in the workplace. These include: (1) promotion of women’s assimilation into male culture, or enabling women to acquire skills and training so that they perform on par with men; and (2) policy interventions such as affirmative action or expansion of female role models and mentoring. These particular organizational interventions do not challenge the sources of power that derive from cultural beliefs regarding masculinity, thus they continue to reinforce sex stereotypes and generate a backlash from men (Nemoto, 2013). These interventions are also not effective when dealing specifically with military infantry units where the policy has already been reversed and resistance is still being displayed. Military leadership will need to fully understand the organizational culture of the infantry in order to determine the best way to facilitate change in the institutional socialization process.

The literature discussed in chapter 2 provided that the culture of the infantry is initiated and perpetuated through the institutional socialization process. The socialization process for the infantry depersonalizes violence and separates the infantrymen from the old morals and values that they knew as civilians, as this is necessary for combat. This process, however, also fosters aggression and violence towards women, while at the same time, promoting male bonding and unit cohesion among the men. The literature also examines how once infantry culture is established in this manner, it becomes very hard to change. Because of the new value systems created, and the justification that the existing culture is necessary in order to be effective during battle, any change to this culture will be resisted.
During the institutional socialization process, the military members’ “civilian identity, with its built-in restraints is eradicated, or at least undermined and set aside in favor of the warrior identity and its central focus upon killing.” (Herbert, 1993, p. x) Infantry training, in particular, trains infantrymen for combat by promoting traditional ideas of masculinity. The training also encourages individuals to disregard their bodies’ natural reactions to run from fear, feel pain or show emotions (Fox and Pease, 2012). This process helps to create a sense of purpose in infantrymen, but it becomes problematic when the ideals and values are potentially facing change. This dissertation has shown through statistical analysis that infantry men place a high value on the culture that they have learned during the socialization process. As seen in the results section, infantry men show a 6% decrease in support for gender integration for each 1 unit increase in perceptions of changes to male bonding (considered one of the most cultural factors in the infantry).

Schein (1990) highlighted the different dimensions in which institutional socialization processes occur and vary between organizations. (See chapter 2). The dimensions that pertain to the military are: “Group versus individual”- the degree to which the organization processes recruits in batches, as in boot camps, or individually, as in professional offices- “Self-destructive and reconstructing versus self-enhancing”- the degree to which the process destroys aspects of the self and replaces them, as in boot camp, or enhances aspects of the self, as in professional development programs and “Fixed versus variable”- the degree to which stages of the training process have fixed timetables for each stage, as in military academies, boot camps or rotational training programs, or are open-ended, as in typical promotional systems where one is not advanced to the next stage until one is ready. Schein describes how these particular dimensions are associated with a “custodial orientation”, or
“total conformity to all norms and complete learning of all assumptions” (Schein, 1990, p. 116). Since the military is employing an institutional socialization process that is tearing down the total individual and replacing their current morals and value system with a complete new identity, (and in the case of the infantry, replacing the old values with those of hypermasculinity, aggressiveness and hostility towards women), the lesson learned from this study is that the current attitudes of infantry men towards gender integration may not be the result of inherent sexism, but rather the institutional socialization process that takes place upon their entry into the organization. If the Army hopes to be successful in its gender integration implementation, this study helps to show that the institutional socialization process can be changes to replace these negative assumptions regarding women.

5.2.2 Practical Implications

While this dissertation focuses on levels of support towards gender integration as opposed to implementation, the role of leadership in gender integration is a critical topic of practical importance. This dissertation does not specifically address leadership but is instead interested in the other phenomena which have not received as much scholarly attention as leadership. Leadership has been shown to profoundly influence success of implementation. In order for leadership to be successful and influence the social climates in their units, as has been recommended in the literature, they must first understand the basis of resistance to gender integration. This dissertation offers practical lessons to infantry unit leadership in understanding infantry unit members current attitudes and perceptions.

The central focus of this dissertation is on perceived changes to organizational culture, especially male bonding, which has been shown to profoundly influence attitudes on
gender integration. However, it is important to note that other studies have considered the role of leadership in explaining successful gender integration. For example, the Army Lessons Learned Center (1998) found that integration of combat arms units was largely a leadership challenge. The center reports that in units where non-homogeneity was an issue, leadership needed to find points on which all team members could identify. Leadership was responsible for team building and in times that unit cohesion was eroded, they found that it stemmed from “inequitable leadership and discipline, favoritism or harassment of distinct groups, fraternization (especially with the chain of command) and isolation and segregation of distinct groups” (1998, p. x). Cawkill et al. also note that successful integration of women requires that all members of the Army achieve one standard that meets operational effectiveness and that knowledgeable and proactive leadership at the level where integration is occurring is critical to ensuring successful gender integration initiatives (2009, p. 18).

Segal et al. (2016) focus on the role of regendering and dysfunctional behavior (e.g., physical and sexual assault, sexual harassment, as well as sexist behavior and gender harassment) in the unit and the role that leadership plays in diminishing these types of behaviors. They find that leadership must be held accountable for the social climates in their units and that they must ensure climates with as little to no dysfunctional behavior as possible. Leadership responsibility can be separated into two separate areas: beliefs/attitudes and actions. Drawing on the work of Schein, leaders can seek to understand how their beliefs can potentially influence their organizational members’ attitudes about culture. Schein describes the term “member identification” as a way that culture is created when individuals in a group identify with organization leaders and begin to internalize their values and assumptions. They realize that some of the leaders’ beliefs are practical and “work” while others do not. The group then
learns which of those beliefs work for the group and this is how assumptions are created. In addition to potentially changing the value system introduced to infantrymen during the institutional socialization process, individual unit leaders can also ensure that they are promoting positive, non-discriminatory rhetoric regarding gender integration (and females, in general) in order to ensure that gender integration implementation is successful.

Infantry unit leadership can also draw on the work by Golembiewski (1981) that was discussed in detail in chapter 2. Golembiewski discussed organizational development in the public sector and found that team building activities were used most frequently in organizational efforts to implement change. According to Golembiewski, team building activities are “meant to increase the efficiency and effectiveness of intact task groups” (1981, p. 681). As he notes, these types of activities are frequently employed by the military. As discussed previously in this dissertation, task cohesion is important to unit effectiveness and efficiency. In regard to gender integration, infantry unit leadership can draw on this literature, as well as their current experience with conducting team building activities, and use these activities once gender integration has occurred to increase task cohesion among their now, mixed-gender units.

Drawing on the work of Forsyth (2009) and Allport (1954), Intergroup Contact Theory (the Contact Hypothesis) can also provide some practical implications for infantry unit leadership. This theory states that under appropriate conditions, interpersonal contact is one of the best ways to improve relationships among groups that are experiencing conflict. The idea is that when these groups have more close and personal contact, they are able to communicate more effectively and better understand and appreciate the experiences and views of the other group members. This dissertation tested this theory with the variable
“Work_Opp_Sex) and found support for this hypothesis. The results showed that for each 1 unit increase in contact with members of the opposite sex, support for gender integration increases by just over 5 percent. (As discussed in chapter 4, this result was significant in the non-infantry model only, as infantry units are not yet integrated). Forsyth (2009) described “optimizing” conditions that are essential for ensuring the contact hypothesis is successful.

The conditions are as follows:

- Equal Status- Any differences among group members should be minimized; i.e. status, rank, academic background, wealth, skill etc. Group members should also engage equally in the relationship.
- Common Goals- The groups must be working together to accomplish a common goal or task, combining their efforts and resources.
- Intergroup Cooperation- Group members should work together without competition
- Personal Interaction- The contact situation should involve personal communication, informal interaction so that group members can learn more about each other personally.
- Support of authorities, law or customs- The groups should acknowledge and support established authority that governs the interactions with the groups.

Because positive support for the contact hypothesis has been found in respect to non-infantry units in this dissertation, infantry unit leadership might have reason to show some “guarded” optimism that this hypothesis can potentially hold in their units, provided that these optimal conditions are met.
5.3 Limitations

This dissertation used original survey data, obtained from soldiers in two brigades stationed at Fort Bragg, North Carolina. This was a convenience sample that resulted from previous research relationships with Brigade leadership at Fort Bragg. While one brigade was an infantry brigade and one was a sustainment (non infantry) brigade, the data would be more generalizable if there had been more brigades involved in data collection, and more bases than Fort Bragg alone. The brigades were not necessarily representative of the Army in general, nor the broader U.S. military. Also, the exact response rate could not be determined because the brigade leadership that were involved in administering the survey to soldiers has since left Fort Bragg and could not be reached for information regarding the precise numbers of soldiers that the survey was sent to. Given this, the response rate was created by using a conservative estimate of the total number of soldiers in each unit that were surveyed.

The variable used to test the contact hypothesis (respondents contact with members of the opposite sex) was Work_Opp_Sex. This was operationalized as a survey question that asked at what level the respondent works with members of the opposite sex. As was discussed in detail in Chapter 3, the Brigade level (less frequent contact) is represented as a 1, while Squad Level contact (most frequent and personal contact) is represented as a 7. Chapter 4 discussed how this variable was only statistically significant among non-infantry members. Because gender integration is just now being implemented across the Army, it makes sense intuitively that infantry members would not have frequent contact with females at the lower levels, since females have been not permitted to serve in those positions until very recently. The results in Table 4.1 from the descriptive statistics show that infantry members, on average, have most frequent contact with females at the Battalion level (2.28),
while the non-infantry members in the brigade surveyed for this dissertation have the most contact with females at somewhere between the company and platoon levels (3.48). This fact that infantry members simply don’t have as much contact with females could have potential effects on this variable and its result.

Another potential limitation to this study was the fact that the survey was administered at two different times for the two units that participated in the study. The 2 BCT received the survey in Sep/Oct 2015 and the 285th Sustainment Brigade received the survey in the Spring of 2016. At the time that the 2 BCT received the survey, it had been announced that infantry positions would eventually become open to women, but the decision had not been made yet. At the time, the 285th received the survey, the decision to fully integrate had been announced, but implementation had not begun. The difference in timing of the two waves of survey administration could potentially create a threat to validity due to time. In order to control for the timing of the survey, a control variable for time called “Wave” was created. This was discussed in detail in chapter 3. No significant effects due to timing of the survey were found.

5.4 Discussion and Conclusions

The Combat Exclusion Policy was overturned in January 2013, marking an important date, at least symbolically, for gender equality in the American military. This dissertation outlines the potential areas of concern that the American public will see as a result of this policy reversal. Although American cultural expectations of gender equality, as well as political and isomorphic pressure to make infantry units more homogenous with their other military occupational fields, has prompted a trend towards female equality in the American
military, substantial resistance remains and it may prove to be more persistent than any isomorphic pressure.

This dissertation examined literature that argues persuasively that the culture in the infantry is, in fact, unique. It is comprised of hypermasculine values, aggression towards women, and homoerotic tendencies that allow men to separate from their old civilian values and morals and, in their place, adopt a new value system that justifies actions that they must sometimes undertake when on the battlefield. This dissertation also established that the culture in the infantry is comprised of several factors; primarily male bonding, it has been established in the literature that male bonding is the single most important factor that makes up the culture of the infantry.

This dissertation tested whether perceived changes to the norms that make up the culture of the infantry are significant in predicting resistance towards gender integration. The findings supported this cultural explanation, specifically as it pertains to male bonding, the most important factor in infantry culture, as well as the concept of no man left behind.

This dissertation also drew upon theories of unit cohesion (i.e., task and social cohesion) as a predictor of performance to assesses whether perceptions of both social and task cohesion survival are also related to resistance towards gender integration. The literature provided evidence that task cohesion is a more important facet of unit cohesion than social for predicting performance. Social cohesion has been portrayed as being more important in determining support or resistance towards gender integration because fears over inappropriate relationships and sexual assault/harassment that will erode unit cohesion. The results of this dissertation indicate that perceptions of task cohesion survival is an important predictor in support/resistance for gender integration. Although the statistical results for the
effects of social cohesion on gender integration were not significant, the write in comments support the theory behind social cohesion.

Finally, this dissertation also tested the contact hypothesis to see whether previous experience working with women has an impact on attitudes towards gender integration, and the theory holds true in this dissertation. Add more detail here

The literature regarding gender integration supports the theory that infantry leadership will have the most important job in policy implementation- leadership matters most in terms of implementation. The effects of leadership were not tested in this dissertation; however, the theory was discussed in detail in the implications section. The practical implications addressed are primarily that in order for infantry unit leadership to be effective in minimizing dysfunctional behavior and avoiding the inadvertent “regendering” of their units, they will need to have access to the information that is contained in the results of this dissertation. This will be important in helping them to understand where the basis of resistance comes from before they will be able to effectively address any potential concerns.

“The everyday attitudes of male soldiers are likely to be more important in undermining female integration” (King, 2013, p. 21) and until an understanding into how these attitudes are formed based on the culture and institutional socialization practices seen in the infantry is conducted through empirical investigation, women will continue to face discrimination in attempting to integrate into combat units.
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APPENDICES
APPENDIX A. Email Script and Qualtrics Survey

Email Script:

You are being asked to complete a short survey (approximately 20 minutes) by researchers at NC State University. This survey will ask about attitudes toward gender integration in Army combat units. This survey is anonymous and voluntary. There is no compensation for the survey but your responses will provide valuable information to understanding how units can best integrate females into combat roles. Please click on the link below to be taken to the anonymous consent for the survey. Once you accept the consent, you will be taken to the survey. Thank you for your participation.

http://ncsu.qualtrics.com/SE/?SID=SV_0xMGrJhXsBcksbH
Survey:

North Carolina State University
INFORMED CONSENT FORM for RESEARCH
Gender Integration in Army Combat Units
Holly Danford and Dr. Amanda Ross Edwards
Dr. Jerrell Congdon

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time without penalty. The purpose of research studies is to gain a better understanding of attitudes regarding gender integration in Army combat units. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?
The purpose of this study is to gain a better understanding of attitudes regarding gender integration in Army combat units.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to complete the online survey which should take 10-20 minutes.

Risks
There should be no risks associated with completing this survey. All survey responses will be kept anonymous and data will be aggregated so that no identifying information will be available.

Benefits
The benefit to this study is the knowledge gained regarding attitudes towards gender integration in Army combat units which will allow researchers as well as military leadership to better implement policy.

Confidentiality
The information in the study records will be kept confidential to the fullest extent allowed by law. No reference will be made in oral or written reports which could link you to the study. You will NOT be asked to write your name on any study materials so that no one can match your identity to the answers that you provide.

Compensation
You will not receive anything for participating.

What if you have questions about this study?
If you have questions or any time about the study or the procedures, you may contact the researcher, Holly Danford, at hdbixon@ncsu.edu.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator at dapaxton@ncsu.edu or by phone at 1-919-513-4314.

Consent To Participate
“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”

- Yes, I consent to participate
- No, I do not consent to participate
What is your gender?
- Male
- Female

What is your current marital status?
- Married
- Single, Never Married
- Single, Previously Married
- Living with partner, not married

Do you have any children, including adopted?
- Yes, I have son(s)
- Yes, I have daughter(s)
- Yes, I have both
- No, I have no children

Do you have any siblings, including adopted?
- Yes, I have brother(s)
- Yes, I have sister(s)
- Yes, I have both
- No, I have no siblings
What is the highest level of education that you have completed?

- High school or GED
- Some college, no degree
- Associates Degree
- Bachelors Degree
- Masters Degree
- PhD
- Other professional degree, JD, MD, etc.

Do you have any desire to serve in an infantry/combat unit?

- Yes
- No

Please choose from the following drop down list, the most influential/most important reason for your desire to serve in an infantry unit

[Drop down list]

Are you currently serving in an infantry unit?

- Yes
- No

What was the most important/most influential reason for your desire to serve in an infantry unit?

[Text box]
Do you have any desire to serve in an infantry unit?

- Yes
- No

What is the most important/most influential reason for your desire to serve in an infantry unit?

______________________________

What is your current rank?

______________________________

What is your current MOS/AC?

______________________________

What is the lowest level in which you have experience working with members of the opposite sex?

- Brigade Level
- Battalion Level
- Company/Battery/Troop Level
- Platoon
- Squad Level
What is your time in service?
- 1-3 years
- 3-6 years
- 7-10 years
- 11-14 years
- 15-19 years
- more than 20 years

Have you ever served on a combat deployment, or deployed to a combat zone?
- Yes
- No

How many months has it been since your last combat deployment (or deployment to a combat zone)? Please enter a single number for number of months

Have you ever deployed to a combat zone with members of the opposite sex?
- Yes
- No

In your own words, how did you feel about your personal experience deploying with members of the opposite sex?

The next set of questions will ask you how strongly you agree or disagree with the given statements. Please answer as honestly as possible as the survey is anonymous. Please read the following statements first:

Cultural norms are behavior patterns that are typical of specific groups. These attitudes, beliefs and behaviors
take place in the context of the organizational culture. This can include values, customs and traditions.

Unit cohesion has been defined as “the bonding together of soldiers in such a way as to sustain their will and commitment to each other, the unit, and mission accomplishment, despite combat or mission stress”. This next set of questions pertains to unit cohesion and culture in the infantry. Even if you are not in the infantry, please answer these questions based on your current understanding of these concepts.

Which of the following norms is MOST IMPORTANT to the development of unit cohesion in infantry/combat units? Please note we are not just asking which of these are IMPORTANT, as they are all important, but which is most important to the development of COHESION specifically.

Now that you have selected the norm that you feel is the most important to the development of unit cohesion, please rank all of the items listed in their order of importance (1 being the most important and 7 being least important) to the development of unit cohesion.

- Male Bonding
- Hazing/Initiating
- Loyalty
- Concept of “no man left behind”
- Keepers of the “Warrior Ethos”
- Mental and Physical Toughness
- Expertise in task

How likely will the following norms change if infantry/combat units are fully integrated?
<table>
<thead>
<tr>
<th></th>
<th>Worst change at all 1</th>
<th>2</th>
<th>3</th>
<th>Neutral 4</th>
<th>5</th>
<th>6</th>
<th>Will change significantly 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Bonding</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Hazing/Initiating</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Loyalty</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Concept of &quot;no man left behind&quot;</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Keepers of the &quot;Warrior Ethos&quot;</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Mental and Physical Toughness</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Expertise in Task</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

What is the impact on unit cohesion if the following norms are changed?

<table>
<thead>
<tr>
<th></th>
<th>Cohesion will be affected in a negative way 1</th>
<th>2</th>
<th>3</th>
<th>Cohesion won't be affected at all 4</th>
<th>5</th>
<th>6</th>
<th>Cohesion will be affected in a positive way 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Bonding</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Hazing/Initiating</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Loyalty</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Concept of &quot;no man left behind&quot;</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Keepers of the &quot;Warrior Ethos&quot;</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Mental and Physical Toughness</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Expertise in Task</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Please answer the next set of statements regarding unit social and task cohesion as if women have already been integrated into combat units. If you are male, you are answering what you think it would be like to be in a combat unit with women. If you are female, you are answering how you think the unit environment will be if you, or other females, are with a combat unit.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Strongly Agree</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. My unit will be united in trying to reach its goals for its mission</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Members of my unit will prefer to go out on their own rather than get together as a unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. All unit members will take responsibility for any mission loss or poor performance by the unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Our unit will rarely socialize together</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Our unit members will have conflicting aspirations for the unit's performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Our unit will enjoy spending time together away from work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. If members of the unit should have personal problems, everyone will want to help them so that we will function better as a team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Members of our unit will not stick together outside of work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The next set of questions asks about opinions/feelings towards gender integration in infantry/combat units.

<table>
<thead>
<tr>
<th>I support gender integration in infantry/combat units</th>
<th>Strongly Agree</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender integration in infantry/combat units will increase unit efficiency</td>
<td>○ ○ ○ ○ ○ ○ ○</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender integration in infantry/combat units will increase unit effectiveness</td>
<td>○ ○ ○ ○ ○ ○ ○</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender integration in infantry/combat units will increase unit morale</td>
<td>○ ○ ○ ○ ○ ○ ○</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender integration in infantry/combat units will increase unit cohesion</td>
<td>○ ○ ○ ○ ○ ○ ○</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In your own words, please describe your feelings regarding women being fully integrated into all combat units. What challenges and/or positive benefits do you foresee, if any?

The following are a list of items to consider when integrating women into combat units. Please answer whether you feel the items will be a problem or if they will be a benefit.
<table>
<thead>
<tr>
<th>Click to write Column 1</th>
<th>Very problematic</th>
<th>2</th>
<th>3</th>
<th>Not a problem or a benefit</th>
<th>5</th>
<th>6</th>
<th>Very beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>A woman’s ability to meet the physical demands of the job</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Integrating women into the infantry culture; male bonding, haz ing/initiating, etc.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Women’s abilities during combat; a woman’s ability to fight/till the enemy</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sexual Assault/Harassment</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unit cohesion remaining intact</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (if choose other, please type in response below)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Which of the following are you missing out on by not being allowed to serve in a closed MOS/AOC position?

- Professional Development
- Personal Development
- Leadership Development
- Contribution to mission planning
- All of the above
- None of the above
- Other (if select other, please elaborate on your selection below)

Whom are the leaders, by position, that you interact with the MOST in your unit?

- Brigade Commander
- Battalion Commander
- Company Commander
- Platoon Leader
- Squad Leader
Which of the following are women missing out on by not being allowed to serve in a closed MOS/AOC position?

- Professional Development
- Personal Development
- Leadership Development
- Contribution to mission planning
- All of the above
- None of the above

The next set of questions asks about your interactions with both formal leaders, i.e., Brigade commander all the way down to squad leader positions, as well as informal leaders, i.e., "barracks lawyers," respected peers who you get advice from etc.
<table>
<thead>
<tr>
<th>Strongly Disagree 1</th>
<th>2</th>
<th>3</th>
<th>Neutral 4</th>
<th>5</th>
<th>7</th>
<th>Strongly Agree 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>The formal leaders that I interact with the MOST identified above support gender integration in Army combat units, i.e., in the MOSAOC currently closed to females. In addition to the formal leadership identified above, I also interact with informal leaders, i.e., &quot;barracks lawyer&quot; or respected peers. The informal leaders that I interact with support gender integration in Army combat units, i.e., in the MOSAOC currently closed to females.</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
</tr>
</tbody>
</table>
How do you know about the current opinions of your formal leadership regarding gender integration? Please check all that apply.

- My unit has had gender integration training
- My leadership expresses their thoughts on the issue to me
- Other, if other, please describe below

How do you know about the current opinions of your informal leaders regarding gender integration? Please check all that apply.

- My informal leaders have expressed their thoughts on the issue to me
- I have overheard conversations regarding gender integration
- Other, if other, please describe below

Finally, overall, on a scale from 1 to 100, (1 being no support and 100 being total support) what is your level of support for integrating women into combat units? (Please enter a numeric value 1-100)
Appendix B. North Carolina State University Institutional Review Board (IRB)

Approval

NORTH CAROLINA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD FOR THE USE OF HUMAN SUBJECTS IN RESEARCH
SUBMISSION FOR NEW STUDIES
Protocol Number 6138
Project Title
Understanding Potential Resistance to Gender Integration: The Role of Institutional Norms and Organizational Culture in Army Combat Units
Short Title: Gender Integration in Army Combat Units
IRB File Number:
Original Approval Date:
Approval Period
08/20/2015 -
Source of funding (if externally funded, enter PINS or RADAR number of funding proposal via ‘Add New Sponsored Project Record’ button below): N/A
NCSU Faculty point of contact for this protocol:
Coggburn, Jerrell D: School of Public and International Affairs
Does any investigator associated with this project have a significant financial interest in, or other conflict of interest involving, the sponsor of this project? (Answer No if this project is not sponsored)
No
Is this conflict managed with a written management plan, and is the management plan being properly followed?
No
Preliminary Review Determination
Category:
Exempt b.2
In lay language, provide a brief synopsis of the study (limit text to 1500 characters)
The Federal combat exclusion policy, which excludes women from serving in combat positions, was overturned in January 2013. Most studies on gender integration conducted thus far focus on the physical traits of women and their ability or lack thereof to pass the stringent physical fitness requirements necessary to gain assignment to an infantry unit. Focusing solely on the physical component makes the assumption that if women were to pass the physical requirements there would be no further issue integrating them into the infantry. This assumption ignores the organizational cultural component associated with the institutional socialization process that is unique in infantry units. This concept is studied using an institutional framework that examines how infantry units, whose source of perceived legitimacy comes from their informal cultural norms, i.e. unit cohesion and male bonding, will resist gender integration based on the perception of deviation from those informal norms. The primary research question being addressed is how perceived deviation from organizational norms will impact perceived unit cohesion and then how perceptions of unit cohesion will impact attitudes regarding gender integration. The study will entail administering an electronic survey through Qualtrics to a Brigade at Fort Bragg, NC.
Briefly describe in lay language the purpose of the proposed research and why it is important.
As the Army prepares to integrate women into combat units, it is important to understand what the attitudes are of those who are in these units. This will enhance our understanding of potential barriers to integration, as well as the positive impacts that can be used to leverage change.
My research qualifies for Exemption. Exempt research is minimal risk and must fit into the categories b.1 - b.6 found here: http://www.hhs.gov/ohrp/humansubjects/guidance/45crf46.html
Is this research being conducted by a student?
Yes
Is this research for a thesis?
Yes
Is this independent research?
Yes
Is this research for a dissertation?
Yes
Is this research for a course?
No
Do you currently intend to use the data for any purpose beyond the fulfillment of the class assignment?
No
Please explain
If so, please explain
If you anticipate additional NCSU-affiliated investigators (other than those listed on the Title tab) may be involved in this research, list them here indicating their name and department.
Will the investigators be collaborating with researchers at any institutions or organizations outside of NC State?
Yes
List collaborating institutions and describe the nature of the collaboration
Lt Col (ret.) David Walton- military point of contact
Fort Bragg, NC- 2nd Brigade- they have allowed us to survey their Brigade
What is NCSU's role in this research?
This survey will be used for both the dissertation of PhD student, Holly Danford, as well as an additional publication by Holly Danford, Dr. Amanda Ross Edwards and Lt Col (ret) David Walton
Describe funding flow, if any (e.g. subcontractors)
No funding is being provided
Is this international research?
No
Identify the countries involved in this research
An IRB equivalent review for local and cultural context may be necessary for this study. Can you recommend consultants with cultural expertise who may be willing to provide this review?
Adults 18 - 64 in the general population?
Yes
NCSU students, faculty or staff?
No
Adults age 65 and older?
No
Minors (under age 18--be sure to include provision for parental consent and/or child assent)?
No
List ages or age range:
Could any of the children be "Wards of the State" (a child whose welfare is the responsibility of the state or other agency, institution, or entity)?
No
Please explain:
Prisoners (any individual involuntarily confined or detained in a penal institution -- can be detained pending arraignment, trial or sentencing)?
No
Pregnant women?
No
Are pregnant women the primary population or focus for this research?
No
Provide rationale for why they are the focus population and describe the risks associated with their involvement as participants
Fetuses?
No
Students?
No
Does the research involve normal educational practices?
No
Is the research being conducted in an accepted educational setting?
No
Are participants in a class taught by the principal investigator?
No
Are the research activities part of the required course requirements?
No
Will course credit be offered to participants?
No
Amount of credit?
No
If class credit will be given, list the amount and alternative ways to earn the same amount of credit. Note: the time it takes to gain the same amount of credit by the alternate means should be commensurate with the study task(s)
Will you utilize private academic records?
No
Explain the procedures and document permission for accessing these records.
Employees?
Yes
Describe where (in the workplace, out of the workplace) activities will be conducted.
This study focuses on military members- they will have the opportunity to take the survey electronically wherever they are most comfortable. It will be administered in an email link.
From whom and how will permission to conduct research on the employees be obtained?
We have obtained permission from the commander of the 2nd Brigade at Fort Bragg to survey his Brigade. We have also added the 528th Sustainment Brigade.
How will potential participants be approached and informed about the research so as to reduce any perceived coercion to participate?
They will be sent an email link from the personnel officer who will explain that this survey is being conducted by a PhD student at NCSU. The survey is voluntary and anonymous. The informed consent form in Qualtrics explains this as well - The Personnel Officer, also known in military terms as the "S1" is Major Frank Cenkner. In civilian terms, this might best be described as a "human resources" specialist. He manages staff functions for the Brigade. He has not direct authority over personnel in the Brigade, other than simply the military rank structure which cannot be avoided. The email script that he will send along with the link for the survey will be as follows:
"You are being asked to complete a short survey (approximately 20 minutes) by researchers at NC State University. This survey will ask about attitudes toward gender integration in Army combat units. This survey is anonymous and voluntary. There is no compensation for the survey but your responses will provide valuable information to understanding how units can best integrate females into combat roles."
Is the employer involved in the research activities in any way?
Yes
Please explain:
The Commander will also have the opportunity to take the survey, if he so chooses, but that is the extent of his involvement
Will the employer receive any results from the research activities (i.e. reports, recommendations, etc.)?
Yes
Please explain. How will employee identities be protected in reports provided to employers?
If the commander wishes to see the survey results, he will be able to see report, aggregated data, after the dissertation is complete, as it will be public
Impaired decision making capacity/Legally incompetent?
No
Mental/emotional/developmental/psychiatric challenges?
No
Identify the challenge and explain the unique risks for this population.
Describe any special provisions necessary for consent and other study activities (e.g., legal guardian for those unable to consent).
People with physical challenges?
No
Identify the challenge and explain the unique risks for this population.
Describe any special provisions necessary for working with this population (e.g., witnesses for the visually impaired).
Economically or educationally disadvantaged?
No
Racial, ethnic, religious and/or other minorities?
No
Non-English speakers?
No
Describe the procedures used to overcome any language barrier.
Will a translator be used?
No
Provide information about the translator (who they are, relation to the community, why you have selected them for use, confidentiality measures being utilized).
Explain the necessity for the use of the vulnerable populations listed.
Because this survey is specifically assessing attitudes about gender integration in Army units, it is necessary to survey current Army members.
State how, where, when, and by whom consent will be obtained from each participant group. Identify the type of consent (e.g., written, verbal, electronic, etc.). Label and submit all consent forms.
There will be a consent page (the first page in the electronic Qualtrics survey) that will require the participant to read and "click" the consent button. Since the survey is anonymous and there is no identifying information, this consent will allow them to continue, or if consent is not given, they are directed to exit the survey.
If any participants are minors, describe the process for obtaining parental consent and minor's assent (minor's agreement to participate).
No minors
Are you applying for a waiver of the requirement for consent (no consent information of any kind provided to participants) for any participant group(s) in your study?
No
Describe the procedures and/or participant group for which you are applying for a waiver, and justify why this waiver is needed and consent is not feasible.
Are you applying for an alteration (exclusion of one or more of the specific required elements) of consent for any participant group(s) in your study?
No
Identify which required elements of consent you are altering, describe the participant group(s) for which this waiver will apply, and justify why this waiver is needed.
Are you applying for a waiver of signed consent (consent information is provided, but participant signatures are not collected)? A waiver of signed consent may be granted only if: The research involves no more than minimal risk; The research involves no procedures for which consent is normally required outside of the research context.
Yes
Would a signed consent document be the only document or record linking the participant to the research?
Yes
Is there any deception of the human subjects involved in this study?
No
Describe why deception is necessary and describe the debriefing procedures. Does the deception require a waiver or alteration of informed consent information? Describe debriefing and/or disclosure procedures and submit materials for review. Are participants given the option to destroy their data if they do not want to be a part the study after disclosure?
For each participant group please indicate how many individuals from that group will be involved in the research. Estimates or ranges of the numbers of participants are acceptable. Please be aware that participant numbers may affect study risk. If your participation totals differ by 10% from what was originally approved, notify the IRB.
We are surveying one Brigade at Fort Bragg. The Brigade currently has 5000 soldiers but it is doubtful that the whole Brigade will participate. How will potential participants be found and selected for inclusion in the study?
The Personnel Officer of the Brigade has an email list and plans to distribute the survey via email to her list. For each participant group, how will potential participants be approached about the research and invited to participate? Please upload necessary scripts, templates, talking points, flyers, blurbs, and announcements.
Email invitation
- as mentioned in previous section, email link will be sent by Major Frank Cenkner, Personnel Officer (Human Resources) for the Brigade. The email language is as follows:
"You are being asked to complete a short survey (approximately 20 minutes) by researchers at NC State University. This survey will ask about attitudes toward gender integration in Army combat units. This survey is anonymous and voluntary. There is no compensation for the survey but your responses will provide valuable information to understanding how units can best integrate females into combat roles."
Describe any inclusion and exclusion criteria for your participants and describe why those criteria are necessary (If your study concentrates on a particular population, you do not need to repeat your description of that population here.)
Inclusion- participate must be an Army member
Is there any relationship between researcher and participants - such as teacher/student; employer/employee?
No
What is the justification for using this participant group instead of an unrelated participant group? Please outline the steps taken to mitigate this relationship.
Describe any risks associated with conducting your research with a related participant group.
Describe how this relationship will be managed to reduce risk during the research.
How will risks to confidentiality be managed?
Address any concerns regarding data quality (e.g., non-candid responses) that could result from this relationship.
In the following questions describe in lay terms all study procedures that will be experienced by each group of participants in this study. For each group of participants in your study, provide a step-by-step description of what they will experience from beginning to end of the study activities. They will only be required to take a 10-20 minute survey. It is electronic and they can take it wherever they are most comfortable.
- participants will not be recruited. They are being sent an email based on their membership in the Brigade. If they are assigned to the 2 BCT at Fort Bragg, the Brigade that we have partnered with to administer the survey, they will receive the email with the link as provided above. The Personnel Officer has all email addresses of everyone in the Brigade,
just as a human resources specialist would have access to have all email for everyone in an organization. He will use that list to obtain the email addresses and sent the email script provided above. Participants can then choose to complete the survey or not. The consent provides instructions that they can contact the researchers (Dr. Amanda Ross Edwards or Holly Danford) if they need more information or have concerns and provides email contact information.

Describe how, where, when, and by whom data will be collected.

Survey results will come in electronically into the Qualtrics system and Holly Danford will collect those

Social?
No
Psychological?
No
Financial/Employability?
No
Legal?
No
Physical?
No
Academic?
No
Employment?
No
Financial?
No
Medical?
No
Private Behavior?
No
Economic Status?
No
Sexual Issues?
No
Religious Issues/Beliefs?
No

Describe the nature and degree of risk that this study poses. Describe the steps taken to minimize these risks. You CANNOT leave this blank, say 'N/A', none or 'no risks'. You can say "There is minimal risk associated with this research."

There are minimal risks associated with this research. This study will be anonymous. We have even combined ranks so as to eliminate the possibility of someone being identified by rank alone. There is no identifying information. The questions being asked are general and should not provoke any type of stress or emotional response - this question has been addressed previously. Sample size too large and all data aggregated.

If you are accessing private records, describe how you are gaining access to these records, what information you need from the records, and how you will receive/record data.

N/A

Are you asking participants to disclose information about other individuals (e.g., friends, family, co-workers, etc.)?
No

You have indicated that you will ask participants to disclose information about other individuals (see Populations tab). Describe the data you will collect and discuss how you will protect confidentiality and the privacy of these third-party individuals.

If you are collecting information that participants might consider personal or sensitive or that if revealed might cause embarrassment, harm to reputation or could reasonably place the subjects at risk of criminal or civil liability, what measures will you take to protect participants from those risks?

We are not collecting personal information

If any of the study procedures could be considered risky in and of themselves (e.g. study procedures involving upsetting questions, stressful situations, physical risks, etc.) what measures will you take to protect participants from those risks?

These questions do not ask about stressful situations

Describe the anticipated direct benefits to be gained by each group of participants in this study (compensation is not a direct benefit).

No direct benefits

If no direct benefit is expected for participants describe any indirect benefits that may be expected, such as to the scientific community or to society. They are contributing input on an issue that is very current and public and has important, relevant, policy considerations.

Will you be receiving already existing data which includes identifiers for this study?
No

Describe how the benefits balance out the risks of this study.

There are no immediate, identifiable risks involved

Will data be collected anonymously (meaning that you do not ever collect data in a way that would allow you to link any identifying information to a participant)?
Yes

Will any identifying information be recorded with the data (ex: name, phone number, IDs, e-mails, etc.)?
No

Will you use a master list, crosswalk, or other means of linking a participant’s identity to the data?
No

Will it be possible to identify a participant indirectly from the data collected (i.e. indirect identification from demographic information)?
No

Audio recordings?
No

Video recordings?
No

Images?
No

Digital/electronic files?
No

Paper documents (including notes and journals)?
No Physiological Responses?
No Online survey?
Yes Restricted Computer?
No Password Protected files?
Yes Firewall System?
No Locked Private Office?
Yes Locked Filing Cabinets?
Yes Encrypted Files?
No Describe all participant identifiers that will be collected (whether they will be retained or not) and explain why they are necessary.

No participant identifiers

- to address your comments above, although we are asking many demographic characteristics, the probability that these can be used to identify someone is highly unlikely. This Brigade has approximately 5000 soldiers and any data provided to the commander will be in the aggregate. Nothing on any individual respondent will be provided at any time
If any links between data and participants are to be retained, how will you protect the confidentiality of the data?
N/A

If you are collecting data electronically, what (if any) identifiable information will be collected by the host site (such as email and/or IP address) and will this information be reported to you?
No email reporting

Describe any ways that participants themselves or third parties discussed by participants could be identified indirectly from the data collected, and describe measures taken to protect identities.

They should not be able to be identified indirectly as we have combined ranks so that there is no risk of identifying someone solely by rank

- Again, with a sample size of approximately 5000 soldiers, this is highly unlikely. Also, again no data will be provided that has not been aggregated. That is not the nature of this research
For all recordings of any type: Describe the type of recording(s) to be made Describe the safe storage of recordings Who will have access to the recordings? Will recordings be used in publications or data reporting? Will images be altered to de-identify? Will recordings be transcribed and by whom?
N/A

Describe how data will be reported (aggregate, individual responses, use of direct quotes) and describe how identities will be protected in study reports.

aggregate

Will anyone besides the PI or the research team have access to the data (including completed surveys) from the moment they are collected until they are destroyed?
No

Describe any compensation that participants will be eligible to receive, including what the compensation is, any eligibility requirements, and how it will be delivered.

No compensation

Explain compensation provisions if the participant withdraws prior to completion of the study.
N/A
Endnote regarding Data Cleaning Procedures

If the percentage of cases with missing values is greater than 5% and missingness is not MCAR, then conventional statistical advice is to undertake data imputation. Data imputation estimates values for nonresponse items based on the values on responded items. This assumes, of course, that responded items are sufficient for such estimation. By common rule of thumb, imputation is warranted as long as item non-response does not exceed 20%, although some authors allow higher percentages up to 50% (Garson, 2015: 10) For the data in this dissertation, item non-response was xxx%. 

As the data in this dissertation are MCAR, data imputation is unnecessary. However, had imputation been desired, as the percentage of cases with missing values was greater than 5% and since the percentage of missing observations was xxx%, it might have been decided to follow social science convention by imputing missing values and reporting results based on imputed data. However, analysis would also have been run with raw data. Substantive inferences with respect to all hypotheses mentioned further below then might be found the same for both imputed and raw data.