

**Self-reported Attitudes About Acceptance of Women at West Point Following
Repeal of Combat Restrictions for Female Soldiers:
A Cross-Cohort, Cross-Sectional Study of Male and Female USMA Cadets**

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Abstract

Given the recent elimination of restrictions barring women from serving in combat arms positions, acceptance of women in military settings merits examination. This research studied the relation between self-reported Acceptance of Women rates at the United States Military Academy (USMA) at West Point. Cadet scores were compared based on sex as well as class year, as two of the four cohorts experienced the change in restrictions on women during their time at the academy. The analysis used Acceptance of Women (Rosen & Martin, 1998) scale scores from the Project Arete data set (see Callina et al., 2017) to compute a 2 x 4 analysis of variance (ANOVA), with dimensions being sex of participant and cadet cohort. Results showed that female cadets accepted women at significantly higher rates than male cadets, but there was no significant difference between class cohort or in regard to a sex x class cohort interaction. Expanding on this research can provide important information on how to best support development of cadets at USMA, as well as their successful integration into mixed-gender units upon graduation.

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**Self-reported Attitudes About Acceptance of Women at West Point Following
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Women have participated in armed conflict since the United States' founding; however, their status as service members has heavily depended upon policy and public opinion. In 2016, the Department of Defense lifted all combat restrictions for female service members, opening over one hundred thousand jobs that were previously closed. In his memorandum outlining guidance for implementing women into the armed forces (2015), U. S. Defense Secretary Ash Carter noted that transparent standards, based on ability rather than gender, would be the determinants for women's integration into combat arms. Although this policy change allowed for women to occupy and advance in new career fields, their acceptance as legitimate warfighters remains questioned in segments of the U.S. population and U.S. military (Holyfield et al., 2019). Naysayers have raised concerns about women's physical and mental capabilities in combat, while others still are concerned with how their presence will affect unit cohesion and mission readiness (Szayna et al., 2015). Debate about women's impacts within military units has been ongoing since integration, and with the relatively recent lift of combat restrictions, merits further analysis.

Rosen and Martin (1997) first proposed an Acceptance of Women questionnaire to determine if female Soldiers were integrating into units effectively. Their research spanned the removal of the Department of Defense (DoD) "Risk Rule," which resulted in women's integration in all military positions except those whose primary mission was direct ground combat (Gebicke, 1998). Parallels between the lifts of some combat

restrictions in the 1990s and all restrictions in the 2010s provide opportunities for continued analysis. Indeed, Rosen and Martin's questions were adapted and posed to cadets in a recent assessment at the United States Military Academy (USMA) at West Point. This work was part of the Project Arete, a five-year longitudinal study which followed cadets through the academy by administering surveys, conducting qualitative interviews, and integrating responses with administrative data about cadet performance (Callina et al., 2017). Some of the data from this project will be used to investigate cadet's self-reports of Acceptance of Women.

Acceptance of Women data provide a metric for determining how successfully female service members integrate into their military roles, and has implications for unit cohesion and combat readiness. These matters may further impact policy and decision making, as leaders respond to possible deficits to guarantee combat strength (Carter, 2015). Implications for women in the military, including West Point cadets prior to entry into active duty, merit further analysis and understanding. For this thesis, it is first important to detail what Acceptance of Women entails, and what theories have impacted the research. It is then necessary to outline pertinent historical changes, within the military at large and West Point specifically, for female service members. Next, a discussion of barriers to acceptance and how they differ by military and USMA populations allows for deeper understanding of usefulness of the current study. Finally, a recognition of the strengths and necessity of integrated units frames the current study.

Acceptance of Women

Rosen et al. (1996) first sought to determine if variations in the percentage of female service members within combat service support units, as well as the degree to

which they were accepted by their units, would have an impact on overall unit cohesion and readiness. The focus on ratios of women to men was based on the work of Kanter (1977), who proposed that when women make up less than 15% of an organization, their token status becomes more important to their acceptance in the dominant group than their individual characteristics. She further postulated that, until women make up a “tilted” ratio of about 35% of the organization, they will have difficulty affecting the group culture and being viewed as individuals. Other scholars challenged Kanter’s theories for not recognizing the impacts of organizational and societal sexism (Yoder, 1991), but her work nevertheless framed the understanding of acceptance of women. Rosen et al. (1996) tested the validity of sex ratios and organizational functioning as measured by unit cohesion and acceptance of women rates, amongst other variables.

Questions targeting acceptance of women were generated following field interviews with Soldiers, and sought to measure perceptions of women’s work contributions and respondents willingness to work with women. Data were gathered from roughly 1,500 male and female Soldiers across 19 companies, with the proportion of women among the junior enlisted ranks ranging from 7%-59% with an average of 23%, and female Non-Commissioned Officers (NCOs) comprising 0-41% with an average of 16%. Rosen et al. (1996) determined that women more readily accepted their female peers as competent service members than did their male counterparts, and that gender ratio did not have a significant impact on unit cohesion at the company level. Rosen and Martin (1997) replicated these findings the following year when studying these variables with different participants. Their research suggested that women were better integrated and accepted in units following the repeal of the “Risk Rule;” however, there was also an

increase in field training requirements in units with more women, potentially indicating fears that women were not as capable as their peers and thus required more training.

Acceptance of women has important implications for the functioning of units as well as the thriving of female service members. It is important to note that women may not directly influence their acceptance. For instance, Kanter (1977) proposed that differences between token females and the majority are often exaggerated and transformed to fit into pre-existing stereotypes about their performance. Despite their demonstrated capabilities, female service members may face limitations due to the effects of these stereotypes. Furthermore, the environment, especially leadership, plays a role in acceptance of women. Rosen and Martin (1997) found that units with poor leadership often had lower rates of Acceptance of Women and higher rates of sexual harassment.

Changes in acceptance of women has not been linear throughout history; indeed, even between the first and second studies by Rosen and associates, significant policy changes occurred and were reflected in Soldier attitudes (Rosen et al., 1996; Rosen & Martin, 1997). To understand how acceptance of women has changed due to policy, it is necessary to examine U.S. government regulations relating to female military service. Furthermore, because the sample population in this research is USMA cadets, a brief analysis of women's integration there is also necessary for holistic understanding.

A Brief History of Women in the U.S. Military

As previously noted, female citizens have been involved in every conflict since the beginning of war. Their contributions in support of battle predates the United States, as women have always filled logistical positions such as cooks, washers, and message transporters. These roles are often historically overlooked as necessary to the conduct of

war, and in fact, supporting roles only gained military legitimacy when men began to fill them in professional armies (DeGroot, 2001). In the first two centuries of the United States, women's involvement in armed conflict was perceived as necessary to fill vacancies left by men fighting at the front. Though occupying roles previously held by men, women rarely attained the same rank, wages, or benefits despite similar job requirements or duties (Murdoch et al., 2006). Women's service was first formally codified in 1901 through the Army Reorganization Act, which established the Army Nurse corps (Kamarck, 2016). Women were not fully integrated into the "standing" military, however, until the 1948 Women's Armed Service Integration Act (Murdoch et al., 2006). This Act allowed women to serve in the armed forces until retirement but capped their numbers at 2% of the force, curbed their career aspirations with restrictions on what positions they could hold, and limited who could be their dependents (Women's Armed Service Integration Act of 1948). Through these restrictive policies, the U.S. Government made it clear that women were not accepted as equals to male service members.

Limitations on women's duty would not change until the Vietnam War again demonstrated how female service members could free up able-bodied men for fighting (Murdoch et al., 2006). Public-Law 90-130 (1967) eliminated the 2% cap on women's service and expanded the rank and positions attainable by women. Following this repeal, military branches slowly eased duty restrictions for positions like pilots and shipmates previously considered combat roles (Kamarck, 2016). In response, the "Risk Rule" was published in 1988 to standardize women's roles in combat across the Department of Defense. The rule barred female service members from all noncombat assignments that

could face exposure to war-fighting through support of combat units (Gebicke, 1998). Women's representation in the service increased from less than 2% in 1973 to almost 12% by 1993 (Rosen et al., 1996). Despite greater representation, however, their acceptance as warfighters was still formally limited through the "Risk Rule."

The Rule was challenged by the realities of warfare during Operation Desert Storm (ODS), where combat lines were too fluid to guarantee women would not face enemy fire. The DoD repealed the Risk Rule in 1993 and replaced it with the "direct ground combat assignments rule," which allowed women into all positions except those with the primary mission of direct ground combat (Gebicke, 1998). This change opened or expanded roughly two-thirds of positions in the army to women (Rosen et al., 1996). Women continued to serve in non-linear battlefields in Iraq and Afghanistan during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) in the early 2000s. These conflicts marked the largest mobilization of troops since ODS, and again demonstrated that women were often placed in proximity of active engagements despite restrictions (Kamarck, 2016).

Congress called upon the DoD to review the roles of women in military units in 2008 (Duncan Hunter National Defense Authorization Act for Fiscal Year 2009) and again in 2011 (Ike Skelton National Defense Authorization Act for Fiscal Year 2011). Following formal reviews and investigations, Secretary of Defense Leon Panetta announced in 2013 that the DoD would rescind the direct combat exclusion rule, pending a "women in service review" to be completed by the end of 2015 (Kamarck, 2016). In December of 2015, Secretary of Defense Ash Carter dictated that full implementation of women into all jobs would happen by January 1st, 2016 (Carter, 2015).

Changes to U.S. military policies dictating and limiting the roles of women may have shifted attitudes regarding the acceptance of women in all roles within the military, and this possibility warrants further study. Moreover, changed attitudes may also be reflected at USMA. The class of 2016 was the first class of women at West Point given the opportunity to enter into combat arms. The class of 2018 were sophomores when this change occurred, and for the classes of 2020 and 2021, women were allowed to serve in combat roles for all four years of their time at the academy (OConnor, 2020, June 10). The purpose of the proposed research is to address the possibility that attitudes regarding acceptance of women have shifted with the change in U.S. military policy by studying four cohorts of male and female cadets from West Point.

A Brief History of Women at USMA

The United States Military Academy was founded in 1802 as the Army's primary source for commissioning officers. Nowadays, West Point commissions roughly a quarter of the officers who enter the active-duty Army each year (Matthews et al., 2009). Although Reserve Officer Training Corps (ROTC) programs at universities and colleges across the country now account for the majority of officers entering the Army, USMA remains a vital institution for implementing Army values and preparing future leaders for service to the nation (US Army Training and Doctrine Command, 2019).

Much like limitations placed on women within the military and Army, USMA formally prohibited the attendance of women until 1976. Congress codified this change in the Stratton Amendment in 1975. It allowed women to attend all service academies, and passed despite some objections that women's presence was inappropriate and could negatively affect morale, as well as concerns that adapting facilities for female cadets

could be cost prohibitive (Diamond & Kimmel, 2002). Gerald Ford signed Public Law 94-106 allowing the admission of women, and roughly nine months later, 119 women arrived as the first trainees at West Point in the summer of 1976. These cadets faced relative isolation, making up roughly 8% of their class but only 2% of the corps of cadets when they were admitted (Lewis, 2020). Female cadets from this time faced notable obstacles with acceptance from their male peers as well as some staff and faculty, and only 62 of those that started graduated in May of 1980 (OConnor, 2020, June 10). In the decades following, female attendance and self-reported feelings of acceptance would gradually increase.

The first female cadet to hold the position of first-captain, the highest leadership position within the corps, was Kristin Baker from the class of 1989. Her noteworthy accomplishment received attention within the academy and the country at large, with some backlash to her holding the position (Foderaro, 1989). Despite many obstacles, she and other women continued to achieve and succeed at the academy, although post-graduation career options were often limited. Indeed, due to previously mentioned restrictions for women in the army, numerous graduates noted a “brass ceiling” that stifled advancement in rank because key leadership positions remained closed to women (Iskra, 2007). Despite these obstacles, women continued to attend USMA in greater numbers, and cultural shifts in acceptance of women were notable (Lewis, 2020).

Many changes for female USMA cadets within the last decade directly corresponded to the changes occurring in the Army. For instance, once combat branches were formally opened to women, the class of 2016 commissioned the first female cadets into these previously-closed positions. Notably, the first women to graduate from Ranger

School, a premiere warfighter experience, were academy alumni. In addition, the first female generals to hold the second-highest military positions of Commandant of Cadets and Dean of cadets were appointed around this time: Brigadier Generals Holland and Jebb, both USMA graduates themselves, assumed these coveted positions in 2015 and 2016, respectively (OConnor, 2020, June 4). West Point Women have attended the academy in steadily greater numbers, filled key leadership positions within the academy and Army at large, and made notable achievements as both cadets and commissioned officers; because of these advances and changes, reports of acceptance of these women merit study.

Brief Overview of Relevant Literature

The implications of historical changes for women in the military at large and USMA specifically have been marked in research. As Matthews et al. (2009) summarized, “social attitudes towards women serving in expanded military roles continue to reflect historical biases and stereotypes” (p. 242). Indeed, many studies have been devoted to understanding acceptance of women in increasingly expanded military assignments, and note themes within the general population, through segments of the military, and among cadets specifically. This research provides important insight into the current cultural environment faced by West Point cadets, as well as context for why proper integration of female leaders into expanded roles is important.

Many of the concerns raised following the lifting of restrictions on women’s service in combat roles seemed to fit into general themes: Women are not physically or mentally/emotionally capable of the tasks required of these jobs, presence of female Soldiers would negatively affect unit morale or cohesion, and that traditions would be

ruined. These sentiments are pervasive online, with discussion boards teeming with melodramatic responses of the general American population, as well as those who self-identified as military veterans (Holyfield et al, 2019). Other surveys of service members have found similar results, with self-reports indicating concerns of women's physical capabilities and potential negative effects on their units (Trobough, 2018; Szayna, 2015). These general themes have remained relatively constant (DeGroot, 2001; Ryan, 2006).

However, these themes are not limited to research pertaining to self-reports. Former Secretary of Defense Ash Carter directly addressed concerns about "transparent standards," "physical demands and physiological differences," as well as "conduct and culture" in the 2015 memorandum dictating the expansion of all roles to female service members. These worries have received special attention and research, and warrant further analysis to aid in understanding what obstacles women may face in acceptance in these expanded roles.

Physical aptitude

There has been consistent, general concern about women's ability to fight war due to physiological differences between the sexes. Indeed, concerns about women's "physical strength and stamina" have been regularly cited throughout the debate of opening combat roles to women, often as a deterrent for doing so (Gebicke, 1998). Indeed, the department of defense acknowledged how physiological differences in men and women may result in more injuries for the latter in combat units, but also emphasized ways to mitigate injuries (Carter, 2015). More ideologically, physical aptitude and masculinity are often viewed as directly connected, and many in the U.S. population express concerns that women can only perform in all specialties if standards are lowered

to accommodate them (Holyfield et al, 2019). It is worth noting, however, that conflict has become more technological, requiring less brute strength from Soldiers than was the case in previous wars (DeGroot, 2001).

To assuage concerns relating to fitness standards, the army has attempted to update fitness tests and scoring standards; however, the military and U. S. Senate have clashed at points due to perceived gender biases (Gillibrand & Blumenthal, 2022). Notably, concerns arose that measures for fitness were determined based on male strengths. A pertinent example was requiring a half-pull-up as an indicator of core strength, which, following outside analysis (Hardison et al., 2002), was replaced by the more appropriate, gender-neutral plank (Britzky, 2022). Furthermore, whereas there are five components to physical fitness including cardiorespiratory, body composition, muscular strength, muscular endurance, and flexibility (Caspersen et al., 1985) the Army has tests to measure all but flexibility (FM 7-22), a fitness competency for which women often outperform men (Hoge et al., 2010). Although fitness tests may be based on male strengths, efforts are ongoing to determine appropriate and fair measures of fitness.

Indeed, since the repeal of restrictions on women in combat, the military has established both gender-normed standards, in which physical fitness is measured in terms of effort based on biologically-linked sex differences, as well as gender-neutral standards, where there is no difference made on the basis of sex. Occupational standards are measured in terms of output, meaning men and women must meet the same physical standards in order to be assigned specific jobs (Kamarck, 2016). The Army currently maintains gender and age normed standards for the Army Combat Fitness Test (ACFT), the physical fitness test that Soldiers must pass semi-annually. In addition, the Army

implemented a gender-neutral test in 2017 called the Occupational Physical Assessment Test (OPAT), which determines the military occupational specialties for which new recruits are qualified. The Senate Armed Service Committee has dictated, however, that the Army must create an additional occupational fitness test for combat jobs, with greater requirements than the ACFT and OPAT (Myers, 2022). Despite these new testing standards based on merit, much attention is still focused on physical abilities.

Male service members regularly cited females perceived physical deficiencies as the top reason combat arms should not be opened to women. These concerns persisted even as men reported they had seen women pass warrior-type tasks; such cognitive dissonance may reflect a powerful bias against women (Trobough, 2018). Even female leaders who are perceived as competent and capable by their peers may face concerns related to pregnancy and physical readiness. Stereotypes about women being life-givers and not life-takers may limit their acceptance regardless of physical abilities (DeGroot, 2007). Furthermore, the army still struggles with how to integrate women into combat leadership positions when pregnancy and childbirth warrant restrictions in work and physical training that can last over a year (Hogestyn, 2021). USMA and the other military academies only recently allowed cadets who become pregnant to continue their studies without terminating parental rights (Thayer, 2023). Although pregnancy can temporarily limit a woman's physical readiness, this possibility should not be an outright disqualifier for acceptance of women within military roles.

The hyperfocus on women's perceived physical aptitude within the academy has not been limited to pregnancy. Indeed, since the integration of West Point, much of the research into the differences between male and female cadets has been dedicated to

“women’s bodies,” and perceived deficits they have in fitness and health (Lewis, 2020).

In addition to institutional focus, cadets themselves also exhibited an emphasis on women’s fitness. Female cadet’s physical abilities, as specifically demonstrated in run times and push-up counts during physical readiness tests, were reflected in perceptions of their fitness as well as military suitability; however, men’s physical fitness did not have similar impact on military ratings (Schaefer, 2020). The hyperfocus on female cadets’ bodies can have important impacts, not just on acceptance of women within the institution, but on the women themselves.

The Academy’s “extreme emphasis... on standards of physical fitness and appearance as hallmarks of leadership” causes many female cadets to question their identities as leaders. Self-doubt stemming from perceived physical deficits may impact women’s ability to lead authentically. Indeed, even women with top marks report feelings of doubt and “imposter syndrome” (Lewis, 2020, 315). Acceptance of women rates can be impacted by male perceptions that physically inferior female cadets do not belong, but also could be influenced by women internalizing ideas that they are not capable due to perceived physical deficits.

Culture

Morale, cohesion, and tradition are aspects of military culture that some cynics believe women can negatively affect following their integration into combat-arms positions. Indeed, researchers found an online subculture in which followers espouse that women, and feminism in general, are eroding the capability and culture of the military. This idea of “masculinity under attack” indicates fears of the loss of brotherhood, tradition, and honor (Holyfield et al, 2019). Concerns of erosion of military culture were

also reflected in surveys of special forces Soldiers, as well as from men in less elite Army units, who worried that the mere presence of women could negatively affect how conflicts were resolved, what resources were allocated and, generally, the effectiveness of the unit to perform its mission (Szayna, 2015; Trobough, 2018).

Although concerns of cultural erosion are often highly vocalized, rigorous and timely studies reflecting these claims are not easy to find. In contrast, Rosen and Martin (1997) found that increased presence of women had no significant effect on group-level climate, but the increase did correspond to an increase in acceptance of women.

Comparisons of the repeal of combat restrictions for women might be appropriately made to the military's 2011 repeal of the "Don't Ask, Don't Tell" policy regarding the service of openly gay, lesbian, and bisexual (LGB)¹ military members. Indeed, the latter repeals also drew concerns about "feminization" of the military, with similar arguments related to unit cohesion and physical/mental aptitude; however, by most accounts, this integration has been ultimately successful without weakening the military (Holyfield et al, 2019; McMaster, 2017; Rostker, 2012; Vergun, 2021).

Additional parallels can be drawn between the racial integration of the armed forces and current integration of women in combat roles, where critics again voiced concerns of decreased unit cohesion and morale (MacGregor, 2007). Although racial integration initially faced severe backlash, in the seventy years since, service members of color account for an increased share of military strength- about 40% (Barroso, 2019).

Despite issues that remain with full representation of leaders of color as well as racism

¹ The open service of Transgender military members was not allowed until President Obama signed a law in 2016, which was negated the following year by President Trump. The Biden administration lifted the ban on open transgender service members in 2021, but their status as accepted members of the military remains challenged (Dwyer, 2021).

within the ranks, racial integration has been invaluable to the military's ability to fight and win wars (Bailey, 2023; Cooper, 2020).

Reasons for initial rejection of minorities within the military, whether due to sex, sexual orientation, or race/ethnicity, may stem from biases against outgroups. Prejudice is the negative judgement of others without sufficient justification, and serves as the basis of ingroup-outgroup biases. Allport (1954) suggested that in-groups are any theoretical group in which a member feels they belong; this collective forms norms on which an in-group individual bases their own values. Those not perceived to be in the in-group are determined to be part of the out-group, and may be viewed skeptically or negatively as potential challengers to norms and beliefs. Numerous other studies built upon this research to determine that biases can be implicit (Greenwald et al., 1998), that even incidental similarities can create an in-group bias (Jones et al., 2004) and that competition can increase in-group out-group bias (Kennedy & Stephan, 1977). Kanter (1977) noted in her research that the presence of tokens heightens in-group bias, and this increase may be reflected in military settings. Indeed, women, LGB and racial/ethnic minorities may face difficulties in the military precisely because their presence as "outsiders" challenges the majority ingroup.

In-group out-group bias is not the only prejudice a minority might face; indeed, there are normative and pathological prejudices that may be changed through socialization. Prejudices are shared and transmitted between group members, but individual susceptibility determines the inculcation of these prejudices (Duckitt, 1992). Organizations and institutions may take steps to reduce the spread of prejudices through intentional interventions that reach both groups and individuals. USMA's mission to

develop leaders of character is facilitated by a relational development systems approach, in which the individual within context relationship is acknowledged and supported. Ethics training is combined with character development experiences as well as cadet character strengths to achieve performance outcomes (Callina et al., 2017). USMA's leader development system strives to combat negative effects of prejudices.

Concerns about cultural erosion may be grounded in in-group out-group bias and other forms of prejudice, and concerns may be overstated; nevertheless, they are important to understand and address. Beliefs about how women specifically can affect units, and thus where they should belong, can affect their rates of acceptance. In a study comparing civilian, ROTC and USMA cadets' approval of women in specific military roles, Matthews and his team (2009) found that USMA cadets were most restrictive and civilian college students least restrictive in assigning women to combat jobs. Results indicated that, "although women were effectively integrated into the West Point and ROTC corps of cadets, they may not be perceived as equals in all assignments" (Matthews et al., 2009, 250). Such biases against women serving in formerly-restricted occupations may make their successful integration harder, and effective leadership is necessary to ensure that cultural standards of cohesion, readiness, and discipline are maintained during the ongoing transition (Szayna, 2015; Rosen & Martin, 1997).

Leaders' roles in navigating a changing culture of acceptance while maintaining an appropriate working climate are imperative, and the methodologies they used need to be understood. It is first important to become familiar with these terms. Organizational climate is the shared understanding of policies, practices and procedures, as well as

expected behaviors within an organization. Organizational culture is the shared values, beliefs, and norms, as well as the internalization of these feelings (Schneider et al., 2013).

Leaders play a significant role in establishing an organizational climate, as policies they choose to enforce, or not enforce, correspond with outcomes. Indeed, Rosen and Martin (1997) indicated how important a positive organizational climate is for the acceptance of women, because, in hostile climates, there were increases in cases of sexual harassment and absenteeism as well as decreases in productivity and job satisfaction. McMaster (2017) noted that during the repeal of DADT, leaders' apparent commitment to change, effective communication, and assessment of the climate were some of the instrumental tactics used for the successful implementation of policy. Leaders must be deliberate in fostering an effective organizational culture as well, which they can facilitate through clearly espoused values and goals, commitment to ethics and morals, and emphasis on growth (Warrick, 2017). Understanding the role of leaders in organizational change is imperative to effectively influencing desired outcomes.

Indeed, the Army developed a "leader-first" approach to integrating women into new specialties, in which female officers first integrated into operational units. This action allowed them to "prepare the way" for enlisted Soldiers to arrive, helping establish the appropriate climate for the successful integration of women (Lopez & Sheftick, 2016). Research indicates that subordinates exposed to female leaders report lower levels of bias than those with mere hypothetical experience, suggesting that integrating women may have far-reaching impacts within organizations with low previous exposure to women (Elesser, 2016). Furthermore, whereas the mere exposure effect indicates that the presence of a female leader can help assuage negative stereotypes, the success of a

woman in the leadership position also positively impacts acceptance (Manzi & Heilman, 2021). West Point cadets are on the forefront of ensuring culture is maintained during their integration into the force at large, undoubtedly impacting acceptance of women rates at the academy and beyond.

Necessity of Integrating Women

Integration of women into combat arms is not a luxury of modern times, but rather, a realization of necessity. The military became an All-Volunteer force in 1973 following the end of the draft due to the Vietnam War; this change afforded women more opportunities to serve as the armed forces faced difficulties recruiting enough men (Kamarack, 2016). This trend has continued, and despite previous assertions that women were not necessary in combat positions because enough men remained available to serve (Gebicke, 1998), the DOD still faces recruiting challenges for the all-volunteer force. Numerous senior military members have acknowledged that the military would not be able to function without the women who serve (DeGroot, 2001).

Indeed, the military often struggles to meet recruiting quotas, and fielding all open positions would not be possible without female recruits. Over three quarters of American youth are not qualified for military service due to physical, mental, or legal barriers to entry (Novelly, 2022). Furthermore, less than 10% of young people would consider military service, following a persistent, steady decline in recent years (Phillips, 2022). Americans are divided along political lines for why they believe service members choose to join the military, whereas the Soldiers themselves indicate that benefits and patriotism are their top reasons for entering the service (Krebs & Ralston, 2020). With so few Americans able to serve, and even less so inclined to volunteer, it is imperative that the

military utilize the best service members available to fight and win wars- regardless of their gender.

Female Service Member Unique Attributes

Many arguments against integration of women into formerly closed combat arms positions focus on perceived problems their incorporation may cause; however, far too little of the debate is dedicated to the unique strengths female service members can bring to the fight. Women may have advantages compared to their male peers, which have been demonstrated in previous military conflicts as well as at USMA.

Many researchers have argued that female leaders have advantages in their approaches to problem solving, with women more often demonstrating collaborative and transformational styles that experts laud as the best for organizations (Eagly & Carli, 2003). This approach to leadership has been reflected in the military, where units with female Soldiers, especially those of color, were less likely to escalate tensions with local populations during operations than units with just males. These women volunteered to work with locals, increasing shared understanding and mission success (Miller & Moskos, 1995). Female service members have proved invaluable in engaging with the local population in modern conflicts, often ascertaining information from host nation women which men are unable to obtain for cultural reasons (Denn, 2014). Additionally, the mere presence of women may have a positive impact on the units where they serve, as chances of success increase and males' adverse choices decrease (DeGroot, 2001). Women have proven their benefits to warfare, utilizing socialized leadership advantages and engagement to positively impact their units.

Female cadets may also bring advantages to the institution. Research into personality attributes of USMA cadets found a positive correlation between gender and scores related to agreeableness and conscientiousness. Women may be socially inclined to be more agreeable and conscientious, providing them an advantage in leadership that resulted in women outperforming their male counterparts in cadet leadership positions. Researchers also notably found that female applicants to West Point often surpass their male peers on metrics of academics, athletics, and leadership potential (Bartone et. al, 2002). It is essential that USMA does not squander the apparent talent women bring to the Academy.

In a recent qualitative study of USMA female graduates, the author noted a pattern of greater acceptance of women, with more current graduates noting less pervasive sexism; however, misogyny can still occur, and is almost accepted as part of the process (Lewis, 2020). These findings were also reflected in quantitative research that indicated attitudes at the military academies have become more egalitarian over time, albeit slowly (Ryan, 2006). It is imperative that, with all the reported challenges that women may face in integration, their strengths and necessity are noted as well. Female cadets remain an essential part of USMA and the Army, and thus, the study of their acceptance at West Point truly sets the foundation for their military careers.

The Present Study

My research questions are: does entry into West Point, as determined by class year, relate to self-reports of Acceptance of Women? Furthermore, are the reports of male and female cadets significantly different? My hypothesis is that underclassmen who entered USMA with no restrictions on women in combat have will have higher rates of

acceptance than upperclassmen who experienced female integration in the middle of their experience. Furthermore, I believe self-reported acceptance rates will be higher for female cadets than male cadets, reflecting findings in previous literature (Rosen et al., 1996).

Method

This research will use the Project Arete data set to organize a short-term, cohort sequential study of male and female USMA cadets' self-reported levels for acceptance of women between the 2018, 2019, 2020, and 2021 graduating classes. That is, all data in this thesis are derived from Project Arete, a five year, multi-cohort, cohort-sequential, and mixed methods study of several cohorts of USMA cadets (See Callina et. al 2017 for details).

Participants

West Point Cadets from graduating classes of 2018 through 2021 were recruited for cross-cohort data collection during the spring of 2018 through a regularly-scheduled character development program class. Responses were compiled when the class of 2018 were seniors, the class of 2019 were juniors, the class of 2020 were sophomores, and the class of 2021 were freshmen. Only the data collected from the cadets at these times of testing will be used in the proposed research.

At the time of the survey, administered in the spring of 2018, the class of 2018 included 1,112 cadets (21.8% female), with responses from 272 (18.8% female). The class of 2019 included 1,219 cadets (22.7% female), with responses from 387 cadets (28.7% female). The class of 2020 included 1,320 cadets (21.7% female) with 450 responses (23.1% female). The class of 2021 included 1,229 (24.4% female) with 492

responses (27.4% female). It is important to recognize that the response rates for each class (of approximately 24%, 32%, 34%, and 40% respectively) paired with the sample size allow for pertinent statistical analysis. For the purpose of this paper, data was assumed to be missing completely at random.

Procedure

The IRB for this phase of Project Arete was approved through USMA in February of 2017, in conjunction with Tufts University key researchers. Cadets watched a video from the USMA Superintendent who introduced the project and the study. The facilitator for each class then read a statement about the voluntary and confidential nature of the survey. Cadets were emailed a unique link to take the survey at a time that was convenient for them. This link directed them to an online character and leadership survey consisting of 251 items measuring attitudes, behaviors, and emotions related to character.² This survey was designed to take approximately 30 minutes to complete. Cadets were not compensated for their participation.

Measures

Nine questions regarding acceptance of women were adapted from the work of Rosen and Martin (1998). These questions were adapted to align with West Point language (with the word “cadet” substituted for Soldier). For example, questions included items such as “It seems like male and female cadets have about the same leadership skills” and “Male cadets treat female cadets as equals.” Cadets were instructed to indicate how much they agreed with statements by using a 5-point Likert scale, with 1 = Strongly Disagree and 5 = Strongly Agree. A summary score for this scale (i.e. the mean score

² This procedure section is derived from the dissertation of LTC Andrew Farina, who was instrumental to the Project Arete data set (Farina, 2021).

across the nine items) was computed for use as the dependent variable. This score was created by averaging only items that were answered.

Plan of Analysis.

Using a planned missingness design, participants were randomly assigned to respond to a subset of 75% of the survey. Accordingly, data were assumed to be missing completely at random. Data were analyzed using a 2 x 4 factorial analysis of variance (ANOVA), with dimensions being sex of participant (2: male, female; a fixed effect) and cadet cohort (4; 2018, 2019, 2020, 2021; a random effect) and the score for the acceptance of women scale serving as the dependent variable. Prior to using this ANOVA to assess the questions posed in this research, preliminary descriptive analyses about demographics and distributional qualities of the data set were conducted.

Results

A results section should present answers to the following questions: What score(s), from what analyses, with what participants, will be used to answer what question(s)? Prior to using the above-described ANOVA to answer these questions, I will first provide a descriptive overview of the data set.

Descriptive Analysis

Scale scores for Acceptance of Women were derived from the Project Arete dataset. Frequencies of categorical variables can be found in Table 1. The distribution of the continuous variable, acceptance of women score ($M = 3.69$, $SD = 0.62$), met tests for normality despite some “ocular-inspection” concerns (see Figure 1 for histogram). In addition, the skewness value (-0.238) was greater than two times the corresponding standard error (.073), but the sample size ($n = 1600$) was well over 300, allowing for the

robustness-based assumption of normality. The Kurtosis value was well within four times the standard error (.24 and .15, respectively), indicating non-normality would not be an issue in the computations and interpretation of the results of the ANOVA.

The dataset was tested for outliers (see Figure 2 for boxplot) and case numbers were identified by their z -scores larger than 12.991. Eleven outliers were identified, with ID numbers associated with two male cadets from 2018, one female cadet from 2018, one male cadet from 2019, four male cadets from class of 2020, and three male cadets from 2021. Although these outliers have been identified, they will not be excluded from analysis. The data is robust enough to withstand the few outliers.

To meet other factorial ANOVA assumptions, variance must be approximately equal between the groups. This equality was the case, as the p value for tests of homogeneity of variance were greater than 0.05; however, when running the Levine's test for equality of variances required for the factorial ANOVA with both sex and cohort, the values were all statistically significant ($p < .001$) indicating issues with equality of variance. When observing the means table, it appears that there is much more variance among female responses than males' (see Table 2 and Figure 3). This difference is especially true for female responses in the class of 2018, although this cadet class is also the smallest sample within the dataset. Because the assumption of homogeneity of variance was not met, a Games-Howell test is required once the ANOVA is completed. Despite concerns about homogeneity of variance, the data are suitable for analysis through factorial ANOVA; indeed, the statistic is robust in the face of violation of the attribute of homogeneity of variance.

ANOVA Results

This analysis of variance sought to determine if there was a difference in self-reports of USMA cadets for acceptance of women based upon respondent sex and class-year cohort. Results indicated that there was a statistically significant difference between gender of participants and their self-reports of acceptance of women, $F(1) = 58.51$, $p < 0.001$. Post Hoc tests were not needed for sex due to it being a dichotomous variable. Female responses ($n = 401$, $M = 3.90$, $SD = 0.53$) were more accepting of women than male responses ($n = 1199$, $M = 3.62$, $SD = 0.63$), though it is worth noting that both groups generally accepted women with average Likert scores higher than 3.

Results also indicated that there were no statistically significant difference between class cohorts for self-reports of acceptance of women $F(3) = 0.99$, $p = 0.39$. Furthermore, the final effect tested was the interaction effect of cohort by gender, which proved not to be statistically significant, $F(3) = 0.62$, $p = 0.60$. Post Hoc tests are not necessary for sex because it is a dichotomous variable, and post hoc tests for class cohort further confirmed to statistically significant differences; this includes the Games-Howell test. Effect sizes for class cohort were negligibly small.

Discussion

In this research, I conducted secondary analysis of data from Project Arete (Callina et al., 2017) to determine if there were differences amongst male and female respondents, as well as graduating class cohorts, at USMA. This research was pertinent because of the historical repeal of combat restrictions for women service members, which went into effect in January of 2016. I sought to determine if there was a significant difference between classes for which women were allowed in combat arms for their

duration of time at the academy (Class of 2020 and 2021) and for those where this was a change during their time (Class of 2018 and 2019).

I found there was a statistically significant difference between male and female self-reports of acceptance of women, with female cadets reporting higher rates of acceptance. These results were in line with the work of Rosen and Martin (1997), indicating the relationship between gender and acceptance has remained stable. There were not statistically significant results between class cohorts, nor significant sex-by-class interactions.

Limitations and Future Research

There are many possibilities for why class cohorts rate of acceptance did not significantly differ, including convenience sampling of volunteering cadets, possible homogeneity of the corps class cohorts, potential insensitivity of the measurement instrument, social desirability bias in responses, as well as the methodology of data collection. There are also multiple topics related to the limitations that warrant future research, as well as including assessment of the effect of social contact between male and female cadets, and potential effects of force-branching of cadets into combat arms.

Convenience sampling of cadets allowed for an important study of the target population; however, it is necessary to use caution when applying results from samples to the general population (Etikan et. al, 2016). Cadets were not incentivized to complete the survey, and those who chose to respond may significantly differ from those that did not respond in regards to demographics, engagement, and personality (Porter & Whitcomb, 2005). It could be beneficial to assess demographics beyond gender relating to acceptance of women rates, and for future research, non-response biases could be

analyzed to ensure results are appropriately applicable to the population. Furthermore, it is important to note that these results about the acceptance of women may not be generalizable to other minority or marginalized groups within USMA, and further research would be necessary to determine acceptance of others.

Assessment of differences between classes may not have produced results because the differences between classes themselves may not be significant. Although each class does have a unique motto, crest, and general sense of pride, they still interact with the other class cohorts at the academy and inevitably share in the exchange of ideas and attitudes. Cadets are also generally similar in age. This limitation means that whereas isolating classes may be useful for measurement, in practicality it may not be possible. It is also worth noting that the First Captain in 2018 was a woman and her effectiveness could have impacted acceptance across the cohorts as well.

Insensitivity of the measurement instrument may be cause for no reported differences between the class cohorts. Measures need to be calibrated as capable of assessing change (Lerner, 2018), and the measures in this study did not undergo such scrutiny. Also, there may be limited understanding of the domain of acceptance. For instance, there was no baseline to determine acceptance rates of men, as only rates of women were assessed. This omission of this potential assessment could impact understanding of the data. Furthermore, Rosen and colleagues only conducted research within units that had female Soldiers present, which may have introduced bias into the measure. In addition, quantitative questions alone may not provide a holistic picture of acceptance rates. Some qualitative research has sought to determine female cadets' perceptions of their acceptance amongst the corps of cadets (Lewis, 2020); however,

responses were only gathered from female graduates, and input from recent alumni was limited. Future research could benefit from robust, qualitative assessment of males' acceptance of women as well.

Social desirability bias could also have influenced the detection of differences between class cohorts. Indeed, cadets receive extensive military-ethical training (Callina et al., 2017) and may be inclined to respond to survey questions in ways that reflect the institution's values rather than their own. Furthermore, women have demonstrated a higher social desirability bias than men in responding to ethical decision making in previous research (Dalton & Ortegren, 2011), and future research should ensure responses are comparable for all respondents across gender.

Finally, surveys were distributed not when women were first allowed to enter combat arms, but two years later, meaning attitudes may have already had time to shift. Moreover, although the official lift of restrictions occurred in 2016 and was used as the point of measurement for this study, earlier classes had indications that the change was coming (Kamarack, 2016) and may have already adjusted their collective norms. Indeed, if a researcher wanted to isolate the potential changes in cadets' acceptance of women following repeal of restrictions in combat arms, a longitudinal study with responses both before and after the repeal, or announcement of the repeal, would be most appropriate; however, the survey was administered in the spring of 2018, so a cross-sectional analysis was done to attempt to assess gender differences in acceptance of women. This limitation means that the aims of this project may not have been adequately met. The data used were not longitudinal, so it is inappropriate to theorize that duration of time at the

academy impacts acceptance. In future studies, it would be beneficial to track responses in a longitudinal way.

Future research could benefit from studying the direct interactions between male and female cadets; indeed, the assignment of women to certain squads and platoons may afford some male cadets more opportunities for exposure to female leadership than others, an important potential metric for measure. In addition, some academic majors and departments (Powers, 2019) potentially skew female, and for similar reasons, warrant further analysis. Moreover, research could assess which branches of the army cadets wish to enter, and evaluate if differences exist for those who self-select into combat arms branches. There are numerous topics related to exposure and self-selection that merit future research.

Furthermore, for future studies, it would be advantageous to follow cadets from the academy into active-duty service. Concerns have specifically been raised that, to meet potential quotas, female cadets may have been slotted into combat arms branches despite having no desire to be there; this action could have impacts on their performance in these roles, and in turn, affect levels of acceptance of women in their units. Though USMA reports that a vast majority of cadets receive one of their top choices for branch (OConnor, 2019), further research could be dedicated to the concept of force-branching and how it affects careers of both men and women.

An ideal future study, without regard for realistic limitations, would first maximize participation from all cadets. Although compulsory responses could bias results, increasing participation through incentives could provide results more indicative of the population. A future study of acceptance of women could measure beyond the

Rosen and Martin (1998) scale; it could seek to measure implicit biases in order to minimize social desirability responses, and could also include qualitative, free response questions to provide context to answers. Surveys could request information about exposure to female cadets in academic and leadership settings, and also request information about female officers and other influential service women in cadets' lives. Surveys could ask questions related to male acceptance in order to provide a comparison, and could also ask questions related to other minority statuses. Finally, surveys could be given multiple times through a cadets' time at the academy to measure if changes occur, and ideally even afterwards to determine if acceptance rates differ after commissioning.

Although there were many methodological limitations to this research that could be addressed in future study, the findings of this study nevertheless suggest that, overall, both male and female cadets are accepting of women. Despite gender differences, the trend of accepting women has potential positive impacts on the corps of cadets and army at large. There is still room for improvement of acceptance rates, and decision makers can work towards more equitable rates of acceptance. Indeed, this finding may serve as the basis for future policy decisions at the academy and beyond, as leaders can evaluate and adjust existing programs related to acceptance of women. This research also provides a baseline for future work. Responses show cadet willingness to respond to sensitive issues, which may benefit future researchers with other topics.

The suggestions this author would make to USMA, based on the findings of this study, are multi-faceted. The most important appears to be that cadets would benefit from greater exposure to women. There should be a deliberate process to ensure that all cadets interact with female peers at the platoon-level or lower, as this mere exposure can shift

attitudes. Furthermore, cadets need consistent interactions with female officers at the academy, who can serve as role models from their positions as instructors, TACs, and advisors. Although the currently study did not collect information on acceptance of women in these formal positions, their potential impact should not be disregarded.

Cadets will also benefit from continued instruction, both formally and informally, on the organizational climate and culture of USMA and the military. Cadets should continue to receive Professional Military Education related to the policies of female integration and acceptance, especially those outlining the support for protected status individuals in the Equal Opportunity (EO) program. Cadets should also receive instruction and emphasis on their responsibilities in maintaining culture and climate as current and future leaders. The PL300 “Military Leadership” course is a great vehicle for this training, and instruction can specifically mention EO support within organizations.

Conclusions

Overall, despite its limitation, this study is important. It is useful in at least three ways: 1. It demonstrates that topics such as the ones addressed in the present research can be studied among USMA cadets, particularly in respect to investigating sensitive issues. 2. Despite limitations, the study offers baseline data against which future studies can be judged. 3. Finally, this study, although limited, provides a basis for study among West Point leadership; as such, this research may be a basis of change in instruction and policy. If warranted, such changes can affect other academies and institutions as well.

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Table 1*Respondent Sample Sizes and Sex By Class Year.*

Population	Class of 2018		Class of 2019		Class of 2020		Class of 2021	
Gender	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Male	870	78.2	942	77.3	1,034	78.3	929	75.6
Female	242	21.8	277	22.7	286	21.7	300	24.4
Total	1,112	100	1,219	100	1,320	100	1,229	100
Respondents	Class of 2018		Class of 2019		Class of 2020		Class of 2021	
Gender	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Male	221	81.2	276	71.3	346	76.9	357	72.6
Female	51	18.8	111	28.7	104	23.1	135	27.4
Total	272	100	387	100	450	100	492	100

Table 2*Means Table for Acceptance of Women by Class Year and Sex.*

Cohort	Sex	<i>n</i>	Mean	Std Dev
2018	Male	221	3.7211	.63760
	Female	51	3.9359	.73418
	Total	272	3.7614	.66071
2019	Male	276	3.5693	.61956
	Female	111	3.8934	.51630
	Total	387	3.6623	.60908
2020	Male	348	3.5745	.64239
	Female	105	3.9159	.47767
	Total	453	3.6536	.62457
2021	Male	354	3.6286	.62349
	Female	134	3.8799	.47895
	Total	488	3.6976	.59751
Total	Male	1199	3.6163	.63240
	Female	401	3.9002	.52598
	Total	1600	3.6875	.61966

Figure 1

Acceptance of Women responses for USMA classes 2018-2021 normality distribution

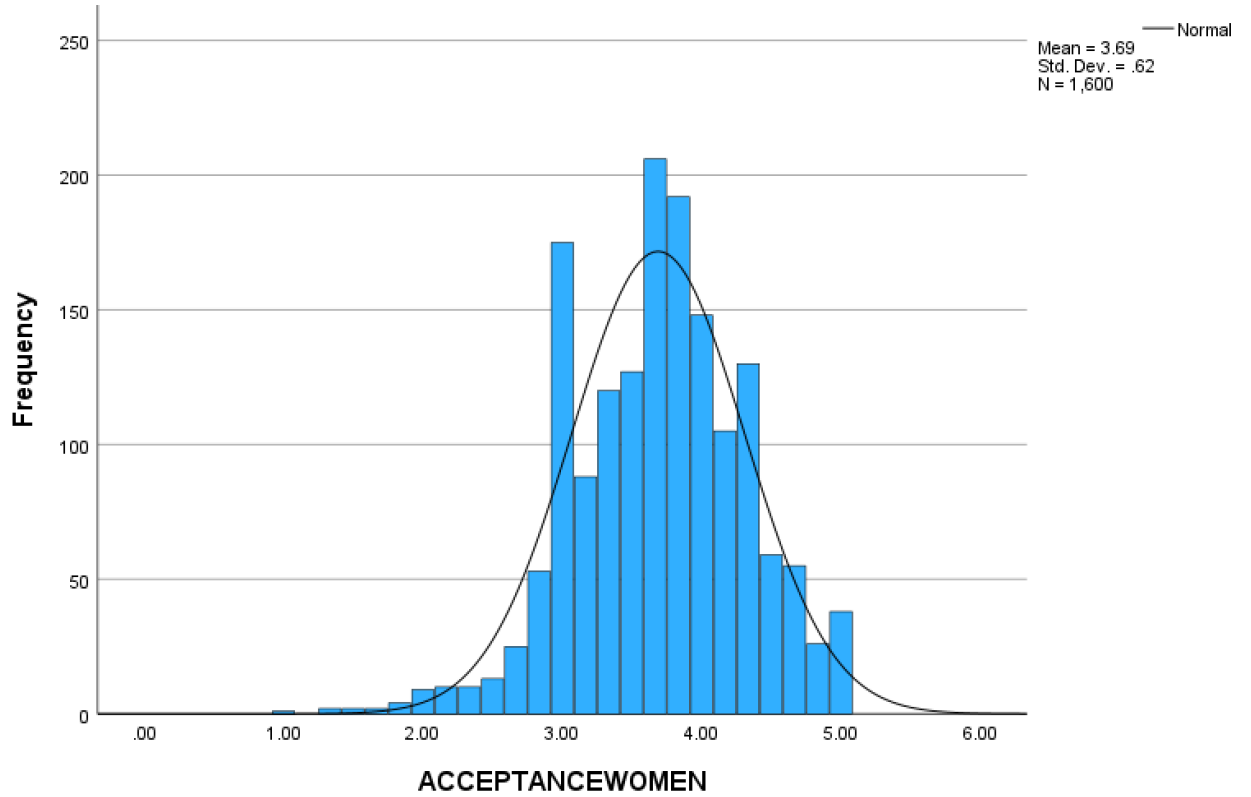


Figure 2

Acceptance of Women responses for USMA classes 2018-2021 Scatterplot

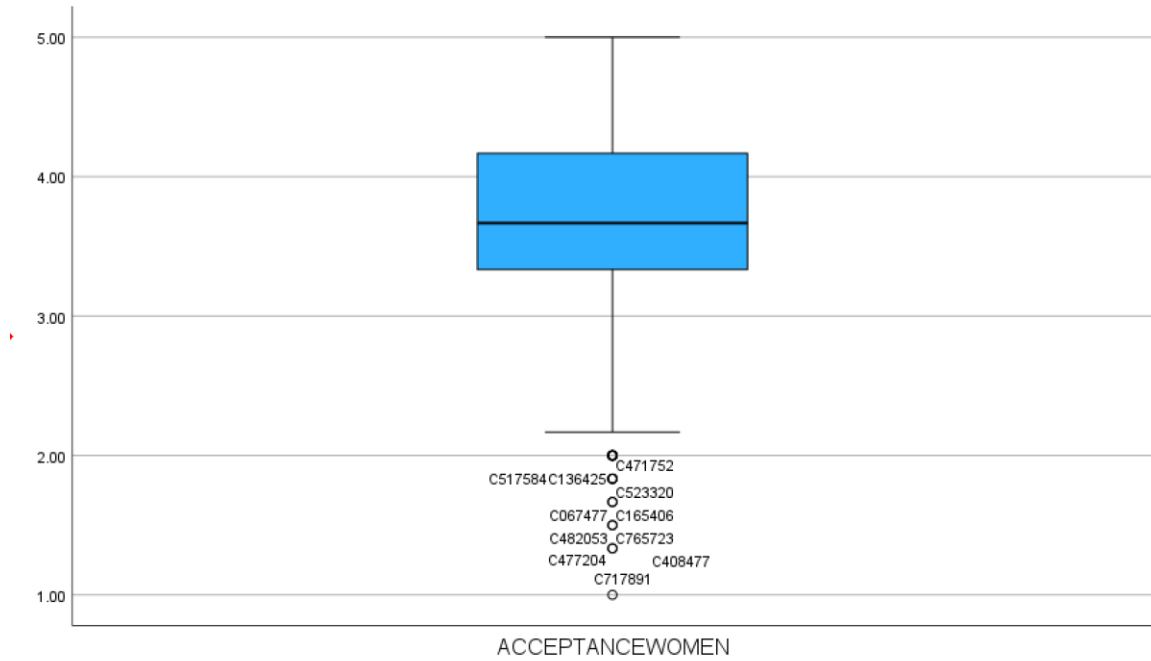


Figure 3

Acceptance of Women Rates by Sex and Class Year

