Gender Effects on Soldier Value: Evidence in Support of Full Gender Integration in the US Army

By Todd Woodruff & Ryan Kelty

On January 24, 2013, US Defense Secretary Leon E. Panetta and Chairman of the Joint Chiefs of Staff General Martin Dempsey announced the decision to rescind the Department of Defense regulation that excluded women from being assigned to units “whose primary mission is to engage in direct combat on the ground” (Aspen, 1994, p.1). With respect to the Army, this regulation prohibited women from serving in infantry, armour, and field artillery units. All branches of the armed forces have been directed to conduct a review of the current positions closed to women and provide a detailed plan to implement full gender inclusion. The target date for execution of full integration of all military specialties is January 1, 2016. Now that the decision has been made to remove gender-based exclusion for military specializations, it is an ideal time to explore the ways in which women add value to the military both as a baseline in advance of the large changes to come, and as a means to provide insight into how these changes may affect the military as it moves forward.

This article examines gender differences among US soldiers to determine whether and to what extent gender may affect identification with the military and the enactment of pro-organizational behaviours. These two foci provide a lens through which to understand current gender differences in orientation to the American military and value provided to the military organization.

Gender Integration in the US Military

The advent of America’s all-volunteer force in 1973 removed the 2% cap on women’s military participation during the conscription era and resulted in a fourfold increase in female service members by 1980 (8.8%, 151,000 women: Segal, 1989). As of 2011 women comprised approximately 14.5% of active duty personnel (Morin, 2011). During this transformative period, research has documented a significant increase in support for women’s participation across military specialties – non-combat as well as combat positions. Despite these advances, significant differences remain between support for full female integration in the military between males affiliated with the military and male civilians. Women show consistently strong support for full gender integration regardless of military affiliation status, and their attitudes are significantly more positive than those of their male peers (Matthews et al., 2009).

1 The Department of Defense Secretary memorandum on Direct Combat Definition and Assignment Rule specifically states that “women shall be excluded from assignment to units below the brigade level whose primary mission is to engage in direct combat on the ground” (Aspen, 1994, p.1).
2 Cf. Cheatham, 1984; Larwood et al., 1980; Matthews et al., 2009.

Published in Res Militaris (http://resmilitaris.net), ERGOMAS issue n°1, Women in the Military, Part One, September 2015
Senior military leaders are committed to executing full integration of women without compromising the military’s “pursuit of excellence” (Senior Army Leaders, 2013). To accomplish this task, there is clear consensus on using gender-neutral, standards-based criteria to establish necessary qualifications for specific military specialties. The gender-neutral aspect of the approach to establishing standards for military specialties in a fully integrated military is critical both for accomplishing mission-essential duties as well as for sociocultural issues related to fairness, trust, and cohesion (Kelty et al., 2010; Synder, 2003).

The official decision to lift the ban against women in combat roles has not ended the debate concerning women’s ability to serve in these roles or the value created by doing so. Concerns voiced by opponents of full inclusion related to physical ability (Cohn, 2000), privacy issues and fraternization (Armor, 1996; Synder, 2003), and unit cohesion (Harrell & Miller, 1997; Woodward & Winter, 2006) are important considerations in light of the historic change under way in women’s military participation. An alternative, powerful set of questions involves an examination of the value of establishing a fully gender-integrated military. In other words, if physical ability is effectively controlled for through proper qualifications standards and appropriate privacy and social standards are met, what effects might gender have on key indicators of value to the organization?

**Personnel Value in the Military**

The degree to which a person has goals that are aligned with the organization’s, is identified with an organization, and enacts pro-organizational types of behaviour has a strong impact on that person’s value to the organization. One way to examine the value of women in the military is to examine the effects of gender on these factors and their antecedents. In other words, does gender play a role in why people enter the military, their identification with the military, and the enactment of pro-organizational behavior? This research addresses this set of questions through two related theoretical lenses: organizational identification theory, which is a form of social identification, and goal theory.

Strong institutional identification and pro-organizational behavior have great benefit to the military. Identified members perceive a sense of “oneness with or belongingness” with the organization (Mael & Ashforth, 1992, p.104) and tend to evaluate themselves relative to

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3 “Gender-neutral” refers to standards that are the same regardless of sex. This should be understood in contrast to standards that use gender-normed criteria. Historically, the military has used various gender-normed standards for various assessments (for example, in assessing physical fitness – women’s two-mile run times would be compared to the female population’s distribution to determine their fitness level, and the same for men, rather than having a single standard that both sexes are evaluated against).

4 See the guiding principles provided by the Joint Chiefs of Staff, which includes “[v]alidating occupational performance standards, both physical and mental, for all military occupational specialties (MOS), specifically those that remain closed to women. Eligibility for training and development within designated occupational fields should consist of qualitative and quantifiable standards reflecting the knowledge, skills, and abilities necessary for each occupation” (Department of Defense Public Affairs, 2013).
the attributes, characteristics, beliefs, values, and behaviour of the organization (Reed, 2002; Stets & Burke, 2000). The stronger this identification, the more it influences perceptions and behaviours of importance to the organization and the more individuals tend to reinforce their identity by engaging in relationships and enacting kinds of behaviour consistent with the identity (Oakes, 1987; Stets & Burke, 2000). Identification is most likely to occur when the individual self-categorizes with the organization and fulfils self-definitional needs through organizational membership (Ahearne et al., 2005). This tends to occur when the organization is perceived to have prestige or a desirable image (Mael & Ashforth, 1992; Dutton et al., 1994), and when the member receives social satisfaction from his or her membership (Arnett, German & Hunt, 2003; Woodruff, 2013).

Prior meta-analyses focused on civilian work contexts suggest that gender has a minimal effect on organizational identification and organizational citizenship behaviour (Riketta, 2005; Organ & Ryan, 1995). The military context, with its unique mission, masculine culture and limited female representation, may not follow this pattern. Given these conditions, gender could affect perceptions of the military as prestigious and distinctive and a person’s satisfaction with social relationships.

There are a number of behaviour types that are believed to be critical to the military’s success. Some of these behaviours are also discretionary and should reflect relationship quality better than compulsory ones. These pro-organizational behaviours include retention, providing positive word of mouth (WOM) to others about the military, sacrificing for the mission or organization, use of military services, and participation in voluntary organizational activities. Although this set of membership behaviours is not exhaustive, they are among the more important behaviours in terms of their value to military.

Retention and providing positive WOM across one’s social networks are particularly important behaviours. While retention is critical to almost all organizations, it is especially important to the military because they cannot laterally hire leaders, so it must retain and develop them from a point of initial entry. Providing positive WOM can have salutary effects on retaining current members, the recruitment of new members, and generating positive attitudes toward the institution among the civilian population. In the case of the military, WOM is critical because it tends to be one of the most important factors in inducing military enlistment and has greater influence than the combined effects of recruiters and advertising (Lehnus & Lancaster, 1997). Decisions to access military services and to engage in Army related discretionary activities are associated with soldier/family quality of life, resiliency, cohesion, and identification with the Army and its mission.

5 The military formally recognized the power and value of WOM by instituting an incentive programme, the Army Referral System/ Sergeant Major of the Army Recruiting Team (ARS-SMART), for current military members to help recruit new members through WOM.
Sacrifice is one of the behaviour patterns of greatest interest given the full integration of women into combat specialties. Perhaps the most powerful measure of sacrificing behaviour is the willingness to risk one’s life or health for the needs of the mission. Nowhere is willingness to sacrifice more important than in those ground combat positions previously closed to females, which the military considers most central to their mission and the most hazardous to the individual. It is important, therefore, to understand whether gender differences exist in willingness to sacrifice.\(^6\)

Gender may also affect a person’s goals. Goals represent desired outcomes in an individual’s life, towards which the person is directing effort or expecting to do so (Gable, 2006, p.180). As such, the goal functions as a reference point affecting the evaluation of information, emotions, and behaviour.\(^7\) Goal theory suggests that membership goals (the goals people seek to fulfil through membership in an organization) will affect how individuals perceive the military, their satisfaction with the military, the quality of their relationship with it, and the enactment of discretionary pro-organizational actions. This occurs because, cognitively, information, options, and behaviour related to the organization are evaluated against the person’s membership goals. Information and behaviour that are relevant and believed to contribute to the person’s membership goals are evaluated positively, while the opposite is true for information and behaviour that are irrelevant or inhibit the goal (Brendl & Higgins, 1996).

Intrinsic membership goals, such as personal self-enhancement and altruistic service, are usually associated with more positive perceptions of the organization, higher levels of social satisfaction, increased organizational identification, and frequent pro-organizational behaviour (Woodruff, 2013). Conversely, economic membership goals tend to be associated with less positive perceptions of the organization, higher levels of economic satisfaction, decreased organizational identification, and rarer pro-organizational behaviour (Woodruff, 2013).

Prior research has identified several goals that motivate military service. Early work identified institutional versus occupational orientations to service, with the former represented by traditional values such as duty, service and honour. Conversely, self-interest and external incentives are hallmarks of occupational motivations (Moskos, 1977). More recent studies have identified numerous factors motivating enlistment to include adventure, civic duty, money for college, financial support, desire to serve in the military, patriotism, lack of better employment options, benefits, dignity, acquiring job skills, developing personal discipline, increase self-

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\(^6\) DoD data indicate that as of January 2013 more than 150 female service members have given their life in support of OIF/OEF (Fischer, 2013). Women have also sacrificed with respect to “invisible wounds” of war in these conflicts, reporting higher rates of PTSD and depression than their male counterparts, even “after controlling for differential trauma exposure and other factors in multivariate analyses” (Tanielian & Jaycox, 2008, p.98). While this speaks to actual physical and psychological sacrifice, it does not address the attitudinal willingness to sacrifice that is the focus in the current study.

\(^7\) Fishbach & Ferguson, 2011; Kruglanski \textit{et al.}, 2002.
esteem, and the challenge of military service.\textsuperscript{8} Factor analysis typically identifies four or five underlying constructs for these motivations.\textsuperscript{9}

Patten and Parker’s (2011) work is the only study found that examines enlistment motivation by gender among active duty personnel since the conflicts in Afghanistan and Iraq began. Their findings indicate women’s motivations for military service are remarkably similar to those of men, but they also caution about the external validity of their gender-based findings since their sample of 1,853 included only 135 females. Thus, assessing whether and to what extent gender difference in enlistment motivations exists among contemporary soldiers is a timely sociological question with important policy implications.

**Conceptual Model**

The conceptual identification-membership goal model (Figure 1) advanced for this study is based on the research of Mael and Ashforth (1992), Fishbach and Ferguson (2011) and Kruglanski et al. (2002). The model identifies goal and attitudinal variables that affect pro-organizational behaviour either directly or through the intervening variable of identification. Further, membership goals are identified as influencing the other model constructs. Inclusion of these membership goals is one of the unique contributions of this study since prior organizational identity studies do not consider the effects of goals.

**Figure 1**: Identification-Membership Goal Model

\textsuperscript{8} Cf. Baker, 1990; Eighmey, 2006; Griffith & Perry, 1993; Lawrence & Legree, 1996; Woodruff et al., 2006. While both Griffith & Perry (1993) and Eighmey (2006) analyze a gender effect on enlistment propensity/behaviour, these studies do not use comparable data to the active-duty military personnel data in this study. Griffith’s data was collected from Reservists a decade prior to OEF/OIF and Eighmey’s data is from 15-21 year-olds with no formal military affiliation, or commitment for military service, on their attitudes toward service. Further, Woodruff et al. (2006) surveyed all male units, and Lawrence & Legree (1996) is a review of literature predating Operations Enduring Freedom and Iraqi Freedom.

\textsuperscript{9} For example, see Griffith & Perry (1993) and Woodruff et al. (2006); each identifies four underlying enlistment motivation factors. Baker (1990) identified 7 factors.
The second major contribution of this paper is to assess whether and to what extent gender may influence the relationship between organizational identification and membership goals in the military context. There are several reasons why membership goals may vary by gender. First, the Army has limited the war-fighting role of women in the Army, which could affect female soldiers’ ability to fulfill elements of the intrinsic goals used in this study. Additionally, the combination of gender-blind pay and benefits in the US military and the gender gap for pay in the civilian employment sector may create gender-based differences in economic goals held by soldiers. If present, these differences could affect perceptions, satisfaction, identification, and behaviour.

This study therefore seeks to identify whether there are differences between male and female soldiers in their perceptions of the Army, their level of social satisfaction, their identification with the Army, and their general willingness to enact pro-organizational behaviour as represented by a second-order factor that includes reenlisting in the Army, providing positive WOM referrals to others about the Army, voluntary participation in discretionary events, using Army services, and sacrificing for the Army or its missions. Since much has been made in debates on women in military service over their willingness and ability to put mission before self, sacrificing is one of the behaviours of greatest interest in assessing gender differences as the military moves toward full gender integration.

Methods

This study uses a sample of active-duty US Army soldiers drawn from a population of roughly 400,000 as of September 2011. Data were collected using two sampling methods: simple random sampling from the full relevant population, and sampling of operational units using a method similar to stratified cluster sampling. This multiple source data helps prevent some of the issues related to single-source, self-reported data (Podsakoff & Organ, 1986).

Simple random sampling was used to select individuals who then received individual email invitations to participate in a web-based survey. One quarter of those sampled completed the instrument, resulting in 610 usable surveys. In addition, three Army organizations were sampled to reflect the Army’s variation in mission type and deployment status. One sampled unit was deployed in a combat zone, another had just returned from a combat zone deployment, and the third had spent the previous year at its home installation in the US. These organizations included both combat arms units that engage in direct combat with the enemy (e.g. infantry, armour, field artillery) and non-combat arms units that provide service and support (e.g. logistics, communication, transportation) for the former. Response rates were between 69% and 90%, resulting in 481 usable surveys. After testing the survey data for invariance (Byrne, 2001) and comparing them against population statistics, the samples were

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10 Source: Department of Defense, Statistical Information Analysis Division, 2014.
combined to create a total sample of 1091 soldiers, which closely reflects Department of Defense population statistics. 11

**Focal Measures**

Construct definitions for focal study variables are consistent with extant theory in social psychology; all scales and most items were adapted from existing measures with good psychometric properties. 12 Items were assessed for content and face validity using panels of expert judges (Netemeyer et al., 2003), and included use of a Q-sort, which demonstrated strong consistency, with over 90% agreement between respondents. The survey was then pilot-tested using an independent sample, and the data were analyzed using principal components analysis (PCA), and confirmatory factor analysis (CFA), which affirmed the item and factor structure suggested by theory and PCA.

PCA indicated items loaded as hypothesized at 0.725 or higher, with no cross-loadings exceeding 0.250. CFA of the final first-order measurement model produced strong fit (CFI = 0.977, RMSEA = 0.035 and $\chi^2$ = 435.408, df = 173), meeting the prevailing recommendations for CFI and RMSEA (Hu & Bentler, 1999). All scales had reliability scores above 0.7 and the survey itself was analyzed for patterns of non-response or any other indications of problems. Lastly, the model was adjusted to include three second-order factors and again tested using CFA: a general economic satisfaction factor, an economic membership goal factor, and a pro-organizational behaviour factor (CFI = .966, RMSEA = 0.040, $\chi^2$ = 1703.5, df = 620), with all loadings reaching significance.

The survey used seven-point Likert scales that asked the respondent to rate their level of agreement or disagreement (1 = strongly disagree and 7 = strongly agree). One exception is the measurement of Word-of-Mouth (WOM), which used a balanced seven-point scale to measure disagreement/agreement ranging from -3 to 3.

Membership goals were assessed using indicators of both intrinsic and extrinsic reasons for joining the Army. The intrinsic membership goals included both an altruism/self-transcendence (patriotic) goal and a self-enhancement goal. The altruism/self-transcendence goal reflects a desire to serve the organization or its cause (four-item scale; $\alpha$ = .930). The three-item self-enhancement goal reflects a belief that association with the organization will lead to actual or perceived improvement of character, maturity, or values associated with the organization ($\alpha$ = .900). It does not include acquiring new skills or training.

The extrinsic membership goals are twofold and focus on immediate and deferred benefits, respectively. The pay goal reflects an immediate need for economic security and a steady income ($\alpha$ = .912). Deferred rewards, in the form of future employment goal, reflect a

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11 Defense Manpower Data Center, Statistical Information Analysis Division, 2011.
12 Summary of scales’ psychometric properties are available from the authors upon request.
desire to acquire skills and experiences that will make the individual more marketable for employment outside the current (Army) membership context ($\alpha = .911$).

Organizational prestige was measured using a four-item scale\textsuperscript{13} assessing the degree to which the organization is well-regarded, respected, valued or admired by others in absolute and comparative terms ($\alpha = .920$). Organizational distinctiveness is the degree to which it is unique and distinguishable from other organizations, particularly from competing organizations (Dutton \textit{et al.}, 1994). This scaled item is also comprised of four items\textsuperscript{14} ($\alpha = .874$).

The model includes both economic and social satisfaction measures adapted from Geyskens and Steenkamp’s (2000) scale. Economic satisfaction is operationalized as pay and future employment. The pay scale has three items and the future employment scale has four items, with alpha reliability coefficients of .912 and .911, respectively. Social satisfaction is the member’s evaluation of the personal contacts and interactions within, or enabled by, the organizational membership ($\alpha = .897$).

Organizational identification implies a psychological connection and a sense of oneness with the organization, in that the individual classifies or defines him/herself in terms of the organization, and the individual would feel some psychological reaction if the connection to the organization was lost or the organization threatened. Members’ identification with the Army (the focal organization) was measured using five items adapted from Mael and Ashforth’s (1992) scale ($\alpha = .907$).

Five factors were included in this study to assess various forms of pro-organizational behaviour: retention, positive word of mouth, service use, participation, and sacrifice. Retention intention was measured using a three-item scale used by the Army to assess retention likelihood among soldiers ($\alpha = .932$). Word of mouth measures soldiers’ positive or negative verbal representation and support of the Army ($\alpha = .903$) using a balanced seven-item scale adapted from Arnett \textit{et al.} (2003). Use of services was assessed using a seven-item scale designed to measure the use of Army provided services that are intended to limit financial burden and increase quality of life for soldiers and their families ($\alpha = .883$). The participation intention scale measures soldiers’ beliefs that they would attend discretionary events that benefit their unit or the Army and consists of three items ($\alpha = .866$). Sacrificing intention measures the soldier’s willingness to take actions for the benefit of the organization or its mission that are hazardous, disliked, or create hardships ($\alpha = .941$).

Demographic and context-specific variables include gender, age, rank, race, education level, marital status, number of children, and occupational specialty. Additionally, many of the respondents are deployed to combat theatres and/or have been previously deployed to active combat zones. To control for the effects of this experience, both the current deployed status

\textsuperscript{13} Cf. Bergami & Baggozi, 2000; Mael, 1988; Mael & Ashforth, 1992.

\textsuperscript{14} Mael & Ashforth’s scale, 1992.
deployed, not deployed) and the total number combat deployments are included as controls in the model.

**Sample Characteristics**

The sample is comprised predominantly of unmarried (62%) men (86.5%), with a mean age of 28 years, two-thirds of whom have at least some college education. Participants are predominantly Caucasian (62%), with 15.5% African-Americans, 12% Hispanics and another 10.5% identifying with one of the other racial/ethnic minorities. In terms of military service, the sample has an average of 5.7 years in service, just under half (43.5%) are enlisted in combat specialties, and on average have 24 months of combat deployment.

**Plan of Analysis**

This study uses structural equation modeling (SEM) to identify if model factors vary by gender in their latent means (membership goals, organizational perceptions/satisfaction attitudes, organizational identification and pro-organizational behaviours), to test for a direct effect of gender on these model factors, and determine whether gender moderates the relationships among these factors (see Figure 1, p.5). Specifically, this analysis will assess the effects of gender on organizational membership goals, identification constructs, and discretionary behaviours among soldiers using a multiple-step approach.

In the first level of analysis, examination of latent means includes two pairwise comparisons (male combat arms with females, and male non-combat arms with females), which were run for every model construct (all males: n=944; non-combat specialty males: n=488; and females: n=151). This is done in order to compare men and women in general, as well as to compare women to men who serve in non-combat arms specialties – i.e. positions that are currently open to women. Second, the direct effect of gender was assessed by including gender in the identification-membership goal model (along with occupational specialty and other control variables) and assessing its significance and relationship strength (being female) on all other model constructs.

The third level of analysis examines whether gender moderates the relationship between the constructs in the identification-membership goal model. This is accomplished through multi-group analysis using ‘male combat arms’, ‘male non-combat arms’, and ‘female’ groups. Model paths were freed to vary across groups and then fixed as equal across groups one at a time, which yields a chi-square difference score for each path. Paths that do not exhibit statistical difference are fixed as equal. A significant difference indicates the path is

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15 A significance level of .10 was used (based on the different sample sizes), with a Bonferroni adjustment for two post-hoc tests, yielding a significance level of .05 for these tests. Prior to this testing the three groups were assessed for scalar and metric invariance to ensure the groups could be meaningfully compared. These tests showed that both types of invariance were present and that the ‘female’, ‘male combat arms’, and ‘male non-combat arms’ groups can indeed be meaningfully compared.
moderated by gender or combat specialty, depending on which pairwise comparison is significant. Each of the paths with a significant chi-square value (those paths that differ in some way between groups) is then compared pairwise using the unstandardized path estimates and standard errors to compute Z-scores for the path difference among the three groups. This analysis allows us to determine whether the differences observed are an artifact of structural differences (combat versus noncombat specialty) or attributable to gender effects.

**Results**

Given the number of variables and analyses involved in testing the conceptual model used in this study, the results are presented by focal variable: membership goals (i.e., reasons for joining), organizational perceptions and satisfaction, organizational identification, and pro-organizational behaviour. For each focal variable, we begin with the test of latent means by gender and proceed through direct effects of gender in the SEM model, and conclude with multi-group SEM moderation results.

**Gender Effects on Membership Goals**

Results indicate that gender plays a limited role in soldiers’ enlistment and membership goals (Table 1, next page). Among the four membership goals, only the latent means for the pay goal (a short-term economic goal) differs by gender (females = 6.01, SE = 0.09; males = 5.67, SE = 0.04). Female soldiers have stronger income/financial motivations for enlistment than do their male peers. Neither of the two intrinsic membership goals, altruism and self-enhancement, nor the future employment economic goal differs by gender.

To address potential concerns over the comparability between females and all males (of whom roughly half hold direct combat specialties that women were barred from holding at the time of this study), additional analysis compared the latent means for the pay goal of female soldiers to those of males holding non-combat specialties (Table 2, next page). This analysis also produced significant results, with women having a higher pay goal than non-combat specialty males (females = 6.01, SE = 0.09; males = 5.78, SE = 0.06).

Analysis of the direct effect of gender on these membership goals produces a similar outcome, with gender only affecting the pay goal. Females report greater importance of the pay goal (.184, SE = 0.035), even after controlling for combat specialty, deployment, demographics, and other variables, indicating that financial incentives are a more powerful enlistment motivation among females than among males.

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16 Gender is applied in this analysis as a dichotomous variable with combat arms included as a dichotomous control variable. There is only one regression weight and SE for the effect of gender, unlike a comparison of male-female latent means where each group has a mean and a SE.

17 This analysis controls for combat/non-combat specialty, race, age, current deployment status, number of times deployed to combat, education level, rank, time in service, marital status, and number of children.
Gender Effects on Perceptions and Satisfaction

Analysis of latent means suggests that gender does not play a significant role in one’s perception of the Army as distinctive or prestigious, or in determining one’s social satisfaction (Table 1). The data do indicate that gender affects economic satisfaction with the Army, with women’s pay satisfaction higher than men’s (females = 4.04, SE = 0.14 ; males = 3.64, SE = 0.06). Women (5.56, SE = 0.09) are also more satisfied than men (5.28, SE = 0.05) that their
current training and experience will lead to future employment. Comparisons of females with non-combat specialty males continues to show no differences in terms of viewing military service as distinctive, prestigious, or satisfying. Unlike the comparison to the full male soldier sample, the non-combat specialty male sample shows no difference with females in terms of their pay or future employment satisfaction (Table 2).

Examination of the direct effects of gender on the perception and satisfaction constructs in the model reveals that gender has no significant effect on perceptions of organizational distinctiveness or prestige, nor does it affect social or economic satisfaction. Overall, these analyses suggest that gender has a very limited effect on soldiers’ perceptions of, or satisfaction with, the Army.

Multi-group SEM analysis was used to identify potential differences in significance and relationship strength between membership goals and the perception and satisfaction constructs among the ‘female’, ‘combat male’, and ‘non-combat male’ groups. This analysis indicates that the effects of the altruism goal varies in its effect on distinctiveness and social satisfaction across the three groups, while the self-enhancement goal varies in its effect on prestige and social satisfaction (Table 3, next page). No difference exists among the groups regarding the effects of economic goals on economic satisfaction.

The pairwise comparison of the unstandardized Altruism Goal ➔ Distinctiveness paths shows that the source of this variation is primarily due to differences between females and males in combat specialties and between males in combat and non-combat specialties. The difference between females and non-combat specialty males is not significant (Table 4: see p.14). Joining for reasons of altruism has a less positive effect on perceptions of organizational distinctiveness among females and non-combat specialty males relative to their male counterparts in combat specialties.

Results of the pairwise comparison of the Altruism Goal ➔ Social Satisfaction paths show that the source of the variation is primarily due to differences between combat specialty males and non-combat specialty males, but even this difference fails to reach significance when the Bonferroni correction is used. Again, we observe no difference between females and non-combat pairwise comparison of the Self-Enhancement Goal ➔ Prestige path, revealing no significant differences among the three groups. In fact, though non-significant, most of the path strength variation occurs between the two male groups.

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18 This analysis identified five relationships as being non-invariant across the three groups.

19 In this analysis model fit is reduced enough by constraining the path as equal across females, combat males, and non-combat males to create significant chi-square value, but none of the subsequent pairwise comparison reach significance once the Bonferroni correction was applied. In other words, It is possible to find evidence of moderation in three-group SEM (e.g., a significant model fit chi square change when the path is constrained as equal across the groups and then freed to vary), but not find path strength differences between any two groups.
Table 3: Multi-Group SEM Test for Moderation

<table>
<thead>
<tr>
<th>Path</th>
<th>Gender/Combat Specialty Group</th>
<th>Invariant</th>
<th>(\chi^2) Change if Constrained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female Estimate/SE</td>
<td>Males Combat Estimate/SE</td>
<td>Males Non-Combat Estimate/SE</td>
</tr>
<tr>
<td>Altru. Goal \rightarrow Distinctiveness</td>
<td>.226 (.058)</td>
<td>.505 (.038)</td>
<td>.304 (.038)</td>
</tr>
<tr>
<td>Altru. Goal \rightarrow Prestige</td>
<td>–</td>
<td>.400 (.036)</td>
<td>–</td>
</tr>
<tr>
<td>Altru. Goal \rightarrow Social Sat.</td>
<td>.304 (.075)</td>
<td>.163 (.049)</td>
<td>.296 (.044)</td>
</tr>
<tr>
<td>Self-Enhance. Goal \rightarrow Dist.</td>
<td>–</td>
<td>.223 (.028)</td>
<td>–</td>
</tr>
<tr>
<td>Self-Enhance. Goal \rightarrow Prestige</td>
<td>.267 (.068)</td>
<td>.300 (.037)</td>
<td>.191 (.040)</td>
</tr>
<tr>
<td>Self-Enhance. Goal \rightarrow Social Sat.</td>
<td>.306 (.076)</td>
<td>.478 (.043)</td>
<td>.367 (.041)</td>
</tr>
<tr>
<td>Self-Enhance. Goal \rightarrow Econ Sat.</td>
<td>–</td>
<td>.181 (.038)</td>
<td>–</td>
</tr>
<tr>
<td>Altru. Goal \rightarrow Econ Sat.</td>
<td>–</td>
<td>.084 (.034)</td>
<td>–</td>
</tr>
<tr>
<td>Econ. Goal \rightarrow Econ Sat.</td>
<td>–</td>
<td>.570 (.040)</td>
<td>–</td>
</tr>
<tr>
<td>Prestige \rightarrow Identification</td>
<td>–</td>
<td>.132 (.060)</td>
<td>–</td>
</tr>
<tr>
<td>Distinctive \rightarrow Identification</td>
<td>–</td>
<td>.173 (.072)</td>
<td>–</td>
</tr>
<tr>
<td>Social Satisf. \rightarrow Identification</td>
<td>–</td>
<td>.354 (.065)</td>
<td>–</td>
</tr>
<tr>
<td>Altru. Goal \rightarrow Identification</td>
<td>–</td>
<td>.288 (.045)</td>
<td>–</td>
</tr>
<tr>
<td>Self-Enhance. Goal \rightarrow Ident.</td>
<td>.216 (.090)</td>
<td>.335 (.066)</td>
<td>.218 (.057)</td>
</tr>
<tr>
<td>Econ. Goal \rightarrow Identification</td>
<td>–</td>
<td>-.223 (.048)</td>
<td>–</td>
</tr>
<tr>
<td>Identification \rightarrow Pro-Org Bhv.</td>
<td>–</td>
<td>.347 (.030)</td>
<td>–</td>
</tr>
<tr>
<td>Altruism Goal \rightarrow Pro-Org Bhv.</td>
<td>–</td>
<td>-.155 (.041)</td>
<td>–</td>
</tr>
<tr>
<td>Economic Goal \rightarrow Pro-Org Bhv.</td>
<td>–</td>
<td>-.472 (.066)</td>
<td>–</td>
</tr>
<tr>
<td>Distinctiveness \rightarrow Pro-Org Bhv.</td>
<td>–</td>
<td>.121 (.068) (\text{ns})</td>
<td>–</td>
</tr>
<tr>
<td>Econ. Sat. \rightarrow Pro-Org Behaviour</td>
<td>–</td>
<td>.798 (.093)</td>
<td>–</td>
</tr>
</tbody>
</table>

Model Fit

RMSEA = .037 ; CFI = .954 ; \(\chi^2 = 837.9\) with 341 df

Notes: A dash (–) in the Female and Male Non-Combat columns means the estimate and SE is equal across all three groups, with the value for all three groups reflected in the Males Combat Column. A significance level of .033 was used for this analysis, which reflects the .10 significance level (adjusted up from .05 because of differences in sample sizes) dived by 3 based on a Bonferroni correction for three post-hoc comparisons. Chi square critical value for .033 level of significance is 6.0. All coefficients are significant at the .033 level unless otherwise indicated; \(\text{ns}\) indicates non-significance/ p-values greater than .033.

Pairwise comparison of the Self-Enhancement Goal \rightarrow Social Satisfaction path shows that the variation is primarily due to differences between females and males in combat specialties, and between combat and non-combat specialty males. Joining for reasons of self-enhancement has a less positive effect on perceptions of social satisfaction among females, but only relative to the combat specialty male group.\(^20\) The difference between females and non-combat specialty males is not significant (Table 4, next page).

\(^{20}\) This difference fails to maintain significance when the Bonferroni correction is applied.
Table 4: *Post Hoc* Pairwise Comparisons

<table>
<thead>
<tr>
<th>Path</th>
<th>Membership Cohort</th>
<th>$\beta_1$</th>
<th>$SE_1$</th>
<th>$B_2$</th>
<th>$SE_2$</th>
<th>t-Score (CV=2.15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altruism Goal $\rightarrow$ Distinctiveness</td>
<td>F♀ vs. M♂CBT</td>
<td>0.226</td>
<td>0.058</td>
<td>0.505</td>
<td>0.038</td>
<td>-4.024*</td>
</tr>
<tr>
<td></td>
<td>F♀ vs. M♂NonCbt</td>
<td>0.226</td>
<td>0.058</td>
<td>0.304</td>
<td>0.038</td>
<td>-1.125</td>
</tr>
<tr>
<td></td>
<td>M♂CBT vs. M♂NonCbt</td>
<td>0.505</td>
<td>0.038</td>
<td>0.304</td>
<td>0.038</td>
<td>3.740*</td>
</tr>
<tr>
<td>Altruism Goal $\rightarrow$ Social Satisfaction</td>
<td>F♀ vs. M♂CBT</td>
<td>0.304</td>
<td>0.075</td>
<td>0.163</td>
<td>0.049</td>
<td>1.574</td>
</tr>
<tr>
<td></td>
<td>F♀ vs. M♂NonCbt</td>
<td>0.304</td>
<td>0.075</td>
<td>0.296</td>
<td>0.044</td>
<td>0.092</td>
</tr>
<tr>
<td></td>
<td>M♂CBT vs. M♂NonCbt</td>
<td>0.163</td>
<td>0.049</td>
<td>0.296</td>
<td>0.044</td>
<td>-2.020</td>
</tr>
<tr>
<td>Self-Enhance. Goal $\rightarrow$ Prestige</td>
<td>F♀ vs. M♂CBT</td>
<td>0.267</td>
<td>0.068</td>
<td>0.300</td>
<td>0.037</td>
<td>-0.426</td>
</tr>
<tr>
<td></td>
<td>F♀ vs. M♂NonCbt</td>
<td>0.267</td>
<td>0.068</td>
<td>0.191</td>
<td>0.040</td>
<td>0.963</td>
</tr>
<tr>
<td></td>
<td>M♂CBT vs. M♂NonCbt</td>
<td>0.300</td>
<td>0.037</td>
<td>0.191</td>
<td>0.040</td>
<td>2.000</td>
</tr>
<tr>
<td>Self-Enhance. Goal $\rightarrow$ Social Satisfaction</td>
<td>F♀ vs. M♂CBT</td>
<td>0.306</td>
<td>0.076</td>
<td>0.478</td>
<td>0.043</td>
<td>-1.970</td>
</tr>
<tr>
<td></td>
<td>F♀ vs. M♂NonCbt</td>
<td>0.306</td>
<td>0.076</td>
<td>0.367</td>
<td>0.041</td>
<td>-0.706</td>
</tr>
<tr>
<td></td>
<td>M♂CBT vs. M♂NonCbt</td>
<td>0.478</td>
<td>0.043</td>
<td>0.367</td>
<td>0.041</td>
<td>1.868</td>
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<tr>
<td>Self-Enhance. Goal $\rightarrow$ Identification</td>
<td>F♀ vs. M♂CBT</td>
<td>0.216</td>
<td>0.09</td>
<td>0.335</td>
<td>0.066</td>
<td>-1.066</td>
</tr>
<tr>
<td></td>
<td>F♀ vs. M♂NonCbt</td>
<td>0.216</td>
<td>0.09</td>
<td>0.218</td>
<td>0.057</td>
<td>-0.019</td>
</tr>
<tr>
<td></td>
<td>M♂CBT vs. M♂NonCbt</td>
<td>0.335</td>
<td>0.066</td>
<td>0.218</td>
<td>0.057</td>
<td>1.342</td>
</tr>
</tbody>
</table>

* Significant at the .033 level, which reflects the .10 significance level (adjusted up from .05 because of differences in sample sizes) divided by 3 based on a Bonferroni correction for three *post-hoc* comparisons.

**Gender Effects on Identification with the Army**

Our analysis indicates that women do not differ significantly from men in terms of organizational identification with the Army. A test of latent means of male and female soldiers was non-significant (Table 1). Results also indicate no significant difference in latent means between females and males in non-combat specialties (Table 2). Similarly, there is no direct effect of gender on identification, even after controlling for other factors, which suggests a robust finding that soldier-Army relationship quality does not differ by gender.

Multi-group SEM analysis indicates that the effects of perceived distinctiveness, prestige, and social satisfaction on organizational identification do not vary by gender. Likewise, the effects of altruism and economic membership goals on organizational identification are unaffected by gender either. Only the self-enhancement goal’s effect on organizational identification varies between the groups (Table 3). A pairwise comparison of the Self-Enhancement Goal $\rightarrow$ Organizational Identification path shows that none of the pairs differ significantly, and the difference between females and non-combat specialty males is essentially zero (Table 4). Gender does not moderate any of the drivers of organizational identification.
Gender Effects on Pro-Organizational Behaviour

Gender is observed to have a statistically significant direct effect on pro-organizational behaviour (-0.19, SE 0.09), indicating that female soldiers are less likely than their male peers to participate in voluntary activities that benefit the Army. Because pro-organizational conduct is a second-order factor reflecting five different discretionary behavioural components, we next seek to identify the effects of gender on those specific components and better understand the significant effect of gender on pro-organizational behaviour. This is done by removing the second-order factor and examining the latent means of each component by gender, and by testing the direct effect of gender on each. We find that the means do not differ by gender except for sacrifice (Tables 1 and 2); nor are there significant direct effects on any behaviour other than sacrificing. These findings are discussed in more detail in the subsequent section.

Finally, multi-group SEM analysis is used to test whether gender or combat specialty moderate the effects of other model constructs on pro-organizational behaviour (Table 3). This analysis suggest that the effects of organizational identification, economic satisfaction, and membership goals (i.e., altruism, self-enhancement, and economic) on pro-organizational behaviour do not vary among ‘female’, ‘combat male’, and ‘non-combat male’ soldiers.

Gender Effects on Sacrificing Behaviour

Given the organizational importance of sacrifice and its relevance to lifting the combat exclusion on women participating in direct ground combat specialties, we examine sacrificing behaviour in more detail. Our findings show significant gender differences in that regard: female soldiers report less willingness to sacrifice for the Army than their male counterparts (females: 5.05, SE = 0.13; all males: 5.45, SE .05; on a 7-point scale : Table 1). This difference in latent means persists even when female soldiers are compared to males in the non-combat specialties (5.41, SE = 0.05) (Table 2). However, the sacrificing means are high for both genders, indicating a generally high willingness to sacrifice among both genders. Gender also has a significant direct effect on such willingness (-0.35, SE= 0.11). Even so, gender explains very little variance of sacrificing within a model that includes identification, economic satisfaction, membership goals, and control variables, which already explain over 70% of variance in sacrificing without the inclusion of gender. Further, the standardized direct effect of gender on sacrificing is -0.088, and its standardized total effect (both direct and operating through goals and identification) is -0.090.

Looking at this evidence in its entirety, it suggests that while females may have lower willingness to sacrifice for the Army than their male peers, they nonetheless report high levels of such willingness and the effect of being female on sacrificing is very small in practical terms. The final assessment of sacrificing behaviour, which used Multi-group SEM analysis,

21 This population is generally experienced with sacrificing behaviour, having deployed to combat twice on average.
suggests that the effects of organizational identification, economic satisfaction, and membership goals (i.e. altruism, self-enhancement, and economic) on sacrificing behaviour do not vary by gender (Table 3). This cluster of findings lends support to the conclusion that whatever gender difference may exist in sacrificing behaviour, it does not have strong or systematic effect on outcomes important to the military examined here.

**Discussion**

The extent to which a person is identified with the Army and enacts pro-organizational behaviours on its behalf has a strong impact on that soldier’s value to the organization. This study provides important insights regarding the effects of gender on identification with the Army, willingness to enact discretionary behaviours that benefit the Army, and their antecedents. These findings have significant implications for the US Army as it moves towards full gender integration.

Prior research has documented that organizationally identified members perceive a sense of "oneness” with the organization (Mael & Ashforth, 1992, p.104), which increases enacting behaviours of importance to the organization (Oakes, 1987; Stets & Burke, 2000). Identification with an organization is increased when its members perceive the organization as prestigious and distinctive, and members have greater social satisfaction associated with the membership. This is important when examining the relative value of women in the US Army because there a number of compelling reasons why females may perceive the US Army as less prestigious and distinctive, may be less socially satisfied, and experience a reduced sense of oneness relative to their male counterparts. Furthermore, the goals that individuals seek to fulfil through membership have been shown to affect organizational identity, its antecedent, and behaviours highly valued by the organization, with intrinsic goals generally producing more positive organizational effects than economic goals (Woodruff, 2013).

Viewed in their entirety, our findings indicate that while gender-based differences exist which indicate that women are more likely to enlist for economic reasons and are less willing than their male peers to sacrifice for the Army and its mission, these differences should not create problems for the lifting of the combat exclusion. If anything, our results suggest that gender differences may be reduced by the removal of the combat exclusion.

Our results also show that men and women see the Army as equally prestigious and distinctive and have equivalent levels of social satisfaction and organizational identification with it. The organizational identification findings presented here support the conclusion of Riketta’s (2005) meta-analysis of gender and organizational identification. Despite its agreement with the meta-analysis, this result is surprising and extends prior findings by showing that the effects of gender on organizational identification are limited even when the organization is highly masculine, male-dominated, and membership is functionally constrained based on one’s gender.
Women in the US Army are substantially underrepresented relative to their proportion in the American population, entirely unrepresented in important ground combat specialties within the Army, significantly underrepresented in positions of strategic leadership (general officers), and entirely unrepresented in the core strategic leadership positions (general officers commanding division, corps, or geographic regions, though the Army selected its first deputy division commander in 2012). Given these exclusions, the lack of strategic level female leaders, and negative media regarding sexual assaults and harassment, it would not be surprising for female soldiers to find the Army less prestigious or distinctive and to feel less of a psychological sense of oneness with the Army. The absence of any difference between male and female soldiers is a good sign for the Army and the broader health of its relationship with its female members.

The inclusion of women in key ground combat roles will result in a substantial increase in female representation in the Army and, if well-executed, distribute this representation evenly across combat and non-combat specialties (Armor, 1996, pp.19-20). Moreover, this should lead to more females in strategic level leadership positions, though this outcome will almost certainly be lagged based on the time needed for junior level female officers in combat specialties to progress in rank and responsibility. These changes could reasonably be expected to enhance positive perceptions of the Army and relationship quality with the Army among its female members. Full inclusion of women may also have positive impacts on the (gendered) social construction of what it means to be a soldier through removing institutional barriers that foster hegemonic masculinity as the ideal type for military identities and military practice (Hale, 2012).

Our initial analysis indicated that being female moderates the positive effects of self-enhancement goals on social satisfaction and altruism goals on perceptions of organizational distinctiveness. In both cases, we observe a less positive effect for females than for males. Interestingly, this is not observed when female soldiers are compared to men in the non-combat specialties. In other words, women serving in non-combat specialties do not differ statistically from men who are also serving in such specialties. Given that these differences disappear when comparing females to males serving in similar positions, it raises the possibility that the difference between males in combat specialties and females may not be a product of gender, but rather one of organizational structure and/or socialization into role expectations within the organization.

Several gender differences did emerge in this study that are worth noting. Females did report placing greater importance on pay as a reason for membership in the Army, having greater satisfaction with their pay and future employment opportunities, and being less willing to enact pro-organizational behaviours for the Army in the form of willingness to sacrifice.

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22 Segal & Segal, 2004; Manning, 2005; Defense Manpower Data Center, 2014.
In the first case, female soldiers placed greater importance on pay as a reason for membership than did their male counterparts, to include their male non-combat specialty peers. The differences in pay goal between female and male soldiers may be a product of unequal opportunity in the workplace in the broader US employment market. Regardless of its source, this difference is important because economic membership goals tend to reduce identification and pro-organizational behaviours. While the Army cannot easily change the goals of the young men and women who enlist (they have remained relatively stable across multiple decades), it may want to consider emphasizing the organization’s ability to help prospective soldiers fulfil their more intrinsic goals, like self-enhancement/personal growth. This has implications for lifting the combat exclusion. If the Army is enlisting a higher proportion of individuals motivated by pay relative to more intrinsic motivations such as serving one’s country, this could have negative effect within ground combat units. One should bear in mind, though, that enlistment motivations have been shown to be multidimensional, with intrinsic and extrinsic motivations co-varying independently (Eighmey, 2006; Woodruff et al., 2006). One can be highly motivated by pay and patriotism at the same time. As such, the gender difference observed need not produce pernicious effects within units. Additional support for this interpretation comes from the findings that both men and women were motivated by pay – just to different extents – and that while women were lower than men in sacrifice they were not unwilling to sacrifice.

Female soldiers also experience greater pay and future employment satisfaction than their male counterparts. This is important because it tends to have a positive effect on pro-organizational behaviour and partially offsets the negative effects of higher pay goals among female soldiers. It is not surprising that female personnel report greater pay and future employment satisfaction. Satisfaction is driven substantially by meeting or exceeding expectations relevant to the type of satisfaction being measured (Szymanski & Henard, 2001). The Army is one of the leading institutions in terms of providing equal pay for equal work, equal time in service, and equal rank in a society where women make 75% to 80% of their male counterparts (Hurst, 2013, p.123). Female soldiers’ higher level of economic satisfaction, relative to male soldiers, indicates that the Army is more effectively meeting their pay and job training expectations. When combined with female soldiers’ more salient pay goal, it indicates that women are placing greater importance on pay when entering the Army, then having these important goals fulfilled through membership in the Army. While this has a strong positive effect on pro-organizational behaviour, it runs the risk of being very transactional.

While motivations for joining, perceptions of the Army, satisfaction, and relationship quality are all very important in their own right, the Army ultimately derives value from individuals through their willingness and ability to achieve organizational objectives. Without

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23 This refers to satisfaction that current training and experiences will create greater opportunities for future employment.
soldiers who are willing to reenlist and sacrifice for the mission and the organization, the Army could not be successful. Other measures of quality being equal, soldiers who are more willing to enact pro-organizational behaviours are of greater value to the Army than those who are less willing to do so. One of this study’s more interesting findings is that being female has a negative effect on pro-organizational behaviour. This effect was present even after controlling for combat arms/non-combat arms specialization. Moreover, it is contrary to the findings from a meta-analysis on gender and pro-organizational behaviours (Organ & Ryan, 1995). By examining specific pro-organizational behaviours, we were able to specify sacrifice as the sole source of this gender difference within the second-order pro-organizational behaviour construct. Importantly, this means that men and women do not differ in their intention to promote and recommend the Army to others, intention to reenlist, willingness to participate in discretionary behaviours that are important to the Army, or in their willingness to use services offered by the Army that improve readiness and mental/emotional/physical fitness. Female soldiers are producing value for the organization on par with male soldiers on all pro-organizational behaviours but sacrifice.

While our study does not pinpoint the source of gender differences on sacrificing behaviour, one potential explanation is the greater importance female soldiers placed on pay. In our study, economic reasons for enlisting, which had a higher latent mean among females, had a negative effect on pro-organizational conduct. Social forces should also be considered, as for much of its history the United States has been a relatively low gender-egalitarian culture, where men were expected to protect the family, the community, and the nation. Consequently, sacrifice among women may be manifested in ways that are less tied to physical risk. For example, women may for cultural reasons be more willing to sacrifice for families than for their work organization. Another explanation could be that because women are excluded from certain specialties and generally underrepresented, they may simply be less willing to sacrifice for the Army. If so, we would expect to see this change disappear with the lifting of the combat exclusion. Given the importance of sacrificing behaviours, lower willingness to sacrifice among female soldiers should be examined further in subsequent studies.

Despite the observed gender differences, females’ willingness to sacrifice is still relatively high. Furthermore, the practical impact is likely not so high that it would justify any changes to removing the combat exclusion, nor is it likely to reach a threshold that is problematic for the Army. This argument is buoyed by the amount of variation in sacrificing behaviour explained by gender. While significant, gender is much less important than the reason a person joins or the quality of their relationship with the Army in terms of explaining or predicting sacrifice. The Army could much more easily increase sacrificing behaviour by focusing on increasing the Army’s prestige and distinctiveness, or encouraging more intrinsic

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24 The United States is currently close to the global average amongst 62 nations that were part of the GLOBE study (House et al., 2004).
membership goals among current and potential members. It is also possible that self-selection into combat positions that may require higher levels of sacrifice could lead to a greater willingness to sacrifice.

**Conclusion**

Overall, this study provides an important contribution to the ongoing debate over the effects of integrating females in previously excluded military combat roles, which has heretofore been focused on issues of physical ability, privacy, and cohesion. By examining the effects of gender on organizational value based on the quality of their relationship with the Army and performance of discretionary behaviours of importance to the Army, we have shown that very few differences exist that should cause concern over the integration of women in previously excluded positions. Despite being sharply underrepresented across the organization, unrepresented in strategic level war-fighting leadership roles, and structurally prohibited from holding positions considered central to the organization, females view the Army just a favourably, are as strongly identified, and are engaging in valued behaviours to an extent that is largely commensurate to their male counterparts. Given that even fewer differences are observed to exist between females and their structurally equivalent group of non-combat specialty males, it is quite possible that as females are fully integrated in combat roles, gender differences may disappear altogether.

**References**


**Res Militaris**, ERGOMAS issue n°1, Women in the Military, Part One, September 2015


