Gender integration into the combat arms: more unknowns than knowns for team cohesion

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Introduction

As most readers of this Journal would be aware, gender restrictions on the employment of women in the combat arms of the Australian Army have been removed, effective 1 January 2016 (Department of Defence, 2012a).

This historic change in longstanding practice has been preceded—and undoubtedly will continue to be accompanied—by vigorous, widespread debate about its advisability, both within the ADF (Carroll, 2014; Evans, 2013; Knight, 2013) and the wider Australian community (Mackenzie, 2015; Raphael, Neuhaus and Grompvoets, 2015).

The debate is not unlike debates around integration of other previously-excluded groups into the military (Kaplan and Rosenmann, 2012; Segal, Smith, Segal and Canuso, 2016). It also mirrors that in other nations (Deuster and Tepe, 2016; Haring, 2013; G.L.A. Harris, 2015; Morgenthaler, 2015; Ritchie and Naclerio, 2015). For example, in Canada as long ago as 1989, similar debates became the subject of a court case and a subsequent ruling removing gender restrictions in the Canadian Defence Force (Cawkill, Alison, Knight and Spear, 2009).

These debates have been characterised by a wide range of diverse and frequently-heartfelt opinions. However, from a scientific perspective, opinions of all stripes have rested largely on journalistic narratives and personal memoirs (G.L.A. Harris, 2015; Lemmon, 2015; Morgenthaler, 2015). Systematic evaluations of an objective type have been less common, partly because—to date—few women have actually joined the combat arms.

In order that the incorporation of women into the combat arms in Australia receives a systematic evaluation, the Army is conducting two longitudinal studies that will track both women and men from recruit training through their initial employment training into the regimental environment. One study, which is the focus of this article, is examining the cohesion of mixed-gender sections in comparison to all-male sections.

The other, which will be the subject of a separate report, concerns the adaptation of women to the physical demands of the combat arms. As it happens, a recent ‘Women in Combat Symposium’, conducted by the US Department of Defense, strongly recommended that such longitudinal studies be conducted (Tepe, Yarnell, Nindl, Van Arsdale and Deuster, 2016).

Scope

At the time this article was written, the systematic collection of data concerning the cohesion of mixed-gender and all-male sections had only commenced a few weeks earlier. Accordingly, this article will describe the background to the cohesion study in four subsections:

- A description of ‘observed’ versus ‘felt’ cohesion in teams;
- A summary of the available findings concerning the impact of women on cohesion in combat arms teams;
• A summary of international experience with mixed-gender combat teams, including the influence of leadership; and
• A brief description of the current cohesion study in the Australian Army.

**Observed versus felt cohesiveness**

**Observed cohesiveness**

Team cohesion has long been considered a vital component of military performance, alongside leadership, military skills, weapon systems, collective training and doctrine (for example, Griffith and Greenlees, 1993; Shils and Janowitz, 1948; Siebold, 2007). For primary military teams (notably sections and platoons), ‘cohesion’ is broadly the tendency for teams to stick together under pressure. Put in concrete, observable terms, a team demonstrates cohesion when its members execute their roles with sound coordination, cooperation and communication. Conversely, a loss of team cohesion may be observed when members perform their roles with poor coordination, cooperation and communication.

Team cohesion can, in principle, be measured by external, expert observer ratings of team performance during military training exercises, such as movement to contact, hasty attack, deliberate attack, ambush, defence and reconnaissance (Siebold and Lindsay, 1999). More systematic observation of a team’s cohesion appears possible in circumstances that permit video recordings and subsequent image analysis (Mezzacappa et al., 2012). No studies could be found in which team cohesion has been explicitly rated by observers outside the team. However, as an approximation that presumably depends on a team’s cohesion, overall team performance has frequently been rated by external observers, such as supervisory staff.

**Felt cohesiveness**

Although externally-rated team cohesion is uncommon, there are numerous studies that have asked team members to rate the bonds that they feel for one another, their leaders and their larger organisation (for example, Castano, Watts and Tekleab, 2013; Siebold and Lindsay, 1999). Recently, for example, US Army recruits—comprising 62 per cent men and 38 per cent women—were asked during their initial training to rate whether their platoon members were cooperative with each other, could depend on each other, and would stand up for each other (Williams et al., 2016).

These cohesiveness ratings increased as training progressed. In line with previous studies, higher cohesiveness ratings within a platoon were associated with greater self-rated resilience, greater confidence in managing stress, more positive states of mind and greater tolerance of training stressors, as well as less psychological distress and fewer sleep problems. In turn, these positive associations were predictive of the successful completion of training.

In many studies, cohesiveness ratings within a team are combined into a single measure. However, other researchers have contended that felt cohesiveness may be split into three components, namely social cohesiveness, task cohesiveness and organisational cohesiveness.

1) **Social cohesiveness** refers to the bonds of friendship and caring within a team. Many team-building activities in civilian life appear to be aimed at increasing the peer-to-peer, ‘horizontal’ bonds among team members and less often the ‘vertical’ bonds with immediate leaders. In the vertical case, the perception among team members that leaders care for their well-being and success is nevertheless thought to be particularly vital (Segal et al., 2016).

2) **Task cohesiveness** is the confidence of team members that each within the team can be relied on in achieving an identified, collective goal (MacCoun, 1996). Furthermore, task cohesiveness can also be subdivided into ‘horizontal’ bonds of confidence among team members versus ‘vertical’ bonds of confidence regarding their immediate leaders (such as
section commanders, platoon sergeants and platoon commanders) (Harrell and Miller, 1997; Siebold, 2007).

In many circumstances, social and task cohesiveness may strongly overlap, and the ratings in many studies treat them together as a single construct. However, such an overlap may not always be necessary. There are anecdotal stories that even elite units may lack social cohesiveness to the point of physical brawls when off duty but still display high task cohesiveness and successful team performance when on missions. Conversely, units with high levels of social cohesiveness have more than once failed to conduct effective collective drills on the battlefield (King, 2006).

3) **Organisational cohesiveness** labels the vertical bonds of identification that soldiers have with their military organisation and its values. This component of cohesiveness has been associated with retention, positive conduct and positive attitudes toward military service (Siebold, 2007).

Across a wide variety of civilian and military teams, the self-rated cohesiveness of team members is a partial predictor of team performance ratings (Castano et al, 2013; Siebold, 2007). In particular, combined ratings of task and social cohesiveness moderately predict team performance when the team's task requires a high degree of 'interdependence'—meaning that considerable coordination, cooperation and communication among team members is necessary to complete the task, for example, battle drills (Carless and De Paola, 2000; Gully, Devine and Whitney, 2012). When the task interdependence is lower, cohesiveness ratings are only weakly related to team performance, for example, individual shooting (Gully et al., 2012).

**The impact of women on cohesion in combat arms teams**

Scientific studies of cohesion in mixed-gender combat teams are virtually non-existent. The closest—but not very close—approximation has been conducted by the US Marine Corps (Smith, 2015). In that study, mixed-gender infantry squads received a period of training and then underwent field trials to assess their physical and combat performance. The summary document stated that the self-rated cohesiveness of the squads 'averaged medium to good'. Specifically, 31 per cent of the males and 36 per cent of females reported their levels were 'very good'. Ratings of observed cohesion and/or combat performance were not available.

The next closest study tested the ability of cohesiveness ratings to predict performance among conscripts posted to an armoured brigade in the Finnish Army (Salo, 2006). The conscripts, including a few women recruits (34 of 2004), rated their teams on a combination of task and social cohesiveness in their horizontal, vertical and organisational dimensions. In all these dimensions, team performance as rated by the instructors was weakly to moderately correlated with the conscripts’ ratings of cohesiveness.

Finally, outside the combat arms, the US Army has conducted repeated large-scale studies on the integration of women since the 1970s, finding that the integration of women into training for combat support and combat services support roles has had no discernible adverse effects on training outcomes down to squad levels. In fact, gender integration of up to 25 per cent of personnel in small teams reportedly improves the performance of women without detriment to the performance of men (Harris, Simutis and Gantz, 2002, p.5).

In addition to the relationship of cohesiveness to team performance, other studies have investigated the relationship of cohesiveness and other self-ratings by the team members. Harrell and Miller (1997) surveyed a total of 934 US Army, Navy and Marine personnel regarding their team cohesiveness. Across all ranks, 30 per cent of respondents viewed their team as ‘very cohesive’, 51 per cent as ‘loosely cohesive’, and 20 per cent reported their team ‘divided into conflicting groups’. These proportions were reportedly similar across men and women.

Unfortunately, for the purposes of quantitative analysis, the report's conclusions appear to have been based largely on a selection of quotes from focus groups. According to these selected quotes, gender as an issue for cohesiveness tends to be a secondary consequence of other
conflicts within a divided team. Gender differences alone did not appear to erode cohesion provided leaders emphasised unity among personnel, rather than, for example, displaying double standards and/or warning their male personnel to ‘stay away from the women’.

In discussions concerning the loss of bonding rituals distinctive to all-male environments, even males who longed for the ‘good old days’ admitted that some types of male bonding were unprofessional and detracted from the work environment. Eliminating some purported bonding practices was viewed by the majority of male participants as raising the standards of discipline, conduct and professionalism for all concerned (Harrell and Miller, 1997).

Quantitative studies have also been conducted by the US Army in which samples were drawn from companies of combat services support units in both garrison and deployed settings in the period 1988-95, which included operational service in the Persian Gulf, Somalia and Haiti (Rosen, Bliese, Wright and Gifford, 1999). Across all samples, 16 per cent of the respondents were women.

These surveys concerned only horizontal social cohesiveness, focusing on off-duty interactions. This off-duty social cohesiveness varied depending on the setting and percentage of women in a company. In the Persian Gulf and Somalia settings, the mean rating of social cohesiveness for each company fell significantly as the percentage of woman increased. In garrison and during operations in Haiti, however, this relationship was far less apparent.

Rosen and her colleagues were cautious about reaching a definitive conclusion from their results that female integration into the US Army has a negative impact on military team cohesion, contrary to what has been inferred by others (Knight, 2013). They noted that their research captured ‘a moment in time just prior to major historic events [Gulf War 1] that led to significant changes in the role of women in the military’, specifically, the overseas deployment of 41,000 women for the first time in combat services support roles (G.L.A. Harris, 2015, p. 55).

Furthermore, we note that these studies, being restricted to off-duty cohesiveness, do not directly bear on team cohesion in the field. They did not assess either on-the-job task cohesiveness or observable team performance.

**International experience with mixed-gender combat teams**

Although integration of women into the combat arms is a recent initiative for the Australian Army, many other countries have employed women successfully in mixed gender combat teams, some for two decades or more (Cawkill et al., 2009). Although the numbers are very small, women have been consistently observed to contribute to cohesion and combat performance as much as the male members of their teams. Across all countries, there have been no reports of adverse effects from the integration of women in combat teams and employing them in actual combat, including close combat on occasion. Table 1 (overleaf) summarises the reported experience from a range of other nations.
Table 1. Gender integration of women into the combat arms of other nations

<table>
<thead>
<tr>
<th>Country</th>
<th>Note</th>
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<tbody>
<tr>
<td>Canada</td>
<td>Women occupied 3.8% of combat arms occupations in 2006. Women have deployed to Afghanistan, where 2 of the 125 casualties have been women.</td>
</tr>
<tr>
<td>Denmark</td>
<td>As at 2009, 128 women have been employed in combat in Afghanistan.</td>
</tr>
<tr>
<td>Finland</td>
<td>Allows women to join the combat arms but no other information available.</td>
</tr>
<tr>
<td>France</td>
<td>As at 2006, 1.7% of combat infantry soldiers were women but no other information available.</td>
</tr>
<tr>
<td>Germany</td>
<td>Allows women to join the combat arms, and there have been no reports of problems as a result of female soldiers being involved in combat.</td>
</tr>
<tr>
<td>Israel</td>
<td>In 2006, 2.5% of women served in the combat arms but apparently not in close combat roles. However, their absorption into combat units has been observed to depend greatly on the commander’s acceptance of women as equal to their male counterparts.</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Allows women to join the combat arms but no other information available.</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Employs women in close combat roles. As at May 2004, there were 9 female gunners, 3 riflemen and 1 field engineer serving in the NZ Defence Force.</td>
</tr>
<tr>
<td>Norway</td>
<td>Employs women in close combat roles. Women have participated in patrols in Afghanistan but, as far as known, have not been in actual combat.</td>
</tr>
<tr>
<td>Poland</td>
<td>Allows women to join the combat arms. As of 2008, an unspecified number of women have been deployed to Iraq and Afghanistan as platoon commanders.</td>
</tr>
<tr>
<td>Romania</td>
<td>Allows women to join the combat arms. Romania has sent women in close combat roles to Iraq (5.3% combat personnel) and Afghanistan (6.8%). No difficulties relating to women’s employment in combat roles with respect to operational performance, team cohesion or successful achievement of missions.</td>
</tr>
<tr>
<td>Spain</td>
<td>Allows women to join the combat arms but no other information available.</td>
</tr>
<tr>
<td>Sweden</td>
<td>Allows women to join the combat arms and has deployed them to Afghanistan. They have been reported to have demonstrated positive operational effects. For example, through the contact between Swedish military females and local Afghan females, a number of improvised explosive devices and suicide bombers have been discovered and neutralised.</td>
</tr>
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Source: (Cawkhill, 2008)

Leadership

Leadership is widely considered to be vital to developing the cohesiveness and ultimately the demonstrated cohesion of military teams (Adler, Castro and Britt, 2006; Bartone, Johnsen, Eid, Brun and Laberg, 2002; Siebold and Lindsay, 1999). In the context of gender integration, Segal et al (2016) have considered the profound influence that leaders have had in successfully
integrating previously-excluded groups, listing the following conditions that leaders at all levels can readily implement to facilitate team cohesion:

- Ensure that new members enjoy at least an equal status as current members, such as uniformly assigning duties to women and men in a unit;
- Ensure that new and existing members share common goals;
- Encourage new and existing members to have close, sustained opportunities to become familiar with each other on the job;
- Ensure, as far as practicable, there are a sufficient numbers of new members to prevent them from being seen as exceptions to stereotypes about the previously-excluded group;
- Provide visible, sustained support for integrating the previously-excluded group; and
- Conversely, discourage negative talk at all levels of command, even in private, that could perpetuate prejudicial and discriminatory behaviour.

The current study

The Australian Army’s Small Group Cohesion Study aims to measure teams at the section and platoon levels throughout recruit training, initial trade/employment training and into their workplaces for up to five years. The study, which commenced in January 2016, is examining the cohesion of teams as assessed by instructor ratings for performance on tasks requiring differing degrees of interdependence. It will include personnel from the start of recruit training through corps-specific training and into their regimental environment for the combat arms but also combat support and combat service support roles.

At the same time, the felt cohesiveness of each team will be measured through surveys adapted from previous military research (Kanesarajah, Waller, Zheng and Dobson, 2016; Mael, 1989; Siebold and Kelly, 1988; Siebold and Lindsay, 1999; Treadwell, Lavertue, Kumar and Veeraraghavav, 2001; Williams et al., 2016). The desired end-state will be a series of scientific findings that meet the ‘gold standard’ of international, peer-reviewed publication so that further debate and policy development will be better informed.

Conclusion

As described in this article, little is known systematically, much less understood, about the relative effectiveness of mixed-gender teams on cohesion and performance. Undoubtedly, until mix-gendered teams actually engage in close combat, there will continue to be uncertainty about their performance, including—among other things—their cohesion in the face of the enemy.

That said, such uncertainties are hardly novel in the military. They have always been a source of considerable apprehension for leaders and soldiers in any team going into combat for the first time. The best available antidote to these pervasive uncertainties has always been rigorous, realistic training at the individual and collective levels, starting at recruit training.

Over the next five years, the Small Group Cohesion Study’s systematic evaluation of this topical issue aims to further mitigate the uncertainties surrounding the incorporation of women into the combat arms, as experienced by the Australian Army.

Lieutenant Colonel Orme enlisted in the University of NSW Regiment in 1976. He was commissioned to the Royal Australian Infantry Corps in 1982, and transferred to the Australian Army Psychology Corps in 1988. He has deployed on operations to Bougainville, Timor L’Este, Solomon Islands, Middle East and Afghanistan. He completed a PhD in 2015 on the post-deployment adjustment of Australian Army reservists. In civilian life, he is an organisational and consulting psychologist in the corporate sector.
Lieutenant Colonel Kehoe is in the Australian Army Psychology Corps, where he serves as a senior consultant to the Head of Corps. He has previously co-authored nine research papers on the Australian Army. In civilian life, he is Professor of Psychology and Director of Organisational Psychology at the University of NSW, where he has been on staff since completing his PhD at the University of Iowa in 1976.

Lieutenant Colonel Pascoe is an Infantry Officer in the Australian Army. Since graduation from the Royal Military College in 1991, he has served in a range of regimental, operational and personnel postings, and has deployed to Timor L’Este and Afghanistan. He has an undergraduate degree and a Master of Arts in International Relations.

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