

Workshop: The Future Canadian Soldier and Enhancement of Human Performance
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Emerging technologies as a way to close the gender gap in the armed forces?

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Is there a gender gap?

| Country | % of women in armed forces |
|---------------|----------------------------|
| Hungary | 20% |
| United States | 18% |
| Latvia | 16% |
| France | 15% |
| Bulgaria | 14.5% |
| Albania | 14% |
| Canada | 14% |
| Spain | 12% |

Source: NATO Military Committee on Gender Perspectives

Why is there a gender gap?

- **Physical abilities**
- **Social dynamics**
- Professional barriers
- Demand fluctuation
- Low recruitment



The Evolution of a Debate

“No benefit to anyone can come from women serving in combat... Why? Because men fight better.”

- Jim Webb in “Women Can’t Fight” (1979)



*Jim Webb is a former US Senator,
Secretary of the Navy and Marine Corps
Officer who served in Vietnam.*

RAND survey (2014)

7,600 US special operations forces surveyed:

- 85% opposed opening SOF jobs to women
- 70% against having women in their units
- 80% believe women aren't strong enough
- 64% believe women aren't mentally tough
- 60% believe women will be treated unfairly

Scholarly literature

Joshua Goldstein (2001):

“They can fight; they can kill. Yet exceptional individual women who wanted to go to war had to either overcome stubborn resistance from men or adopt male disguise.”



“Gender equality is not an option when bullets are flying...”

- Women in uniform in Donetsk Republic (Trisko)
- 40% of PKK fighters are women (Szekeley)
- Women are focus of recruitment efforts by ISIS (Bloom)



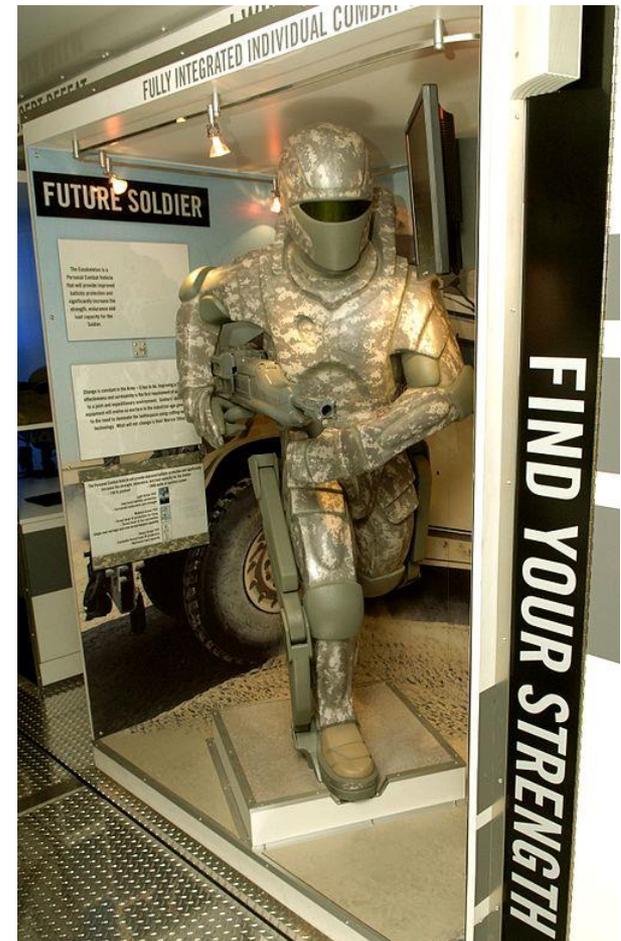
Types of enhancement considered

- Robotics and automation
- Clothing/equipment requirements
- Enhancement of cohesion
- Cognitive enhancement



Robotics and autonomous weapons

- Wearable robots: increase strength and endurance
- RPA pilots and sensor operations: operationally relevant standards could mean more women



Clothing and equipment requirements

- Ill-suited clothing/equipment have hindered women in the field = unnecessary risk
- Tailored clothing/equipment for different body types can enhance performance for all



But still...

“The physics associated with trying to have the body armor work in a complex shape [read breasts and hips] is just a bridge too far right now”

Brig. Gen. Peter Fuller, the top officer at the Army's Program Executive Office Soldier, told a congressional committee recently.

Cohesion:

Social engineering or enhancement?

- All-male units more likely to produce “undesirable behaviour”
- Army’s Ready and Resilient Campaign: address high-risk behaviours within the Army
- CAF: Op Honour to eliminate predatory behaviour, which undermines readiness and operational effectiveness

Cognitive Enhancement

Gender differences:

- Ability to perceive and sense emotional changes
- More even communications distribution partners (better balance between listening and talking)
- Finding from Woolley and Malone 2011: Add women and collective intelligence



Recommendations

- Redesign and enforce standards to optimize social dynamics:
 - Equal opportunity (policy)
 - Equal treatment (leadership)*
- More tailored approach to designing equipment, clothing, but also training

