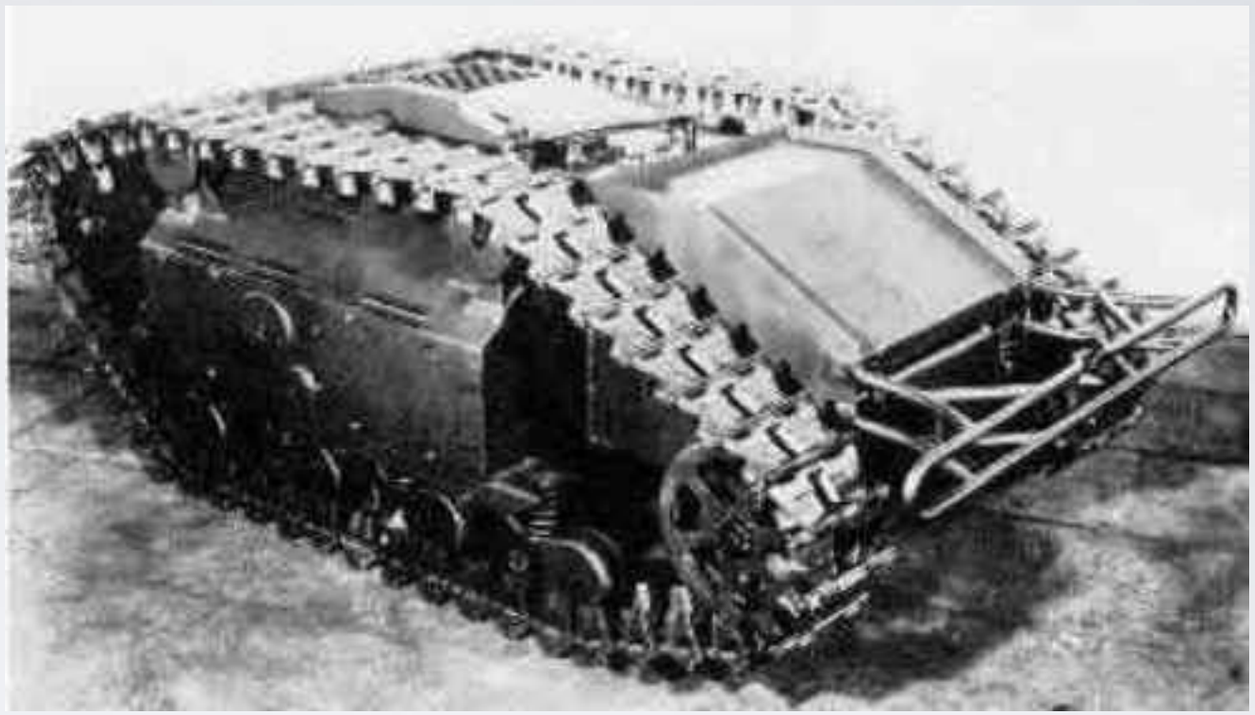
On the Nature and Consequences of ‘costless’ Combat

Erik Gartzke
U. of Essex, Dept. of Government *and*
UCSD, Dept. of Political Science



- Disclaimers:

- I am not a military technologist or an expert on military affairs generally (I am a logician/political scientist).

- No special or insider knowledge: “It is tough to make predictions, especially about the future” — Yogi Berra

Introduction

- Speculation exists about the effects of technology on war
- Little attention to understanding how new modes of combat intersect with established motives for using force.
- I explore the political dimensions of automated conflict.
  - Premise: use continuity in political processes to assist in predicting the effects of technology on war fighting.
  - Apply existing insights about the causes and nature of war to the (predictable) aspects of military automation.

- “We’re entering an era in which unmanned vehicles of all kinds will take on greater importance – in space, on land, in the air, and at sea” — George W. Bush

- “The purpose of these actions [using RPVs] is to mitigate threats to U.S. persons' lives” — John O. Brennan

Capital, Labor and War

- War is labor intensive.
  - Some thinking is required, even with machines (actually mechanization of war increases need for brain input).
  - Technology seeks to increase the lethality, accuracy or range of harm or augment protection from harm.
    - Increasing lethality/accuracy/range, augments incentive to move humans off the battlefield
      - Norm of not aiming at civilians
      - Most combatant casualties caused by indirect fires

Capital, Labor and War II

- Substitution of capital for labor is thus incomplete.
  - Historically can’t get all humans off the battlefield
  - Attempts to minimize human exposure to harm just emphasize the societal value of human beings.
  - Increased appeal of targeting human combatants (Mogadishu, enemy “firing at the ramparts”)
  - Logical extreme “little wars” (ubiquitous, unstable).

Military automation

- What happens when capital finally begins to substitute for brain, rather than brawn, on the battlefield?
  - Military automation allows humans on one or both sides to work remotely, or possibly not involved at all.
- Would appear to benefit technological power (it does).
  - However, there are also non-intuitive consequences

The Frequency of Warfare

- Technological shocks that have obvious consequences for the battlefield should tend to change where nations fight, or what they fight over, rather than whether they fight.
  - “Common conjecture effect” relates to origins of war.
  - Implies that biggest effect of automation may be to produce a rise in “brush wars” (asymmetric powers) and “undeclared” or “limited wars” (symmetric powers).

Casualties

- Myth that automation will make war “costless”
  - Costless war does not serve the purposes of war
    - Harm (prospective and retrospective): punishment vs. denial strategies in offense/defense and deterrence.
    - Tendency will be to attempt to re-assert human cost
      - Asymmetric war: Terrorism and other off-battlefield aggression, initiated by less technological actor.
      - Symmetric war: Targeting enemy “non-combatants.”

Scenarios: One-Sided

- Lower (human) cost of war leads to increased aggression
  - Some of the effect absorbed by acquiescence of target
  - Some of effect countered by increased aggression
    - Technological power unchallenged where it is resolved
    - Tendency to intervention in more marginal places
    - Reduced exposure to casualties balanced by reduced willingness to absorb large numbers of casualties
- Net effect uncertain: increased uncertainty increases instability and probability that challenges lead to warfare

Scenarios: One-Sided II

- Lower exposure + greater sensitivity creates asymmetry:
  - Technological initiator must anticipate low battlefield casualties in order to be willing to intervene.
  - Less technological target must seek to maximize opponent's battlefield casualties in order to prevail.
- Net effect depends on:
  - Willingness of target to resist, imposing casualties
  - Ability of initiator to protect its forces from harm
  - Resolve of initiator to persist despite casualties

Scenarios: One-Sided III

- One-sided automation of war changes this dynamic
  - Technological initiator *<u>knows</u>* battlefield casualties will be low or possibly even non-existent.
  - Less technological target cannot maximize battlefield casualties, and therefore cannot win on the battlefield.
    - Less technological power must concede at the outset
    - Or find another “battlefield” on which to prevail.
    - Obvious solution is to target enemy non-combatants.

Scenarios: Two-Sided

- Analogue applies when both sides field automated armies.
  - “Winner” of robot wars can declare victory, but still depends on “loser” accepting defeat, making concessions
  - “Limited automated symmetric war” is a dispute among robots. Winner is side with the most successful robots.
  - “Unlimited automated symmetric war” involves killing civilians. Winner is side that convinces opponent to quit.
    - May be side with best robots, but punishment is an inherently contingent strategy -- the loser decides.

Scenarios: Two-Sided II

- Additional implications:
  - Appeal of denial strategies in warfare and low cost of automated occupation could see the re-emergence of territorial aggression, possible new age of imperialism.
  - Paradoxical need to target civilians to win automated wars suggests evolution in norms about military force.
    - The side that only strikes combatants will lose -- can make an analogy to strategic bombing during WWII.

Interim step

- Full military automation is farther than many suspect...
  - There will be important twists and turns along the way
  - Perhaps one of the most salient involves the effects of automation in redefining and diffusing marksmanship
  - *Precision Guided Firearm* (Austin TX) has developed technology advertised as “democratizing accuracy.”
    - Very quickly allows inexperienced shooters to fire like experienced marksman -- dramatic implications.

Interim step II

- Effect of “marksmanship for dummies” is to upset the balance forged by technological powers post WWII.
  - Example: Mogadishu
  - Substituting quality for quantity allows advanced nations to wield influence in many places with relatively little cost or exposure to human casualties.
  - “Democratizing accuracy” adjusts this balance in favor of those forces that are less willing/able to cultivate marksmanship/invest in elite forces.

Conclusion

- War has always been changing. A big part of the craft of the soldier is understanding this and staying ahead of innovation initiated by others. This is why governments spend enormous sums of new weapons and on training soldiers.
- What is different about military automation?
  - Possible elimination of battlefield casualties
- How does this matter?
  - Several changes in political calculus of war.

Conclusion II

- My analysis suggests the following changes:
  - A reduction in battlefield casualties implies a commensurate rise in off-battlefield casualties.
    - Military automation offers major advantages to societies that are vulnerable to casualties
    - Because of this, opponents will continue to impose casualties, even on “civilians” if needed
- Automation limits vulnerability and may increase ability to harm, but it does not do away with the traditional political purposes of the use of force.