

“Game-Changers”

--Confronting New Challenges in the
Classroom--



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Goal of Seminar

- ◆ Following last year's masterful presentation by Martin Cook on military ethics & "professionalism" . . .
- ◆ How is that conception (or JWT itself) challenged or changed by what you have heard over the past two days?
- ◆ How ought we to present these new challenges in our teaching?



Baron Karl von Clausewitz



**“Every age had its own kind of war,
its own limiting conditions
and its own peculiar
preconceptions.”**





Illustrative Problem

- ◆ Everyone now teaches Clausewitz: “old hat”
- ◆ But Clausewitz is classical, Newtonian
- ◆ No more (or less!) applicable to IW and emerging technologies than classical Newtonian physics is to problems in relativity and quantum mechanics



Solution

- ◆ Col. James Cook's banquet address:

- ◆ “Covariance”



- ◆ Master classical JWT principles, see how they “transform” into the novel space of postmodern war



Postmodern War

- ◆ IW, “hybrid” and “small wars”
- ◆ Private contractors
- ◆ Increasing use of Technologies
 - Robotics
 - “enhanced” warriors
 - Non-lethal weapons
 - Nanotechnology
 - Cyber security and conflict



Ethical Challenges

- ◆ These new developments are to Clausewitz as Relativity and QM are to classical physics
- ◆ Clausewitz is classical military strategy (Newtonian metaphors, state-centric)
- ◆ Ethics analogy is classical “just war theory” (also state-centric)
- ◆ Both need an “upgrade,” some “new Apps” to handle new contexts

New York Times

“War Machines: Recruiting Robots for Combat” (John Markoff: 26 Nov 2010)

- ◆ “opponents say robot warriors lower the barriers to warfare, potentially making nations more trigger happy...”
- ◆ “Wars will be started very easily and with minimal costs” as automation increases, predicted Wendell Wallach, Yale University Center for Bioethics





The “Threshold Problem”

with the advent of these new technologies, **“wars become less costly, indiscriminate, and destructive, and thus easier to fight”**

- First raised in a seminal ONR report on “risk and ethics” by Keith Abney, George Bekey and Patrick Lin (2008)
- echoed by P.W. Singer in *Wired for War* (2009)
- McCain Conf. Executive Summary (2010)
- JME special issue on military technologies (2010); and numerous scholarly journal essays and news articles analyzing the ethical ramifications of emerging military technologies





Military Professionalism

- ◆ If I can get the job done as well or better, and more cheaply, using private contractors and robots
- ◆ Then what becomes of the notion of the “military profession”?
- ◆ CAPE, and Admiral Mike Mullen’s concerns?



Robotics and Unmanned (Remotely-Controlled) Standoff Weapons

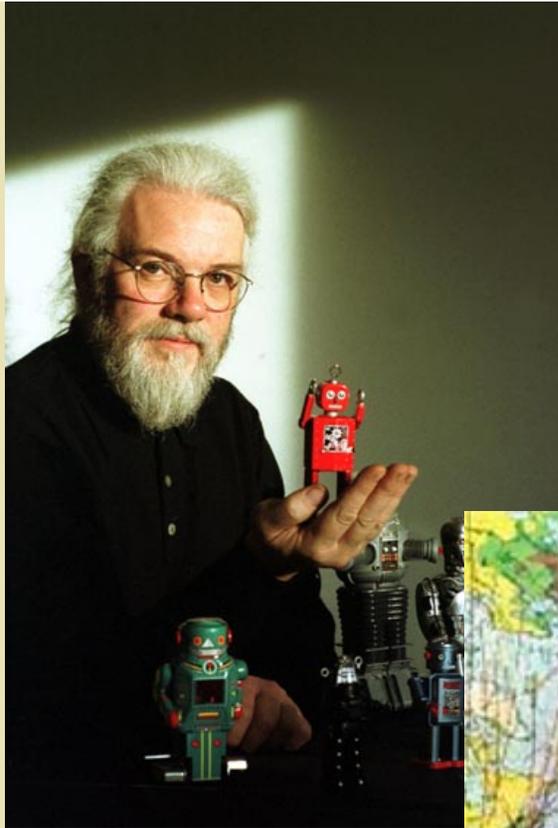
- ◆ UAVs, UGVs, UMMVs, UUVs...and the quest for autonomy
- ◆ By far the most attention
- ◆ Need a methodological sound, data-driven discussion (avoid hype, hysteria, and massive equivocation)



Dr. Siva Banda

Senior Scientist for Control Theory with the U.S. Air Force Research Laboratory

- ◆ “The military’s use of UAVs is escalating. . .from a quarter of a million cumulative UAV flight hours during the twelve-year period from 1995 to 2007, to an additional quarter million flight hours in merely six months (from May to November, 2007). . .predominately [driven by] cost savings over manned systems.
- ◆ The main reason is the increasing cost to train pilots, but it also costs more and more to manage the escalating UAV flight hours. The solution is increased autonomy. We have to become less and less dependent on humans, to decouple UAVs from their human operators. . .
- ◆ To achieve this, UAVs in the future will need to be endowed with smart sensors and with tactical reasoning and decision-making capabilities. Without intelligence, which is the key enabler, we will remain tied to human operators for sensor interpretation and have limited influence.” (Banda 2010)





Specific Dilemmas

- ◆ Accountability for accidents and war crimes (cf. PMCs) – Sparrow
- ◆ Precautionary principle (cf. Human genome research) – Singer
- ◆ Stress or disengagement from RPVs, the “play-station” mentality, and targeted killings – Sharkey, Cummings
- ◆ “Paradox of Precision” – David Whetham: the more precise your weapons become, the more you are held accountable for errors
- ◆ Geoffrey Murat – losing the public relations war for hearts and minds of stakeholders



Autonomy & “Machine Morality”

- ◆ Autonomy: not analogous to human deliberation.
- ◆ Move from “scripted” autonomy (Cruise missiles—”point, fire, forget”), through “executive” (human supervision, SWARM technology) to “intelligent systems” (iRobot’s ROOMBA), to “strong AI” (learning)
- ◆ Problem: autonomy (targeting)+ lethal force



Obstacles & Prospects

- ◆ The main ethical concern is that allowing robots to make decisions about the use of lethal force could breach both the Principle of Distinction and the Principle of Proportionality as specified by International Humanitarian Law (Sharkey 2008b).
- ◆ Currently and for the foreseeable future no autonomous robots or artificial intelligence systems have the necessary properties to enable discrimination between combatants and civilians or to make proportionality decisions (Cummings 2011)
- ◆ Ron Arkin: proportionality algorithm, less likely to commit war crimes than humans

IW Case: SEAL Team 10





Case Variations

- ◆ IW + autonomous robots (same scenario with robots instead of SEALs)—Arkin
- ◆ Valerie Morkevicius’s “Afghan Farmer w/AK-47”
- ◆ Emmanuel Goffi: IEDs, Predators (other stand-off weapons & tactics)

“Iron Men” (Warrior Enhancements)



- ◆ Should warfighters be required to give their informed consent to being enhanced, and if so, what should that process be?
- ◆ Can a warfighter successfully object to being enhanced on religious or other grounds?
- ◆ Legally and ethically, how safe should these technologies be before deployed?
- ◆ Are there ethical, legal, psycho-social, or operational limits on the extent a warfighter may be enhanced as well as types of enhancement, e.g., enhancing mood to induce euphoria, fearlessness, or amnesia?





Civil-Military Issues

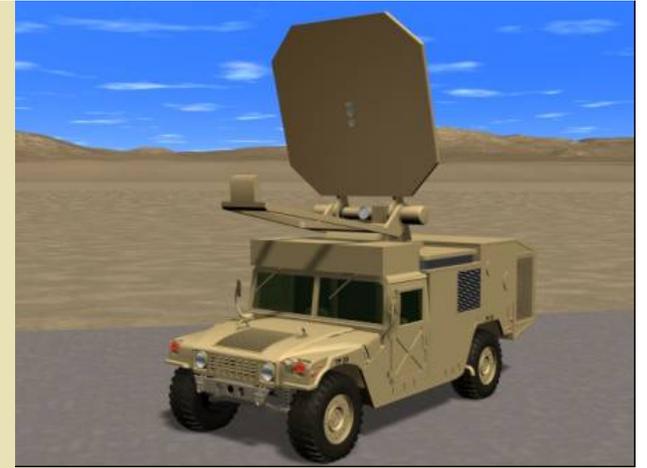
- ◆ If the enhancements are not reversed, what effects will they have on the ability of the enhanced warfighter to make a successful return to civilian life? How can any adverse effects on the return to civilian life be minimized? What effect will this have on the VA, insofar as enhancements will be regarded as service-connected?
- ◆ If there are enhancements available in the civilian market but not in the military, should warfighters be permitted to purchase and use them?
- ◆ What are the societal implications if/when military enhancements have a dual-use in civilian applications?

Nanotechnology

- ◆ “Blowback”
- ◆ Environmental risks



Non-lethal Weapons



- ◆ Economy of force (proportionality)
- ◆ Do I use less destructive force w/same rules of engagement?
- ◆ Or do I resort to (“non-lethal”) force more readily
- ◆ Stephen Coleman and Pauline Kaurin





Cyber War

- ◆ Kinetic retaliation for cyber attacks?
- ◆ Just cause/causus belli
- ◆ Cyber weapons and tactics target civilians, violate JWT principle of distinction/discrimination (Randy Dipert)
- ◆ But could be less destructive than conventional war: restore denied services with passwords, rather than rebuilding wrecked infrastructure (Kosovo)
- ◆ Intelligence/espionage ethics versus warrior ethos



Elements of JWT

- ◆ Note the use of JWT categories:
- ◆ JAB: just cause, intentionality, last resort
- ◆ JIB: proportionality and discrimination
- ◆ New challenges to interpreting these (Jim Cook), but no need to abandon them
- ◆ Covariance, versus paradigm-dependent models of JWT (Walzer, IHL)



Conclusion

- ◆ If, unlike lying or law-breaking, war is not prohibited in principle, then warfare employing advanced military technologies might offer an improved and otherwise preferable means for resolving intractable conflicts
- ◆ In that case, war could no longer be meaningfully said to be a “last resort” (Michael Walzer, 1977; Lucas, “Postmodern War,” 2010)

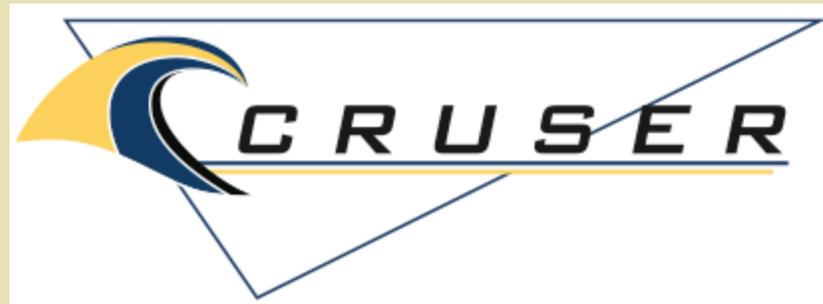


Making War Less Destructive

- ◆ the advent of robots (alongside highly discriminate weapons, non-lethal weapons, and other technological innovations) might force us to re-examine the principle of last resort, rather than simply to condemn the emerging technology as “destabilizing” or “war-provoking.”
- ◆ If war, as a result of these innovations, becomes less costly and destructive than its alternatives (including costly and harmful blockades, trade sanctions, financial embargos, or efforts at political destabilization), then it would no longer be wrong to resort to it *other* than as a “last resort.” That criterion would no longer have its traditional force.
- ◆ These revolutions in military technology, that is to say, may well force us to re-examine our settled principles about the presumed evils of war, at least when compared with its alternatives.

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