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Teaching Notes for CHAPTER 12: Security by Drones: The Global Market for Remote-Controlled Warfare

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TEACHING NOTES

Security by Drones: The Global Market for Remote-Controlled Warfare

By Rebecca LeFebvre*

At its core, this case is about how advancements in technology can change the face of armed warfare. Policies, standards, and international law often lag behind these advancements leaving a void to be filled by the whim of an anarchical international system. Drone technology seems to have emerged overnight to the front line of global armed conflict. This case highlights the implications of drone technology to public-private sector interaction, civil-military coordination, and computer-human ethics.

Background

The role of the state as the primary actor in international relations has been challenged by the phenomenon of globalization. Globalization has brought about interdependence between regions of the world economically, politically, culturally, and through technology and communications. Globalization continually challenges the power of the state. As Jessica Matthews points out in her 1997 article in *Foreign Affairs*, “The steady concentration of power in the hands of states that began in 1648 with the Peace of Westphalia is over, at least for a while”.¹ In situations of conflict and war, the roles of state and non-state actors have become blurred. Even the 9/11 attacks show evidence of the growing link between the public and private sectors, as the World Trade Centers and the Pentagon were all part of the same attack.¹ This blurring of roles may call for new partnerships between state actors, particularly the military and non-state actors, such as non-governmental organizations and private sector businesses.

The question of the civil-military status of drone operators is further complicated when considering the computer-human status of drones with autonomous decision-making capabilities. Allowing computers to make lethal combat decisions severs the chain of responsibility, even if the standard rules of engagement are programmed into the computers.

The Purpose of the Case

The field of civil-military coordination in the high-tech world of drones contains many unresolved issues, including the need for expansion of policies and guidelines for civil-military coordination, re-evaluation of the legal framework for armed conflict, ethical considerations with the use of drones, and economic considerations for the private sector amidst a growing international drone market. This case may be used to familiarize students with many of these issues, and give them the background to understand the challenges that lie ahead. The main

objective of this case is to promote discussion of key issues among students. The issues for discussion may be grouped into three main categories:

1. *Erosion of State Sovereignty*: This case study will enable discussions about the erosion of state sovereignty in light of globalization and the power of economics in the private sector. Students can gain insights into the impact of globalization on intrastate conflict through the example of the growing drone market. Examination of the Libyan rebels drone story particularly reveals the influence the private sector can have on the affairs of states.

2. *Civil-Military Coordination*: This case study allows for discussion of cooperation between military and civilian organizations with regard to drone technology development, purchasing, and operations. The needs of civil-military coordination for humanitarian relief missions may be compared with coordination over the control and distribution of potentially lethal drone technology.

3. *Law of Armed Conflict*: This case study highlights legal and ethical implications of emerging drone technology. How can international law of armed conflict, which predates such emerging technologies, be interpreted or updated to address these issues?

Teaching the Case

Instructors may want to start the case study by examining the story of the Libyan rebels purchasing a drone from Canada, described in the “Introduction” section. Once the students have read the case, instructors can show the two-minute video from Aeryon Labs on the capability of the Libya-purchased drone (see url in video section below). Instructors can then hold a group brainstorm on who are the main actors in the story. The list of actors that will likely emerge is:

- David Kroetsch (CEO of Aeryon Labs)
- Charles Barlow (President of Zariba Security Corporation)
- Libyan rebels (also known as the National Transitional Council)
- Gadhafi regime
- UN Security Council
- NATO
- Canadian government

Once a satisfactory list of actors is complete, instructors may want to divide the class into groups, assigning one actor to each group. Each group can then work together to answer the following questions in the spirit of their assigned actor given the Libyan situation presented in the story:

- What are your primary interests?
- What are your desired outcomes with respect to other groups?
- What message do you want to put out to the media?

The class can then regroup, and each small group can report out on their answers. The instructor may wish to capture the primary interests in short form on the board. As the discussion on interests proceeds, several dilemmas are likely to emerge. The sections below describe some of these dilemmas with suggestions for questions the instructor can use to promote further discussion.

The Sovereignty Dilemma

The phenomenon of globalization has brought increased scrutiny to the impact of economic interests in conflict prone zones. As the power of multi-national corporations continues to grow, the power of the sovereign state may decline. The pressures of a competitive market may lead corporations to act in the interest of their shareholders without regard to implications for conflict.

- Should Canada have allowed export of this technology to the rebels?
- Would your answer be different if the drone contained weapons?
- Would your answer be different if the drone had been sold to Gadhafi forces?
- Who is more powerful in this situation: sovereign states or private industry?

The Private Sector Dilemma

Multi-national corporations (MNCs) often find themselves caught between their shareholder interests to grow profitably, the interests of their host countries, and the emerging standards in corporate social responsibility.¹

- How should the private sector participate (or not) in conflict prevention?
- Does private industry have the right to sway the outcome of war?
- How do MNCs avoid exacerbating conflict?
- Should MNC's motivations be for profit, human rights and/or political aims?
- Should the U.S. sacrifice economic advantage to countries like China, who don't prevent export of drones, in order prevent weapons proliferation from within its own borders?

The Ethical Dilemma

The emergence of autonomous drones leads to questions about the law of armed conflict. Also at issue are the ethical dilemmas of computer versus human decision-making in combat situations, and military versus civilian decision-making for non-combat use.

- Is it sufficient to program the Laws of War and Rules of Engagement into drones in order to allow those drones to make automatic yet guided decisions? Or should a human always be involved in lethal decisions? Who decides these questions?
- If computerized drones are shown to behave more consistently with the Laws of War than humans, should they be allowed to replace human agents? How can the military and civilian sectors best collaborate in making such decisions?
- The Just War tradition requires that agents be held accountable for their actions in war. If a drone hits the wrong target, killing an innocent bystander, who is responsible?

Supplemental Readings

One or more of the following articles may be useful to assign to students as supplementary reading for exploring the illustrated dilemmas further.

1. Cedric de Coning, “Civil-Military Coordination Practices and Approaches Within United Nations Peace Operations”, *Journal of Military and Strategic Studies* 10 no. 1 (2007).
2. Ryan J. Vogel, “Drone Warfare and the Law of Armed Conflict”, *Denver Journal of International Law and Policy*, 39, no. 1 (2011): 101-138.
3. Ronald C. Arkin, “Governing Lethal Behavior: Embedding Ethics in a Hybrid Deliberative/Reactive Robot Architecture PART I: Motivation and Philosophy”, *Proceedings of the 3rd ACM/IEEE International Conference on Human Robot Interaction*, 2008.
4. Virginia Haufler, “International Diplomacy and the Privatization of Conflict Prevention”, *International Studies Perspectives*, 5, no. 2 (2004): 158-163.

Videos to Show in Class

Instructors may wish to show this two-minute video about the Scout drone mission in Libya which was produced by Aeryon Labs.

http://www.youtube.com/watch?v=DQ3hEt0EOkc&feature=player_embedded

This is a two-minute video produced by GTRI that shows their demonstration of autonomous collaborative vehicles.

<http://www.gtri.gatech.edu/media/972>