

Christopher Bangs
Political Campaigns Coordinator
bangs.christopher@gmail.com

McGill's Ties to War

November 25, 2012

Many Councilors expressed a hope that more information about McGill's ties to militaries and weapons manufacturers would be made available. This report will lay out much of what we know. All of this information is publicly available on the internet, and it should not be taken as a complete list of ties between McGill and the pursuit of war; Access to Information requests filed with the Secretariat should yield further understanding.

The Center for Intelligent Machines

The CIM is an inter-departmental, inter-faculty research group comprised of researchers from the School of Computer Science, the Department of Electrical and Computer Engineering, and the Department of Mechanical Engineering. Among their projects, it appears that two support war efforts.

The first comes from the Artificial Perception Laboratory of the CIM, where researchers are designing an Enhanced and Synthetic Vision System that help helicopter crews see in poor visibility conditions, like after the detonation of a bomb. It is done in collaboration with CAE Inc., BAE Systems, and the Canadian Department of National Defense, CAE and BAE Systems are well-known weapons manufacturers and arms dealers, and the military applications of this system are apparent.

The second comes from a company spun out of research from the lab. SimActive is developing software they call "Correlator3D" to make it easier for militaries to process large amounts of data, to maintain a line-of-sight from multiple perspectives, and to accurately target in theater. It was developed in collaboration

with the Department of National Defense, and largely serves to automate data collection, processing, and targeting presumably from drones in combat.

CLUMEQ

This supercomputer is run out of many universities in the area, including McGill. It does all sorts of simulations, including the optimization of military helicopter blade shape.

Computational Fluid Dynamics Lab

The CFD Lab primarily develops advanced numerical technologies to improve the design of aircraft. The two professors, two post-doctoral fellows, and 5-8 graduate and honours undergraduate students work on many projects with funding from many sources, including some of the most well-known weapons manufacturers. The researchers receive funding from Northrop Grumman, Lockheed Martin, TAI (a Turkish military aerospace company), and Aselsan (a corporation that produces defense electronic systems for the Turkish Army) to improve drones. The Lab also does work for Boeing and Bell Helicopter, among others, to improve military helicopters.

The CFD developed a computer program called FENSAP-ICE that allows big aircraft manufacturers to reduce or eliminate icing on planes flying “full throttle to 20,000 feet” (6.1 kilometers); it should be noted that commercial aircraft rarely if ever need to fly “full throttle” 6.1 km in the air. The technology has been purchased by Lockheed Martin for the Joint Strike Fighter, and by Bell Helicopter, Textron, Northrop Grumman, Bombardier, and others. It has also been used by CAE Inc. so that military “pilots can get the maximum benefit during their regular training courses.”

Department of Geography

One professor, George LeBlanc (who it appears has never taught a class, does not have an office, and does not have a McGill email address, and so presumably is just receiving funding for their research), advances the science of hyper-spectral

imaging, funded by the National Research Council of Canada. In addition to its uses in identifying mineral reserves and hydrocarbon deposits (many of which are in sensitive, remote areas in the far North), this imaging has military and policing applications.

Faculty of Arts

Even the Faculty of Arts is not immune from military research. The Adversarial Intent Section of *Defence Research and Development Canada—Toronto* engaged McGill professors to understand the root causes of violent conflict driven by armed non-state actors in failing or failed states. The research is intended to better understand why individuals in failing states would resort to force, which has clear uses in the context of sustained resistance to NATO military action in Iraq and Afghanistan. In fact, the paper, titled “The Psychology of Violent Conflict in Failing States: A Review of the Scientific Literature” explicitly addresses this goal, stating, “Increasingly, Western military forces are likely to confront irregular opponents, whereby groups engaging in violence are composed of armed non-state actors (ANSAs), and this in regional settings where the local government is weak or absent. Thus, . . . Western military forces need to understand why non-state actors resort to violence.”

Similarly, McGill University in collaboration with the University of Montreal runs the Centre of International Peace and Security Studies, a bilingual research institute that offers its expertise in strategic and risk analysis and training to public and private partners.

The Institute of Air and Space Law

An Institute in McGill University’s School of Law, the IASL produces many LL.Ms (Masters of Law) whose theses deal with issues of air and space control. Many of these papers act to justify the use of force by the United States or by the West more generally in maintaining or expanding control over geopolitical situations.

For example, the thesis of John W. Bellflower, “The Influence of Law upon Command of Space,” examines “the concept of command of space by providing a

legal basis for its legitimacy.” The author argues that “covenants, without the sword, are words and of no strength to secure man,” and thus that America needs to assert positive and negative control over access to space to protect against threats to U.S. space capabilities. The paper then provides a legal basis for the pursuit of American space hegemony within the framework of international agreements designating space as a public commons for all peoples of the world.

Shockwave Physics Group

Perhaps the most immoral research on campus, the SWPG researches detonation. The group is advancing the technology behind thermobaric explosives: thermobaric bombs are a double explosive bomb, where the first detonation releases a fluid into the air and the second ignites it. This burns the oxygen in the area and creates a shockwave that implodes its victims’ lungs. It is particularly deadly in enclosed spaces.

Canadian researchers are internationally known for leading the charge on developing these weapons, which are designed for maximum lethality and structural damage in urban or enclosed environments, and much if not most of that research happens at McGill.