

PUT AWAY THAT CALCULATOR AND PICK UP A BOOK!

by Charles Oliviero

“RMC makes engineers literate and artsmen numerate.”

– Rear-Admiral David Morse
Commandant, RMC
2000–2002

Amen to Admiral Morse. He had it right. Engineers need to be literate and not just ‘calculator-toting number crunchers.’ Artsmen need to understand basic maths and sciences. But, recently, another general officer in the air force bemoaned the fact that the Royal Military College of Canada (RMC) was not pushing enough science, engineering and math at its cadets. Officers, according to this misguided gentleman, needed more engineering and less time spent studying arts. “The Armed Forces needs engineers” was his message, and RMC is wasting too many resources on arts programs. I beg to differ.

The world does not work like a clock nor like a computer. Real life does not follow well-laid-out plans. There is no mechanical, deterministic design that everyone follows. Life is not based on some blueprint. As Canadian-born author Margaret Millar wrote: “Life is what happens while you’re making plans.” The ruling law of nature is chaos, *not* order. From Thucydides to Clausewitz to Heisenberg, thinkers and philosophers have been telling us that human progression is *non-linear*. Yet, the march towards linearity continues. At our universities, and, most troubling for the military, at RMC, engineering continues to be more important than philosophy. The proof of this is simple: RMC is the only university in Ontario where you *cannot* study philosophy.

At RMC, mathematics is an academic prerequisite. Philosophy is not offered at all. This denies the reality of the human condition. More importantly, for Canadian Forces (CF) officers to be pushed in this direction is not to arm them for their future duties; it is to *disarm* them. Officers are leaders. They are decision-makers. They are role models. But machines do not need to be led. Computers need no decision-makers. Fleets of vehicles do not look to role models for their performance parameters. But soldiers, sailors and aircrew do. Every moment of every day leaders are under constant, if benign, scrutiny. They need not only to lead well; they need to live their lives in an exemplary way.

How has this basic notion, that officers lead other human beings, been overlooked? It has been a long process, and one that has been hard-fought by the scientists over the humanists. Since the writings of Galileo and Newton and the subsequent Scientific Revolution, western society has become increasingly enamoured of science. This is not a bad thing. Our lives are made continuously better by advances in mathematics, physics, medicine *et al.* But science must not become the altar at which a whole society should worship. This is especially true for officers of the armed forces. Military officers must not lose sight of the fact that their primary, some might say *only*, function is to lead their subordinates. Machines and the science that makes them possible are important, but these machines should not hold a place of primacy. Science must retake its back seat in officer education.

I have always felt a certain empathy with those poor Pacific salmon that have to swim upstream against such overwhelming adversity. So few make it from ocean to spawning ground. Any logical analysis of their situation would conclude that a clever salmon would not take the arduous journey that sees so many of them end up as lunch for a bear or beaten and battered in the eddies of boulder-strewn streams. And yet they go. Why? They go because they must. It is in their nature. There is a lesson here for the military. Logic is important but it does not rule the world. Human nature does. Logic denies self-sacrifice; it derides acts of heroism as foolishness that can lead only to death. And yet the military culture praises just such conduct and encourages leaders to act in ways, that, while reaffirming their humanity, may be illogical. Casual reading of the citations for the Victoria Cross winners is proof of that. The Canadian Forces needs to spend at least as much time studying the nature of humanity as it does the machines it builds, maintains and operates. And yet it does not. What is worse, it does not always value those who do. After all, they are *only* artsmen...

Naturally, a part of this is friendly rivalry. Engineers tease scientists, who tease artsmen, who tease everyone. There is nothing wrong with that. But the CF has gone beyond that. Comments like the one mentioned earlier by the air force general are indicative of a deeply rooted misunderstanding of what exactly officers should study and learn. To rephrase the American Admiral James Stockdale: “You are what you learn.” Admiral Stockdale’s engineering studies

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helped him to be a good naval fighter pilot, but he credits surviving years of brutal imprisonment in the 'Hanoi Hilton'¹ to his study of the humanities in general and of moral philosophy in particular:

"The best education, the best preparation for a full and successful life, surely entails a proper blend of classical and contemporary studies. While we pursue the keys to the kingdom of – modernity – studies in political science and economics and high technology – we need to understand the importance of a broad background in the readings of antiquity, those readings that form the basis of our civilization. In time of duress, in war especially, is that classical background important?"

"Achieving that magical combination of ancient and modern grounding took me half a lifetime to improvise. I grew up as a veritable prince of modernity; as a young man I was a test pilot, flying supersonic fighters when they were headline news and sharing a schoolroom with future astronauts. Then, at 37, too late for graduate school in high tech, a turn in my life took me to the quite different atmosphere of the study of moral philosophy. By that I mean old-fashioned philosophy – Socrates, Hume, Mill – mixed with literature with moral overtones – Shakespeare, Dostoyevski, Camus, and the like. I was deeply exposed to the thoughts and actions of men of the ancient past, of mankind dealing with Ultimate Questions."²

A guest lecturer in ethics at the Canadian Land Force Command and Staff College a few years ago pointed out that, in his experience as a professor of business ethics at various post graduate schools in Canada and the United States, the greatest difficulty in coping with moral or situational dilemmas was faced by those students who were highly technically trained. Engineers always had difficulty, and military officers with engineering degrees had the most difficulty. To Professor Gilles Paquet, this was not really surprising when one considered how these men and women had been educated. Scientists are trained in Newtonian cause and effect. This teaches the student that for every problem, there is *at least* one solution. Often there are many solutions. Dr. Paquet rightly points out that in the simplest of terms, a moral dilemma does not offer a choice between two viable and similar options. A *true* moral dilemma is a choice between "chalk and cheese", as he put it. These are disparate choices. The leader may be forced to choose between feeding the soldiers and surrendering; whether to tend to the wounded or launch a counter-attack. This is not like deciding whether you prefer a wheeled or a tracked combat vehicle.

The reality of human existence is that, for a myriad of problems, not only are there not many solutions, sometimes there are *none*. This does not compute for scientifically trained brains, and, explained in the words of elementary psychology, this causes a cognitive dissonance in the mind of the individual faced with the insoluble problem. Only those trained in classical philosophy, or those with years of experience facing dilemmas, have the mental toolbox to think their way out of this intellectual box. Introducing human understanding, emotion and compassion may lead to a solution, but even if it does not, it offers alternatives that may be of some use. Mathematics, science, and physics simply leave a dilemma unsolved.

Some in the Canadian Forces have seen the light and changed their thinking. But they remain in the minority. Most still insist on training more officers in engineering and the sciences. During a recent convocation at RMC, Lieutenant General (ret'd) Roméo Dallaire demonstrated that his difficult journey these past few years had caused him to have an epiphany. He made a *cri du cœur* for officers to be better educated in the humanities:

"Within months of graduating, some of the officer cadets became lieutenants and served in overseas postings in conflict areas. It is no time, and there is no time, for apprenticeship. We must graduate and be able to lead in this complex sphere. That is why the reform of the content of the education and of officership is so crucial."

"Yes, officers should study sociology, anthropology, philosophy, geography, the ebb and flow of cultures. Yes, they must because, from lieutenant to general, they will all be committed, at one time or another, to have to use the intellectual knowledge and intellectual strength married with the fundamental values of this nation in a moral and ethical way to solve problems. And so there is a need for this reform; there is a need to develop these new skills to respond to this new mission."³

I believe General Dallaire is correct, but this is not a new mission. It was ever so. The problem is that, collectively, we have not recognized the shift away from the humanities. And we are not alone, for other armies have made the same shift. In the US Army, the "development of technological applications and operational procedures continues to capture a disproportionate share of the Army's creative energy even though we acknowledge that soldiers – not machines or structures – ultimately determine the outcome of battle."⁴

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Think about the time, energy and money that the Canadian Army is spending currently on new computerized command and control systems and compare this to the time that is spent on moral problem-solving or the contemplation of human problems. I think General JFC Fuller had it right in 1936 when he commented on the role of tactical critiques for teaching senior officers what they really should know: "Tactical exercises set to bring out... *tactical* lessons are not worth the setting. What an exercise should bring out *is the personality and common sense of the generals.*"⁵ How often is that done today?

An instructional scenario in the US Army's Command and General Staff Officers Course at Fort Leavenworth describes a situation relevant to current military operations other than war.⁶ Soldiers deployed on a humanitarian support mission in an undeveloped nation confront drought, refugees, and a regional incidence of HIV estimated as being as high as 50 per cent. Accordingly, the senior tactical commander orders his soldiers to have only minimal contact with the local population, and *no* contact with wounded civilians. One soldier eventually disobeys. His upbringing and army training did not prepare him for what he is witnessing. He becomes so upset at seeing badly wounded orphans along the road during his daily supply distribution runs that he stops his truck

and provides minor medical care to some of the injured children. His platoon commander immediately arrests him. What should happen to that soldier?

First, was the tactical commander's order lawful? Yes, for it was undoubtedly intended for force protection, not to increase human suffering. Was the soldier's action legally correct? No. It violated the commander's lawful order. Were the soldier's actions morally correct? Arguably, both yes and no. The soldier was doing what was necessary to prevent unnecessary suffering to a helpless non-combatant child, and yet he violated his sworn obligation to "obey the (lawful) orders of the President and the officers appointed over him."

So what about the soldier? Should he be punished? Should the commander reconsider his order? What effect will whatever happens have on the morale of the other soldiers in the unit? Knowing how to resolve calculus equations are useful and important, but will not help this soldier or his leaders. Having read Plato, Descartes or Kant, however, might offer some insight.

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NOTES

1. Stockdale was shot down over North Vietnam in 1965 and was the senior United States Navy prisoner-of-war in Hanoi for eight years. He was tortured fifteen times, held in leg irons for two years, and kept in solitary confinement for four years.
2. James Bond Stockdale, "In War, In Prison, In Antiquity," *Parameters*, Summer 1995, pp. 134-40.
3. As quoted by Ian MacAlpine, *Kingston Whig-Standard*, 1 Jan 2001.
4. Walter F. Ulmer, Jr. "Military Leadership into the 21st Century: Another 'Bridge Too Far?'" Spring 1998, p. 6.
5. J. F. C. Fuller, *Generalship: Its Diseases and Their Cure* (1936), reprinted by (Harrisburg, Pennsylvania: Military Service Publishing Company, 1984), p. 7.
6. Major Kenneth Tarcza, US Army, "The Army Values Challenge," *Military Review*, Volume LXXXI – January-February 2001, No. 1, p. 79

Maybe we picked it up, put it there, and forgot,' he said. The next surprise was two weeks later. They had been out to dinner with friends on Wednesday evening, and they hadn't woken up when the alarm clock rang. Rick woke up at twenty to nine. They both got dressed quickly and left home without breakfast. They didn't make the bed, and they left their nightclothes on the floor. She picked up the cigarette end. There was red lipstick on it. She showed it to Rick. She wanted a cigarette while we were talking about the house. I forgot to throw it away. I remembered later in the evening. Didn't you know that it was someone looking at the house?' It would drive me crazy. put up put away clear up bring up. You've borrowed such a great deal of money from me lately. I need to . exactly how much you owe me. make up put out work out clear up. Can you . the time of the next train to Munich? sort out put out find out try out. That math(s) exam was incredibly difficult. It took me ages to . some of the answers. sort out put out work out find out. I'm broke. I have to . an idea for making money. get on with put up with run out of come up with. Our teacher told us to . our work quietly. get on with put up with run out of come up with. The government wants to . a new scheme to encourage people to start their own businesses. hand out try out find out run out. IELTS Book 14 test 1 reading 1 children's play. IELTS 14 test 1 listening vocabulary grammar key paraphrase. IELTS WRITING TASK 2 AGREE DISAGREE teacher's notes. ADVANCED READING LISTENING VOCABULARY Gabriel GarcÃa Marquez. A1 A2 LISTENING PRACTICE. Useful Links. English Language Proficiency is one of the fundamental criteria for the international students from the non-English speaking countries who are willing to pursue their studies abroad (English speaking countries). Aspirants from India and other Asian countries, where English is not the first language, have to qualify these tests. Talkin Travel Tickets book collect pick up reserve Planes board check in go through * land proceed take off transfer Trains alight arrive catch depart get off leave Cars drive hire insure rent return Hotels check in check out complain move store. Socialising Arrangements arrange drop off expect get back pick up Invitations accept invite look forward request the pleasure Restaurants be off bring charge order take away Parties greet introduce mix mingle offer pour Small talk break the ice chat enjoy gossip relax. This book contains over three hundred very useful business verbs. Who needs e-mail? If I want to send a message to someone, I write a letter, put a stamp on it and mail it. It's simple and cheap.