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RMC AND THE PROFESSION OF ARMS: LOOKING AHEAD AT CANADA'S MILITARY UNIVERSITY

by Dr. John Scott Cowan

The Royal Military College of Canada turned 125 this year. In 1876, the artillery and the engineers were viewed as the intellectuals of the profession of arms. As such, the focus at the new RMC in the 19th century emphasized such things as surveying, mathematics, ballistics and other applied or theoretical sciences, though the humanities were also deemed necessary. Officer cadets were between the ages of 16 and 21 on entry, and after four years left the College oriented toward military or public service. For most of its 125 years, RMC has focused on the education and training of junior officers.

While the shift to a fully subsidized programme with an obligation of service occurred in the mid-1950s, and the right to grant degrees was obtained in 1959, the shift towards becoming a modern military university has been accelerating markedly of late. Increase in research and in masters and doctoral programmes have occurred over two decades, but most of the growth is recent, as is the rapid growth of part-time and distance programmes. Recent critical events have also played important roles in redirecting the energies of the College. Among these critical events have been: the closure (1995) of the other two military colleges, creating a critical mass in many disciplines in Kingston; the Withers Report (1998) on

future directions for the College; the approval of the new undergraduate core curriculum (1999); decisions on the shape of the Enhanced Leadership Model (ELM) for new junior officers (2001); and strong policy shifts towards a highly educated Canadian Forces (CF).

EDUCATION AND THE CANADIAN FORCES

The transformation of the College (and in this I include both the changes since 1996 and the considerable shifts still to come) could not have been undertaken without a concomitant shift in the attitude towards all aspects of higher education amongst the senior leadership in the CF. The current Minister has also strongly favoured increased education for both the officer corps and for Non-Commissioned Members (NCMs).

Individual champions notwithstanding, and despite earlier recognition of the need for some education, that broad acceptance of its critical role for the Canadian Forces is recent. The idea, however, is not new. H. G. Wells described the history of humankind as “a race between education and catastrophe”. Nowhere is this truer than for the modern profession of arms.

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On the one hand, the public in the developed world have come to view any significant failure of judgement within the profession of arms as a genuine catastrophe. We would be profoundly unwise to dismiss this as merely anti-military bias and an appetite for scandal. While those factors may amplify that perception, the perception itself is inextricably tied to the increasing importance of human rights issues in both domestic and foreign policy throughout the developed world.

On the other hand, the remarkable acceleration of technological change and the growth of knowledge have the potential to be a vast multiplier of the effectiveness of numerically small forces. This is part of RMA, the Revolution in Military Affairs. But it also amplifies the

tainty that you will need to know more than others in society. Indeed, the knowledge base for the profession of arms spans most of human knowledge.

Most people who think training is done the way it is portrayed in the movies will, no doubt, be surprised to learn military education encompasses most of the fields of knowledge taught at any modern university. And it is an education that spans an entire career.

But a unique and dangerous aspect of the anti-education myth and stereotype is that not only do many in the broader society believe it to be so, but some within the Canadian Forces still view too much education as an impediment.

During the interviews conducted for the Withers Report of 1998 on the future directions of RMC, we heard some remarks from serving officers about too much education.

Even the comments from our own masters and doctoral students echo the established mythology that getting a graduate degree interrupts or slows an officer's career, while getting a graduate degree and teaching at RMC derails one's career completely.



Stamp issued in June 2001 to commemorate RMC's 125th anniversary.

need for complexity of thought and maturity of judgement to avert catastrophe, and drives that requirement further down the chain of command than ever before.

Complexity of thought and maturity of judgement are the product of strong education, and its application to the interpretation of experience. Indeed, while experience is important, experience without education is a form of tourism. But it is too easy to say simply that education will avert catastrophe. What education? When? To whom? By what methods? And to what level?

And there are still skeptics. At convocation in May 2001, I spoke of the persistent but false Canadian stereotype of an uneducated CF:

“But there is another stereotype which is equally problematic, and on this one I address all those graduating today, regardless of their degree. It is the stereotype which equates military service with lack of education.

And yet in many respects those graduating today are a new breed of Renaissance men and women. You have learned and will learn in more breadth about things outside your first discipline than most others in Canadian society. You will hold more varied jobs than others, and you will change jobs more often. The RMC core curriculum of liberal arts and sciences necessary for officership is predicated on the cer-

Well, old biases die hard, but, by God, they are dying. Today, our postgrad students include a major general, and this summer an RMC history professor who is an infantry officer with a PhD takes command of a regular force battalion.

This is evidence of a profound sea change. Learning, even at the masters or PhD level, is becoming accepted and valued in the Canadian Forces.

Do not, please, believe, that the much heralded RMA, the Revolution in Military Affairs, is purely a technological revolution, a revolution of devices. The real RMA is knowledge. And that revolution is upon us now.”

It is in this new context, the one that perceives education to be the antidote to catastrophe, in which the College is beginning to look outward.

THE EVOLUTION OF THE OFFICER-CADET: FULL-TIME UNDERGRADUATES AT RMC IN THE 21ST CENTURY

RMC was originally created to train and teach officer cadets, but both the cadets and the programme have changed. When few Canadians went on to post-secondary education, and when all officer cadets at RMC paid to attend, many RMC cadets were part of Canada's social elite. Today, however, when other

excellent universities in Canada have increasing tuition and residence fees, and are now campaigning vigorously to build endowments to assist bright students, the vast majority of officer cadets at RMC are paid to attend. The easy part of this good news is that we can tap into all of Canada's talent by accepting any promising individual. The hard part is that starting with the full socio-economic spectrum of Canadian society gives us a bigger task over the four years of drawing the group towards common values and seamless teamwork.

In part, however, it is this added task which will continue to make RMC irreplaceable. Many established civilian universities face an uncertain future, as the communications revolution makes what they can provide accessible to students from a distance (at least for those in non-laboratory disciplines). They are beginning to face stiff competition from less costly (but arguably less complete) virtual universities in cyberspace. In addition, there are three other critical factors to consider at RMC.

First, a key feature of its role is the socialization of a large group of young Canadians together in a military setting, creating lifelong friendships and links of trust and shared effort which cut across geography, linguistic and cultural backgrounds, environments and military occupations. This requires a residential programme of education and training while leading a military life. There is no electronic substitute for this. It is also the reason why squadrons at RMC are not aggregated by environment, military occupational classification (MOC), first language, geography or gender.

Secondly, the ROTP/RETP/UTPNM programmes represent a stable basic supply of young officers relatively immune to the economic fluctuations which have so influenced the rise and fall of the supply of Direct Entry Officers (DEOs).

Thirdly, the strength of RMC in the scientific and engineering disciplines has been crucial, as the other entry routes have been unable to supply adequate numbers of officers in technological areas for many years. These are also the disciplines least amenable to distance learning methodologies.

So while the full-time undergraduate programme is today merely one of six significant 'deliverables' of RMC, it is durable. But how will that programme evolve?

The first glimpses of that future direction came from the Withers Report. That report on the undergraduate programme — which was widely anticipated to be an exercise to "put the M back into RMC" — did indeed make strides in that direction, but through a number of clever and unexpected devices. First, it led to changes in MOC selection procedures and created a considerable impetus for revitalization of summer training. But it also advocated more cooperation and synergy between the academic and military

activities of the College, and called for a much expanded core curriculum.

These are now both a reality, and the new core curriculum (1999) is fully described in the report of the Core Curriculum Committee, to be found on the RMC web site on the Board of Governors page. The first class following that curriculum is now in third year. With it, all officer cadets meet defined academic standards in subjects viewed as essential for officership — leadership, ethics, psychology, Canadian history, Canadian civics and politics, military history, international affairs, cross-cultural relations, mathematics, logic, information technology, physics, chemistry, and both of Canada's official languages. This core curriculum of 17 to 19 course equivalents (30 to 42 percent of a degree) is based on defined minimum competences and not necessarily common courses to achieve them. It is not immutable, and the content of the courses used in it will continue to evolve to parallel changes in the Officer General Specification (OGS) and the needs of the CF.

The representatives of the three environments on the Core Curriculum Committee had recognized at once that these core competences are equally essential for officership for a Direct Entry Officer joining the officer corps with a degree from a civilian university, where some of these broad competences might be lacking. After reflecting upon this gap, DND has settled upon a period of Professional Military Education (PME) as part of the Enhanced Leadership Model for new officers. For officer-cadets at RMC, most of this PME is imbedded in the core curriculum. For DEOs, it will be an added period of PME, after individual prior learning assessment. While this PME will be delivered in a number of training schools across Canada, its delivery and quality control will be by RMC through its Continuing Studies Division (often identified as the Office of Continuing Studies or OCS).



Chemistry laboratory at RMC.

It is a fine irony that RMC has sometimes been chided by the uninformed, including some other universities, for not providing a liberal education. I have of late explained core curriculum to my opposite numbers at the civilian universities, and that its consequences have been the need to do a bit of top up for their graduates. However, the difficulties faced by the other institutions in imitating core curriculum are real, and stem

degrees with a single short applied programme. In the words of the younger generation, these out-liers “just don’t get it”.

To the isolationist academic, hoping for just another civilian university, I say, you simply cannot deny the mission of this place. It exists in greatest measure to produce capable, knowledgeable and resourceful officers for the CF. Without that, there is no College. Since the end of the Cold War, its special mission has become increasingly important, as Canada’s role in the world shifts. Considering how Canada chooses to involve itself, the tasks of young officers in the field today have been made especially difficult. The full four-pillar degree, including the recently enhanced core curriculum of subjects essential to officership, is intended to build the breadth of knowledge, judgement, adaptability, maturity and professionalism which Canada’s new roles demand of even very junior officers.

To the skeptical military colleague who wants a uniform, short programme, and who doubts that higher education has much to do with officership, I can only say that the experiment you propose is not a new one. It failed after Confederation when the short programmes of the Artillery schools in Canada, including ‘A’ Battery here in Kingston, were deemed

inadequate. That failure led to the founding of RMC, which was conceived of from the outset (that is to say prior to 1876) as having a four-year post-secondary school programme.

The compression experiment was tried again when the programme was shortened to three years in the 1890s. The fires of conflict taught Canada firsthand that education and officership were linked, and the decision to return as soon as possible to the more complete four-year programme was taken in 1916, even in the depths of the Great War, by people who had seen the need to increase content and had the courage to take the long view.

Today, when a young officer may be called upon to be a skilled leader, a technical expert, a diplomat, a warrior, and even an interpreter and an aid expert, all at once, there is no question that good training is not enough. Skills are not enough. The job calls for judgement, that odd distillate of education, the thing which is left when the memorized facts have either fled or been smoothed into a point of view, the thing that cannot be taught directly, but which must be learned. Without the mature judgement which flows from education, we fall back on reflexes, which are damned fine things for handling known challenges, but which are manifestly unreliable when faced with new ones. And there will be new ones.”

from the fact that an RMC undergraduate degree contains 11 to 50 percent more courses than the same degree elsewhere. Indeed, one of our tasks for the next five years is to bring that ‘overload’ down to 5 to 25 percent more than at other places, partly by making as much use as possible of synergy among the aspects of the programme.

The vast majority of our civilian and military faculty, and the vast majority of other officers on staff at RMC, stand together in our efforts for synergy. We strive to do training at RMC which taps into the rich learning resources we have, and we strive to give courses which have relevance for, and draw examples from, the profession of arms. (Even in research, where our faculty have full academic freedom, and pursue projects of their own choosing, most choose to do defence-relevant research.).

But a minority are not persuaded; the polarization of the past does sometimes re-emerge, and must be confronted. The following quote is from my remarks to a Convocation on 4 October 1999:

“But from time to time there are those who doubt the recipe. There is the occasional academic colleague who resents the intrusion of any military influence into the curriculum, and wants to fully emulate the other 90 universities in Canada. There is also the occasional military colleague who finds the university flavour jarring, and would rather replace our various



Stamps issued in 1976 to mark RMC’s centennial year.

Some of the new challenges for RMC are in the following sections.

THE BEST-KEPT SECRET: MASTERS AND DOCTORAL PROGRAMMES AT RMC

Today, RMC has between five and six hundred students proceeding towards a masters or a doctorate, of whom somewhat more than half are not in Kingston. Granting roughly one graduate degree for every 2.5 undergraduate degrees, RMC has the highest ratio of graduate studies to undergrad of any university in Canada. It voluntarily submits each of its graduate degree programmes to accreditation by the Ontario Council of Graduate Studies (OCGS), the toughest accrediting body in Canada for masters and doctoral degrees. It consistently gets the highest ratings.

But some of these degrees are very unusual, because RMC builds degrees that the Canadian Forces want. RMC can accept civilian graduate students, and it is a measure of the excellence of these programmes that civilians will pay market rates to take programmes that have been tailored for DND. What does this tailoring imply?

In science and engineering, the tailoring largely means that thesis research topics reflect a defence interest, and 94 percent of funded research at RMC is defence-relevant. However, even the very existence of some technology degrees reflects the main client's preoccupations. The newest degree, the MSc in Space Operations, is a case in point, though established programmes focusing on acoustics or nuclear engineering or non-destructive testing make the point as well.

In Arts, while we have the right to give graduate degrees in the individual disciplines, the College has chosen to emphasize its War Studies degrees. These may be tailored towards history, or politics, or even literature, but must be relevant to the concept of War Studies. A year ago, at the request of the intelligence community, War Studies opened up an intelligence stream.

A request from DND resulted in RMC launching a two-year MBA degree programme in September 1999. Stronger on content than executive MBA degrees, it has three streams: supply chain management, financial management and strategic management. The MA in Defence Management and Policy is very popular with graduate students using our part-time and distance services. The newly accredited professional degree, MDS (Master of Defence Studies), is constructed on the platform of the Command and Staff Course at the Canadian Forces College in Toronto, and only available there. The first serial for it began in summer 2001.

We will also take graduate students from abroad, if they are military and if the government of Canada approves. We have seven non-Canadians currently doing a PhD, and expect this number to roughly double by early 2002. We do this for critical mass, to expose CF members to other cultures and contexts, and to facilitate contacts which may be useful for the Department at a later date.

These examples certainly illustrate the RMC approach to graduate degrees: if DND needs it and we are anywhere near being able to do it, we will. But we can't do it all. We currently grant about 90 masters and doctorates a year, roughly balanced between technological and other disciplines. But we may not be able to keep pace. If, for example, it were to be determined that (say) 1/3 of serving officers should have a graduate degree, a rough model would suggest that the CF would need 400 officers a year to receive a graduate degree.

But RMC, even with its CFC collaboration, is unlikely to have the capacity to grant more than 200 such degrees per year, of which only about 160 would go to officers (we have significant numbers of NCMs, civilians and foreign students doing graduate degrees). RMC has about 180 faculty (approximately 26 percent military faculty), of whom nearly 150 could engage in supervision of masters or doctoral students. A doubling of the number seeking a graduate degree would place the ratio of masters and doctoral students to available supervisors at higher than 6 to 1, or by far the highest ratio in Canada.

This leaves a gap of 240 graduate degrees per year which would need to be handled through civilian universities. RMC (through its Office of Continuing Studies) has been making agreements with other universities (13 so far). With these Memoranda of Agreement (MOAs), RMC can act as broker in many of these arrangements for CF members, so as to optimize academic credit which the member will receive for past experiences, to gain acceptance of relevant research



Cadets on Parade.

Painting by Monica Muller

topics, to negotiate the greatest flexibility to accommodate operational requirements, and to minimize administrative hassles for the member.

These facilitations will also alleviate the fear which some have that RMC intends to seek a near monopoly on postgraduate programmes for the officer corps. That roughly 75 percent of masters or doctorates being granted currently to members of the officer corps are RMC degrees is due only to the triad of excellence, relevance and lower overall cost. This ratio is not policy driven, and it is not a ratio that we will seek to maintain when graduate degrees for officers become more common.

LOOKING OUTWARD: THE RISE IN PART-TIME, DISTANCE AND NON-DEGREE PROGRAMMES

Seven years ago, the Royal Military College of Canada was not engaged in measurable amounts of part-time or distance education. It also had not yet widened its view of post-secondary education to include programmes, residential or otherwise, which did not inherently lead to a degree.

Today the Office of Continuing Studies (OCS) deals with some 2000 persons who are seeking degrees from RMC on a part-time basis. The degrees being sought are

sharing with other universities, and sending our faculty from Kingston to teach at the remote location. We sometimes become aware of individuals who are being deployed who have done postgraduate programmes at RMC, and will arrange for them to give courses abroad. We routinely accept assignments transmitted from ships at sea, and we are the one university that is guaranteed to be understanding when students want a few months extension on an assignment because they've just been deployed. We also experiment with compressed format intensive courses which fit into the interstices between training activities.

But the rapid expansion to 2000 part-time students has left some rough edges. We still have some mismatches between policies for part-time and policies for full-time students. Programme details get worked out on the fly, and the growth pattern, which for four years was close to exponential, has made planning difficult. On the other hand, the expansion occurred just in time to give us the experience needed to take on our next large project remote from Kingston, which is the multi-site residential delivery of the PME portion of the ELM to Direct Entry Officers, due to begin within months. This programme will add the contact equivalent of up to one academic term for 500-600 additional people per year. While inherently non-degree in course structure and intent, many of the PME modules being developed are at a level which can be recognized for academic credit if that would be helpful to the individual. The accreditation cell of OCS is always available to do prior learning assessment for any member, in order to identify potential academic credit which may be given for courses or exposures already completed.

This pattern of rapid growth in part-time university-level studies within the CF cannot persist. There is doubtless a natural limit. Furthermore, roughly half of Continuing Studies activity to date has been in courses for serving officers wishing to complete a bachelor's degree. This undergraduate degree completion effort by serving officers is an activity which will taper off in the years to come, as very few new officers will lack first degrees.

Two other types of part-time activity, however, will rise sharply. The number of officers seeking masters degrees will rise; this growth is already being strongly felt. But the huge task just beginning is post-secondary education for NCMs. The 700 non-commissioned members already taking RMC courses (some of them are masters students) is the proverbial tip of the iceberg.

The data from the next two to four years will enable RMC to model the likely eventual endpoint of this growth of part-time studies towards RMC degrees. At this point there is preliminary evidence that the numbers (excluding the DEOs taking PME) may eventually level off in the 3000-5000 band. However, we do not yet know what the exact impact of the new tuition fee refund policies will be.



RMC classroom.

primarily undergraduate, but over 300 of the 2000 are seeking graduate degrees (primarily the MA or PhD in War Studies, the MA in Defence Management and Policy, and the new Master of Defence Studies at CFC). While most of our part-time students are officers, about 35 percent are NCMs and about 5 percent are spouses of serving members.

RMC delivers courses to these students at Kingston, at a number of Canadian Forces Bases, and in some theatres of deployment abroad. The delivery methods are whatever works, including traditional correspondence courses, interactive TV, web-based courses, hiring faculty at the delivery locations to give our courses, course

The Continuing Studies Division is also the accreditation bridge between RMC non-degree programmes and the other academic divisions. Participants in non-degree programmes have the reasonable expectation to be able to apply portions of such programmes towards degrees. The Land Forces Technical Staff Programme (LFTSP), now entering its seventh year at RMC, is a case in point. The Division of Graduate Studies and Research and the OCS continue to collaborate on the process which currently enables some of the graduates of this programme to use it as half of the credit required for a masters degree.

While Directing Staff play an important organizational and pedagogical role, RMC uses regular faculty to teach much of the ten-month LFTSP. If, over time, other technical programmes, including those from other environments, can also be placed in Kingston, significant synergy can be gained by teaching common elements together, and by drawing on the pool of faculty expertise. In the same way that bringing the LFTSP from Shrivenham, England to Kingston saved money and added Canadian context, the addition of other technical programmes has the prospect for dollar savings and programme enhancement. A recent proposal by the Land Forces to co-locate the Master Gunner Course in the same unit for synergy is a promising first step.

There is nothing inconsistent in a university building non-degree programmes, provided that they are still 'higher' education. Many civilian universities have diploma programmes which represent portions of graduate degrees, and the LFTSP is precisely in this category, while serving the practical needs of the client. Too much emphasis on the credential, rather than on the education ('degree snobbery'), runs the serious risk of narrowing the definition of higher education in a way which is inconsistent with the broader goals of RMC and the education agenda of the CF.

RESEARCH AT RMC: THE SURPRISING SYNERGY BETWEEN ACADEMIC FREEDOM AND DEFENCE RELEVANCE

The 135 civilian regular faculty at RMC have full guarantees of academic freedom in their contract, and are the only federal civil servants with that contractual assurance. Without it, RMC would not be so thoroughly accepted by the Canadian university community. These 135 are the main engine for research at RMC, though some excellent military faculty do stay long enough at RMC to get their research programmes into high gear, and a few military faculty also have extramural research grants.

The amount of research carried out at RMC is staggering, considering its size. The regular faculty produce, on average, more than four scholarly papers or reports per year per person. Surprisingly, close to 10 percent of these are books. If one undertook to tally all the inputs of the research enterprise at RMC, including extramural grants and contracts, a portion (say 50 percent) of faculty salaries and benefits, a similar portion of the salaries and benefits of full-time postgraduate students in thesis programmes, relevant infrastructure

costs, equipment, information technology, library and indirect support, the total would be in the vicinity of \$30 million per annum.

The widely used measure of how research-intensive a university has become is the total of extramural research funding directly attracted by the faculty members through their applications for research grants and contracts. This figure for RMC has been rising, and is now close to \$15 million per annum. Its widespread sources are federal, provincial, private sector, philanthropic and foreign. On a per-capita basis, RMC faculty rank high on a Canada-wide scale, attracting these resources at about the same rate as faculty at, for example, Waterloo.

Less than two years ago, technical issues prevented RMC faculty from seeking research support from the major federal granting bodies supporting university research in Canada. These problems have been resolved, and RMC is now eligible for support from the Natural Sciences and Engineering Research Council (NSERC), the Social Sciences and Humanities Research Council (SSHRC), the Canada Foundation for Innovation (CFI), and for a few Canada Research Chairs. In 2001, the first ever round of NSERC applications in which RMC was eligible, RMC applicants had a 71 percent success rate.

On the surface, this seems to parallel other Canadian universities which became research-intensive through talented faculty exercising their academic freedom to seek support for whatever research interested them. What is surprising, therefore, is that about 94 percent of extramural research funding to RMC faculty has been for research which is obviously defence-relevant. This includes substantial amounts of research which DND would not or could not have funded, and which was paid for by entities having no particular sympathy for defence issues. These agencies were supporting what they saw as high-quality, curiosity-oriented proposals from established scholars operating in a climate of academic freedom.

The reason for this dichotomy is clear. Most RMC faculty are highly interested in defence issues. Their extramural applications reflect these interests, but still get funded in the wider world because they meet the important criteria of the broader research community for originality, clarity, rigor and wide impact. It should come as no surprise that the wider community is interested in leading edge work on such things as high performance computing, fuel cells, earthquake-proof structures, antenna design, environmental cleanup, analyses of geopolitics, research on leadership, etc.

RMC is therefore a major performer of defence-relevant research in Canada. But it is not really in competition with the DREs (Defence Research Establishments) under Defence Research and Development Canada; rather, it tends to complement their activities. Research at RMC is likely to be of a more fundamental nature, with the DREs focusing on specific application. In the world of R&D, the College might be viewed as somewhat heavier on the 'R', while the DREs are rather heavier on the 'D'.

One less public facet of faculty scholarship is that the expertise of some faculty, mostly in the Arts Division, has made them particularly valuable as advisors to government, briefing or advising officials, ministers, the PMO and Cabinet. This function is facilitated by RMC being within DND. The faculty's academic freedom assures government that the advice is "not tainted by official policy" (to quote one mandarin), which is to say, free from pressure.

There is still some additional research capacity at RMC. Furthermore, the new salary scales for RMC faculty probably assure us of a reasonable ability to recruit excellence, despite the high demand expected for university faculty in Canada over the next decade. The likelihood is that research activity at RMC will grow by perhaps 50 percent over the next five years, and that the close cooperation with DRDC will persist.

THE COLLEGE IN 2006

The College is typically Canadian. Our American military colleagues would and do find it surprising to have one college that is tri-service, let alone one which combines undergraduate and graduate schools in a single institution, includes distance and part-time learning, has non-degree programmes, and is a major defence research centre and advisor to government. However, this is a very mainstream concept in Canada because of issues of scale. The smaller scale of the CF means that these activities can only be undertaken economically if we can tap into the synergies which flow from using the same people and the same facilities for many related tasks. The multifaceted mission of the modern RMC stems not from lack of focus or from exaggerated ambition, but from the usual economic logic in a smaller enterprise.

I have touched upon how this "small Canada" concept plays out as well in natural upper limits on graduate studies, on part-time studies and on research. For the full-time officer cadet undergraduate programme, the Withers Report has already studied and commented upon the natural boundaries for that programme. In Recommendation 5, it has set a target for junior officer production at 35 to 40 percent of Canadian Forces steady-state needs. This is somewhat but not hugely above the 28 to 29 percent of steady state which we produce today. Withers' logic was that the recommended percentage was large enough to use programme revision at RMC as an ongoing engine of cultural change in the CF, but still obviously less than 50 percent of the intake, so that a balance exists and other entry routes do not start to seem 'second class'.

In 2000, I carried out an economic analysis of those components and activities at RMC for which comparable elements exist at civilian universities. All economic inputs were estimated, and these were compared to the grants, tuition fees and other fees which the same activities would have generated in the various provincial settings. RMC exists in a command economy, and does not simply admit enrolment to the limit of its capacity as do civilian universities. As a consequence, the study showed that RMC in 2000 was about 4 percent less effi-

cient than the average Ontario university, though such a difference can be due to issues of scale alone. However, the same analysis showed that when Recommendation 5 of the Withers Report is implemented, and the other fuller uses of capacity described above take place, RMC would be somewhat more efficient than the average Ontario university. The process in that analysis has been adopted by the Finance Committee of the RMC Board of Governors as part of its monitoring of the appropriate use of RMC capacity.

The wind-up of the Canadian Forces Recruiting Education and Training System (CFRETS), and the proposed creation of an entity (possibly called the Canadian Defence Academy) to promote, facilitate and harmonize post-secondary educational initiatives for the CF is encouraging to RMC. We see it as opening many doors for collaborative programmes and for new initiatives in subject areas which are 'non-traditional' for a university. It also has potential for coordinating the placement of members of the CF in the best and most appropriate programmes in civilian universities. RMC is the one component of such an Academy which is expected to provide services to other components and associated structures (or in the language of chemists, it is exothermic). The other components and associated structures are likely to be mostly endothermic, which is to say that they have enthusiasm and will, but will need external assistance to meet accreditation standards. In the spirit of looking outward, we are ready.

RMC exists, as in 1876, to provide the intellectual framework and foundation for the profession of arms in Canada. If the CF takes advantage of the outward looking spirit of the College today, then it will reap huge rewards. It will have an engine for cultural change and intellectual ferment which will be a force for increased retention and a renewed sense of purpose. It will get research which is second to none, and which solves real problems faced by the Canadian Forces and its allies, and post-graduate training which gives more senior officers expertise available nowhere else in Canada and tools for better judgment in their command decisions. The Continuing Studies activities of the College will deliver the most critical and timely parts of this framework to parts of the CF which have never before been touched by the College. The institutes, centres and schools linked to it will all benefit from the association with a critical mass of relevant scholarship.

In doing these things, we will not lose sight of our task of 125 years standing. We will continue to graduate young officers, and they will be imbued with a desire and capability for lifelong learning, and will have the flexibility and judgement to accept not just petty rules, but profound responsibility.

This is not a wish list. It is our five-year plan.

