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Critical thinking anchored in a solid general culture at the service of the profession of arms: Reflections on the education mission of military academies

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Abstract: This essay is a reflection on the challenges faced by military academies, while developing in naval and officer-cadets, the ‘singular mindset’ required to prepare them for the professional responsibility awaiting them as future officers of the armed forces. As vocational schools, the main purpose of military academies is to train leaders of the armed forces with a comprehensive training and education programme, including, in most countries today, university studies. The choice of a specific academic discipline is of less importance, as there is no single or unique way to become an officer. The most important thing is that the education provided at military academies *leads to the development of critical thinking rooted in a solid general culture at the service of the profession of arms.*

Keywords: officer education, military academies, profession of arms, critical thinking, general culture

1 Introduction

As vocational schools, the main purpose of military academies is to train and educate officers for the armed forces with a comprehensive training and education programme, including, in most countries today, university studies. The undergraduate – or in some cases, graduate¹ – university education offered to naval and officer-cadets in these

educational establishments is not unified and remains generalist, as it mobilises a variety of academic disciplines. At most military academies, cadets can generally choose between different majors and minors. For example, 22 majors are offered at the Royal Military College of Canada, among which are English literature and culture, and Physics, and Chemical engineering (RMC official website). The United State Military Academy at West Point delivers undergraduate degrees in 36 majors, including Environmental science, Kinesiology, or Sociology (USMA official website). Other military academies limit the choice of academic programmes to disciplines more tailored to the profession of arms, such as the Austrian Theresian Military Academy, which offers only one bachelor’s degree in military leadership (TherMiAk official website) or the Spanish Military Academy which delivers, through the Defense University Center (CUD), only one degree in Industrial management engineering for army cadets completing the 5-year programme (AGM official website). All these examples show that there is no single and harmonised academic route to become an officer, unlike other professions such as medicine or law, whose curricula are greatly standardised throughout the West. *Military science* simply does not exist in a unified and universal form or as a professional curriculum.

This situation can naturally be explained in large part by the fact that all future officers will receive additional military training before serving in the specific military branch or occupations assigned to them (infantry, marine combat, air operations, etc.). University education is just one element in the comprehensive training and education programme offered to cadets. But, more importantly, it can also be explained by the fact that the majority of officers will be and remain *generalists* throughout their career². In carrying out their responsibilities as ‘managers

¹ The Royal Military Academy (RMA) of Brussels, the General Tadeusz Kościuszko Military University of Land Forces (AWL) of Poland, the École spéciale militaire de Saint-Cyr (ESM Saint-Cyr) are among the few military academies to offer their graduating cadets a master’s degree.

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² We leave aside here specialists, like military doctors, military lawyers, or padres. In fact, this is one of the major differences between

of violence' (to use Huntington's characterisation), officers need to demonstrate great adaptability, mastery of a wide range of general knowledge and practical flexible skills. Indeed, during their career, they are called upon to perform an extreme plurality of tasks in the most diverse positions, alternating between staff and command positions, through relatively short and successive military rotations or postings. To our knowledge, no other profession organises the career path of its members in such a way that they change assignment, level of responsibility and sometimes even location, every 2 years or 3 years, like officers in the armed forces. Therefore, the training and education leading to this profession naturally tends to value polyvalence over concentration, generality over specialisation and synthetic rather than merely analytical thinking.

But this emphasis on generality for the officer corps, particularly when it comes to education at a military academy, also stems first and foremost from the nature of the singular field of activity for which the armed forces exist, which is that of *military operations*. The task of leading military operations, either as commanders or in staff positions, is a responsibility *exclusive* to this unique profession, in that it is the only one in our society that can assume this crucial role. The scope of an officer's responsibilities obviously goes beyond this, in that it also includes the management of units and troops in garrison, providing national security advice to civilian authorities, strategic planning, technical training on weapon systems and so on. For all these responsibilities, officers can be assisted by civilian managers, advisors or trainers. But the conduct of military operations is a task that belongs solely and exclusively to this profession. So much so that we can say that this constitutes the ultimate *raison d'être* of the officer profession. By saying that we do not imply that war or military operations is the 'main' activity of the armed forces, that is, the one for which officers devote most of their time during their military service. Far from it. In today's Western world, fortunately, war remains a rare event. Indeed, in their entire career, most officers may never serve in military operational theatres outside of low-intensity operations (peacekeeping or aid to civil power, for example). During peacetime, armed forces engage in a wide variety of activities, some of which are

relatively distant from the military core domain. This is perhaps one of the great paradoxes of this profession: the entire training of its members tends to prepare them for an activity they hope to never have to participate in and in which they are very likely never to participate. Medical doctors are trained at school to perform medical operations, which later becomes the core of their professional practice. Lawyers learn to plead at Bar School, which they then use in court throughout their careers. Nothing similar naturally awaits future officers in their career. Yet, military operations continue to be the ultimate *raison d'être* of the armed forces and thus, leading military operations, be it in command or staff positions, remains the ultimate responsibility of officers and for which they should always be ready. There can be no single way to intellectually prepare them for it. Ultimately, the diversified range of university programmes offered at military academies derives from that; providing future officers with general conceptual analysis and synthesis tools, they will be able to mobilise in an operational context which, by definition, defies any specialised or overly oriented way of thinking.

This essay is a reflection on the challenges in military academies for developing in cadets the intellectual capacity, or rather the 'singular mindset', to prepare them for the unique responsibilities awaiting them as officers of the armed forces. In their initial training, cadets must develop a certain way of thinking, to fully assume these responsibilities and to understand the role of officers in the mission entrusted to the armed forces in the defence of the territory, the likes of which cannot be really compared elsewhere in any other profession. For this purpose, the choice of a specific academic discipline is of less importance, as there is no single or unique way to become an officer. The most important thing is that the education they received at the military academy, whatever the chosen academic programme, *leads to the development of critical thinking rooted in a solid general culture at the service of the profession of arms*. We believe that this is how military academies can best prepare intellectually future officers. And as such, this should be the core educational mission of any military academy.

Our aim in this essay is to offer, in a synthetic and organic way, a general educational vision for military academies. It is not to develop a new educational model, nor an innovative and unique paedagogical model for military academies. Rather, driven by a desire to focus on the essentials, this essay offers a general vision that, in our view, best suits the fundamental mission entrusted to these educational establishments. While our reflection draws on the scholarly literature on the subject, much of it is rooted in our own personal experience, first as a

the officer corps and the non-commissioned officer corps; the latter are all specialists, and it is only later, as they progress through the ranks, that they need to broaden their perspective to become generalists. Right from the start, officers' candidates are trained and educated to be generalists, and it is only later in their career that some will choose to specialize.

graduate of a military academy, but above all as a professor and member of the university management staff at the Royal Military College Saint-Jean (Quebec, Canada) for almost 20 years.

2 The unpredictability, complexity and chaotic nature of war

As previously mentioned, the task of leading military operations, either as commanders or in staff positions, is a responsibility *exclusive* to the profession of officer. Before tackling our reflection, let us try to identify what is at the heart of military operations, compared to any other professional activity. War is *chaotic* (Beaumont 1994; Gallant 2021), as it escapes any form of organisation or structured capture. It is *unpredictable* (Marshall 2000; Lindley-French and Boyer 2014; Due et al. 2015), in the sense that it is always impossible to predict with any certainty what is going to happen next on the battlefield. Finally, it is *complex* in nature (Manwaring 2012), in that it falls into the category of events whose composition involves complex interactions between innumerable elements. For the Canadian captain Tim Gallant, '(o)ne must never forget that war is chaos. What is effective is not military organizations that attempt to control this chaos, but those 'who *thrive in chaos* (Gallant 2021, p. 58; our emphasis)'. In a very schematic way, and without any pretension of original analysis, let us shed light on these fundamental characteristics of war.

Following Alan Beyerchen's magistral analysis of Carl von Clausewitz as a non-linear thinker (in his 1992 article 'Clausewitz, Nonlinearity, and the Unpredictability of War'), we can say that the unique nature of war is based on three essential characteristics, which are *interaction*, *friction* and *chance*. First, interaction derives from the fact that in war, one does not confront an inert material, but an adversary. War puts in opposition not only an opponent that is capable of movement, but a human agent that possesses free will and who is thus capable of undertaking things that will necessarily go above simple and predictable reactions. In simple terms, following the military historian Jonathan Due and his colleague, 'war is a clash of wills between two thinking enemies' (Due et al. 2015, p. 27). Let us add, to take full measure of the degree of complexity involved here, that the decisions taken on the battlefield, and this, despite the principle of command responsibility, only very rarely emanate from an individual alone, but are more often than not the result of complex interactions, negotiations and transactions between several actors. Of course, a similar

dynamic exists in other areas of human activity. We can think of politics, economics or even sports. But because of the inherent complexity of military operations, as well as the existential stakes that it implies for any State engaging in war, this interaction appears in war to be carried to its paroxysm.

Second, the unpredictability of war stems from its inherent 'friction', a notion central to Clausewitz, who was one of the first to conceptualise this factor: 'Everything in war is simple, but the simplest thing is difficult (Clausewitz 1989, Book 1, Chapter 7)', is one of the best-known passages from *Vom Kriege*. Associated with this factor is the complementary notion of 'fog of war (*der Nebel des Krieges*)', which stems not solely from a dearth of information, a phenomenon which is nonetheless very real on any battlefield, but also from 'distortion and overload of information' that any officer must process and that inevitably 'produces uncertainty as to the actual state of affairs' (Beyerchen 1992, p. 77). To put it simply, any normally constituted person, even supported with technological and computer means to process both this lack of information coupled, paradoxically, with this overflow of information, will always appear ill-equipped to predict with certainty what is coming next on the battlefield.

Third, in war, chance plays a fundamental role. To quote Clausewitz again, 'no other human activity is so continuously or universally bound up with chance as is war' (Clausewitz 1989, Book I, Chapter 1). Warfare is one of those areas of activity marked by non-linearity, so that the principles of proportionality and additivity tend not to apply perfectly. Whereas in a linear system, any input to any given system, if all other variables remain unchanged, always produces the same effect and any change to any given system will always produce an effect proportional to the change made. In a non-linear system, such as the one that dominates warfare, these two principles have little or no application. On battlefields, the same military manoeuvre opposing similar units, equipped with identical materials, positioned in similar configurations may produce diametrically opposed results. Thus, in war many things seem to happen by sheer 'luck', for they cannot be explained by an identifiable cause, or they escape any rational explanation. Napoleon used to ask the officers he was about to appoint as generals if they had a natural gift for luck...

Indeed, because of its chaotic, unpredictable and complex character, warfare is a field of activity that is almost beyond the reach of any normal person... No human being can ever be equal to the challenges of leading military operations, since its conduct requires qualities, particularly intellectual qualities, in terms of

processing information, reading the enemy's intentions or conceptualising complex plans in a non-linear environment that seem beyond the reach of humans. Yet war remains a human affair! All officers who lead military operations are always immersed in it while always being ill-prepared or ill-equipped intellectually to face it. This sentiment of humility, coupled with the immense responsibility that comes with it, should never leave the mind of any officer. In fact, awareness of this reality should be at the heart of the intellectual preparation of every cadet, as it touches the very essence of their profession.

When it comes to fulfilling the ultimate responsibility of leading military operations, officers are mostly left to their own devices, despite the military support they can rely on through their chain of command and the various advice they are provided with by the staff, military and civilian, assigned to their unit. We are not referring here to the phenomenon of 'loneliness of command', which commanders often lament (Swain and Pierce 2017, p. 84). We are talking about the fact that officers will always appear, given the nature of war, to be under-equipped, under-prepared and never fully ready to face it. Of course, during their military training, they acquire, like the troops they command, practical skills or techniques to react to tactical situations they may face in operations. Such training prepares them to face some 'predictable' situations that might occur with the best possible reflexes. Officers also learn, through operational experience, the principles of warfare, so as to make the best use of the lethal and non-lethal tools at their disposal to defeat the enemy. During their education, primarily that is received at the military academy, but also at the staff college or, maybe at the war college, they also acquire knowledge about history, international relations and military law, which helps them appreciate issues beyond the battlefield. But ultimately, in terms of conceiving how to carry out the missions entrusted to them, to gain the upper hand over the enemy, or to attain military victory, these practical competencies and this knowledge are largely insufficient in themselves, as war is so chaotic, unpredictable and complex. It is left to him or her alone to find the best action to take. In comparison, every physician, in the exercise of his or her duties, constantly relies on a well-established set of rich and comprehensive rules, procedures and ways of doing things that firmly frame each of his or her actions. Medical science leaves little room for imagination and improvisation. Similarly, the work of an engineer is governed by a set of solid principles belonging to the field of engineering, which every good engineer must ensure they

respect when carrying out their tasks. But, according to the military historian Reed Bonadonna:

in her³ role as a tactician, the thinking of an officer is perhaps less tied to rule and more dependent on flexibility and mental agility than that of any other professional activity. Neither procedures, principles, nor doctrine provide the solution to any tactical problem. Unlike the lawyer, to whom the words of which laws are made are all-important, the engineer, who must abide by known rules of stress and structure, or the physician, whose training inculcates strong guidelines for diagnosis and procedure, the military officer-as-tactician must consider a multitude of uncertainties tied to only a few givens. (Bonadonna 2020, 143)

In short, success on the battlefield is rarely based on the studious application of a formula, rigid conformity with the principles of warfare learned at school, the use of ready-made formulas or strict compliance with doctrine, but much more on the ability to *design an improvised plan and lead the troops according to it*⁴. This is the true meaning of the notion of command responsibility for the officer. And it is to meet such responsibilities to prepare cadets to acquire the singular mindset needed for it that the university education offered at military academies must be geared.

3 Education mission of military academies

How can cadets be intellectually prepared, through the university education they received at the military academy, for the responsibilities eventually awaiting them in military operations? In other words, how to bring them to acquire that singular mindset that will allow them to 'thrive in chaos'?

Before attempting to answer, let us clarify one point. The comprehensive training and education programmes offered by military academies are always built around a few distinct but interconnected components: tactical-level military training, leadership training, physical training, language acquisition in the universal military *lingua franca* that is now English and, of course, university

³ The author writes using the feminine article throughout his book.

⁴ But also, let us add, although this is not our proposal here, that success on the battlefield also rests in part on the leadership ability of the officers to get the troops they lead to overcome their natural and strong resistance to risking their lives in engaging the enemy on the battlefield. Fear is a colossal obstacle in operations, even among well-trained and seasoned troops (see Goya 2014).

education. Among all this, university education must occupy an essential, if not crucial, place. Indeed, all other components of this programme can be entrusted to other training establishments within the armed forces. Providing a university-level education is the sole responsibility of a military academy within the armed forces⁵. But more fundamentally, no military training alone, no matter how advanced or comprehensive it may be, will ever be able to prepare future officers for the chaotic, unpredictable and complex nature of military operations. The main purpose of any military training is always to provide cadets – as well as the soldiers and non-commissioned members for whom such training is also intended – the skills essential to deal with the ‘predictable’ dimension of military operations, through weapons training, military manoeuvres, communications, defensive positions, etc. Based on learned experiences of the past, or on borrowed experiences from other contexts, this training is to provide any military to cope with scenarios most common to any operational theatre. This training, as essential it is, must be complemented by a solid education for those destined for command positions, like cadets. *Education, not training, remains the privileged way to train someone to cope with the chaotic, unpredictable and complex nature of military operations*, because to borrow a distinction made by the historian Ron Haycock, ‘instruction aims at a predictable response to a predictable situation’, whereas ‘education aims rather at a reasoned response to an unpredictable situation’ (Haycock 2011). Chaos being the unpredictable situation *par excellence*; to cope with it, one needs a solid education. For the sociologist Anders McDonald Sookermary, ‘preparation for the unpredictable should play a pivotal role in military education’ (Sookermary 2017, p. 310). The ability to design an improvised plan and lead troops accordingly will always engage more than the mere skills reinforced by repetition, consistency and a procedural mindset. It requires the cultivation and development of a certain state of mind, a way of thinking that draws on broad theoretical resources, synthesis skills and even a capacity for imagination that needs to be learned, nurtured and reinforced. And this is what military academies should be aiming for, by *developing critical thinking anchored in a solid general culture at the service of the profession of arms*.

⁵ Of course, the other major recruitment route for all the armed forces is the ‘direct’ one, where future candidates for the officer profession receive a university degree from a civilian institution prior to enrolment. We are here only considering the first recruitment route, that of candidates whose career path includes an initial training period at a military academy.

Let us develop this thesis by tackling each component in turn.

3.1 Critical thinking

First, we believe it is important that the university education offered at military academies contributes to the development of *critical thinking*. There is a relatively large body of scholarly literature supporting this idea, in that ‘critical thinking is important to professional military education because it provides a powerful tool to operate in a complex, changing world’ (George 2000, p. vii; Usry 2004; Mensch and Rahschulte 2008). A survey of this literature reveals many complementary definitions for this notion (Fischer and Spiker 2009). For the sake of our reflection, critical thinking will be broadly defined as a type of ‘intellectual capacity, viz. the ability to think correctly and reflexively using a wide variety of intellectual tools’ (Parenteau 2021). Following Edward M. Glaser’s classical definition, we can add that critical thinking always involves three separate things: (1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one’s experiences, (2) knowledge of the methods of logical inquiry and reasoning and (3) some skill in applying those methods (Glaser 1941). Owing to limitations of space, we will limit ourselves to this operational definition. Furthermore, we cannot address here the best paedagogical or disciplinary approaches to developing this intellectual skill among cadets. Let us simply insist on the importance of developing this skill for future officers, by briefly discussing its usefulness for this profession.

As such, critical thinkers can more easily distance themselves from the patterns of thinking that are naturally imposed on them by their environment; to ‘think outside the box’, as the saying goes. In an organisation dominated by respect for procedures or traditions and obedience to orders, which places high value on uniformity, which tends to place mission success and service at the expense of individuals’ interests, and thus, where the social pressure to conform is greater than in most other organisations in society, the potential offered by critical thinking appears crucial. The rigidity of the armed forces’ authority and command structure plays an essential role in this organisation with regard to its essential mission of defending the State. The point here is not to question this. However, it must be acknowledged that this leads to an organisation that tends to be conservative, not to encourage innovation or to naturally question their ways of thinking. Yet innovation is crucial, essential or indispensable on

the battlefield. Critical thinking always involves a certain amount of creativity, by which new solutions, innovative ideas or plans that depart from entrenched habits of thought can be imagined, and thus that succeed in fooling the enemy. The use of critical thinking does not automatically lead to creative or innovative ideas, but it allows for such a possibility.

If we return to the most fundamental mission of the armed forces, which is to conduct military operations, there is no doubt that the use of critical thinking provides an advantage for officers in devising and implementing successful plans. Indeed, the practice of critical thinking in military organisations allows to draw on the full range of an organisation's intellectual skills in the search for effective solutions, in chaotic, unpredictable and complex environments. In this context, it becomes of the utmost importance to mobilise all the intellectual resources available. All officers – eventually even all senior non-commissioned members – whatever their place in the chain of command, should be put into contribution to find the best courses of action when there is no procedure to fall back on, no simple solution, no defined path. In chaotic contexts, over-centralised decision-making processes are rarely the most effective. On the contrary, the best solutions may well come from the lower echelons of the military hierarchy, or from inspirations furthest removed from the dominant patterns of thought. But for that, all members of that profession, regardless of their ranks, must be able to think critically – and find a culture ready to welcome the opportunity for all to express their views and suggest possible courses of actions. In other words, military organisations need to teach their officers to make ‘professional use’ of critical thinking (Parenteau 2021).

In addition, thinking critically allows someone to reflect on their own values, prejudices and unconscious biases that are at the heart of their own worldview. In doing so, it allows access to patterns of thought, notions and ideas, which might not otherwise be readily accessible to someone. In this respect, critical thinking should contribute to the essential self-reflection that any cadet should carry out during his or her time at the military academy, which touches on the very meaning of the responsibilities that are expected of him or her as an officer. This should allow him or her to take the full measure of the *sentiment of humility*, which means accepting to face situations for which they will be intellectually ill-prepared or ill-equipped, and the immense responsibility that comes with it, to imagine and conceive the best possible course of action in situations dominated by chaos, unpredictability and complexity. Admitting that means humbly and deeply acknowledging one's own limitations, because no human

mind, however powerful, will ever be able to foresee what, by definition, escapes organisation, prediction or simplicity. Thus, in any operational theatre one is left with oneself, as a person facing hard choices, to do what must be done to succeed in the mission that they have been entrusted with. This critical self-reflection should always be a central element of the education cadets receive at the military academy.

3.2 General culture

Second, we believe that the university education provided to cadets at military academies should be geared towards reinforcing their *general culture* (Parenteau 2014). This is perhaps the deepest meaning of the idea formulated by general Charles de Gaulle in his 1944 essay *Vers l'armée de métier* (Towards a professional army) for whom

the true school of command is general culture. Through it, thought is put in a position to exercise itself with order, to discern in things the essential from the accessory, to perceive the extensions and interferences, in short to rise to that degree where the whole appears without prejudice to the nuances (De Gaulle 1944, p. 200; our translation).

In a chaotic, unpredictable and complex environment such as the battlefield, it is essential for any officer to know how to rise to the essential, to gain the perspective to imagine the best course to follow, without letting oneself be distracted by details or superficialities. In the same sense, for the sociologist Bernard Boëne, ‘when complexity and uncertainty of the future dominate, the only worthwhile bet is to invest in the capacity for situational intelligence, which refers to a more rigorous selection and a diversified general culture’ (Boëne 2017, p. 54; our translation). Thought must focus on what is essential, discard the superfluous, find what is necessary and leave aside what is contingent.

General culture is not the absence of specialisation, in other words, a form of generality resulting from the absence of orientation. It refers to a synthetic willingness to focus on the great dynamics at work, both in the contemporary world and in the past, to be able, with this overall view, to dwell later on the details (Parenteau 2014). Let us insist that general culture must not only be based on the acquisition of raw or ‘encyclopedic’ knowledge. Its purpose is not erudition, but a way of thinking, that is, a certain way of approaching reality, or the world of ideas, by focusing on the major dynamics at work, the general patterns, the forces at work in the background and not being distracted with what is secondary, marginal or

insignificant. In concrete terms, embracing this generalist approach allows to engage in a dialogue with different traditions, disciplines and different fields of knowledge (De La Garanderie et al. 2013), at a distance from any form of specialised confinement to a single academic discipline. If general culture can be useful to any officer, it is because it offers the viewer a vast range of concepts, ideas and the most diverse conceptual tools, which, when placed in complex situations, will serve as a pool of intellectual resources from which to imagine and conceive a 'reasoned response'.

3.3 Critical thinking rooted in a vast general culture

As such, we believe that *general culture and critical thinking are inextricably linked*, in that one is difficult to mobilise without the other. Achieving and maintaining a certain degree of generality requires the ability to apply a critical eye to reality or to the world of ideas, just as thinking critically requires the ability to draw on a certain pool of knowledge, from which to deploy and sustain a critical posture. This interconnection is even more evident on the battlefield. To operate in an environment marked by information overload, combined with a crying lack of information, critical thinking anchored in general culture becomes crucial, where it is all about focusing on the essentials, separating the true from the false, to see things more clearly. This is even truer in the operational theatres of today, when information, in the form of *disinformation*, has become a new weapon everywhere (Trevor Thrall et al. 2021; Breton and Sortais 2023). Dominated by a constant bombardment of the most diverse information, from increasingly invasive sources, to which we must now add the use of technologies based on artificial intelligence, which blurs further the line between information and disinformation, real news and fake news, today's battlefields appear even more chaotic, unpredictable and complex than before (Harkins 2020). In this context, finding one's bearings, by critically mobilising a variety of disciplinary fields, traditions of thought and different types of knowledge becomes essential to defeat the enemy.

Bringing cadets to acquire this special set of skills of critical thinking anchored in a solid general culture should involve exposing them to a rich *diversity of points of view or of opinions*. In addition to helping them build a vast reservoir of knowledge (precisely, a general culture), from which to design innovative solutions for the missions they will be entrusted with, university education must

also contribute to their critical thinking skills, by contributing to their open-mindedness, namely, to a certain intellectual capacity to be shaken in one's deepest convictions. By being exposed to cultural, political, religious realities, with which they are not familiar, but which are common to the rest of humanity, cadets must be brought to accept the idea that humanity essentially exists in a multiple and diverse form, adhere to different values, some of which might even be incompatible with their deepest personal values, to be the antithesis of what they value, or may even, from their point of view, be morally reprehensible. The aim is not to challenge their deepest values, or to encourage cultural relativism among them. Indeed, the idea of military service will always require a certain degree of deep conviction on the part of those who accept the inevitable 'unwritten clause of unlimited liability', to quote Hackett (1983). At the root of each service, men or women lay a form of deep conviction and certain solid values, which allow them to give meaning to their commitment. But this deep conviction should never preclude being open to understanding the deep convictions of other people, the deep-rooted values of other human groups and cultures. Being open-minded here means accepting that values incompatible with one's own may nevertheless be at the heart of the worldview of other peoples, cultures or civilisations. In an operational theatre, officers' risk being confronted with realities that might challenge their deepest convictions. They need to be prepared for it, and this should be a paedagogical objective in and for itself at the military academy.

Hence the importance, among many things, for military academies to have a diverse faculty, which should normally include civilian professors along with military teachers. Civilian professors are more likely to have different points of view from those dominant in the military and thus can expose cadets to a greater diversity of opinions. For the jurists Douglas B. McKechnie et Eric Merriam, encouraged by a culture of genuine academic freedom, professors at service academies must 'be free to engage their students in thought experiments, theses defense, and exposure to unconventional ideas, especially those ideas that challenge military orthodoxy' (p. 322). Military organisations tend everywhere to a certain 'standardization of thought' (Maggart 2001, p. 7) among its members and in which we find a dominating form of 'group thinking' (Gerras 2008, p. 26). Military faculty do not escape such a trend, even if one might be tempted to say that it may be less marked than in other military subcultures. To counter this, it is essential that at least a certain percentage of the teaching staff responsible for university education

at military academies be civilians⁶. The military academy, even if it serves to educate and train future officers for the armed forces, or precisely, because of that very mission, must remain a place of free discussion and exchange, at a distance from any form of moral conformism, or worse, indoctrination.

Finally, since it is obvious that the 3 years, 4 years or 5 years spent at the military academy are insufficient to fully develop the mindset needed to build a vast general culture, one of the purposes of this educational establishment should always be to develop in cadets their capacity for 'self-learning', that is, *learning to learn on your own*. This requirement, which could be said to be shared with other professions – we can think of medical doctors or lawyers, for example, who are required to take continuing education programmes throughout their careers – nevertheless takes on greater importance in the case of officers, due to the professional development system specific to this profession. As already observed more than half a century ago by John Winthrop Hackett:

A distinction is worth pointing out here between professional education in the profession of arms and that in some others, such as medicine or the law. In this emphasis is placed on a single long and concentrated dose, after which the practitioner, though he has very much to learn, is recognized as qualified. In armies and to a lesser degree in navies and air forces the initial professional educational dose is only enough for the earliest stages. Thereafter the officer who gets on in the service frequently goes back to school (1962, p. 38).

Throughout one's career, an officer may spend between one-fifth and one-quarter of their time in training and education, including attending professional programmes at different military schools, such as the military academy, the staff college or the war college (Paziuk 2003). The additional advanced courses taken by officers later in their career, unlike those taken by medical doctors or lawyers, for example, are not only aimed at keeping up to date their qualification, but rather to enhance it, that is, to acquire new knowledge, new intellectual and practical skills, and to take account of the expanding scope of their responsibilities as they climb the military hierarchy. An officer is never fully 'qualified', in that their entire career is structured as a long learning process, with alternating command and staff positions in units

and training at the various military schools. At each stage of their career progression, as they move up the ranks, they receive precisely what they need to be qualified for the different levels of responsibility that await them then. Consolidating one's critical thinking skills and general culture and continuing to immerse oneself in different world views are objectives that need to be pursued over the course of a career for any officer, especially when they are away from the school benches. Professional development is an individual and permanent responsibility for any officer, which presupposes maintaining a high degree of intellectual curiosity, a certain appetite for learning and a thirst for continually renewed knowledge. The practice of professional reading lists published by the military high command, well established in Canada, the United States and Germany, for example⁷, as well as the publication of professional military journals such as those found almost everywhere in the West today, which should find their primary readership among officers (*Military Review: The Professional Journal of the United States Army*, *Canadian Military Journal*, *The Belgian Military Review*, *Esprit défense* in France or the present *Journal of Military Studies*, for example), all contribute to this culture. But maintaining and promoting such a culture is first and foremost a task for the single educational establishment responsible for the initial training of officers, whose mission is to provide them from the outset with all the intellectual tools they need to maintain this aptitude throughout their career. And this is perhaps one of the greatest weaknesses of current university programmes offered in military academies.

4 Conclusion

In conclusion, as mentioned earlier, leading military operations, either in a command or a staff position, is the ultimate responsibility of any officer in the armed forces. Thus, preparing naval/officer cadets to be able to acquire this 'singular mindset' allowing them to 'thrive in chaos'

⁶ Conversely, a faculty composed exclusively, or almost exclusively, of civilian professors might tend not to fully embrace the singular vocation of the military academy as a unique institution, to which no civilian university can compare, and thus impact its educational mission.

⁷ Canada's Chief of Defense staff and Canadian Armed Forces Chief Warrant Officer's professional reading lists: <https://www.canada.ca/en/department-national-defence/corporate/organizational-structure/chief-defence-staff/cds-caf-cwo-professional-reading-list.html>; United States Military professional reading lists: <https://dkiapcss.edu/apcss-library/military-pro-reading-lists/>; German professional reading lists for young officers: <https://www.bundeswehr.de/resource/blob/167040/fcced5561155419bfa0f6c4b18a3c4d7/literatur-des-heeres-data.pdf>

should always be at the heart of any education and training programme at military academies.

Yet many dynamics tend to make these institutions lose sight of this core paedagogical mission. The increasing bureaucratisation of the armed forces in the West results in the need to improve the education of cadets in the field of management and administration, skills that are not strictly military in nature. The broadening of the missions entrusted to the armed forces in recent decades and the new requirements for this organisation to be more inclusive and welcoming of diversity also tends to increase the need to train cadets to acquire a variety of new soft skills (interpersonal communication, conflict resolution, bystander training, etc.), some of which appear to be quite distant from the military domain. Furthermore, the strengthening of academic requirements, in conjunction with the maintenance of university accreditations, tends continually to translate into revising if not adding additional university credits to cadets' school curriculum. The educational programme at the military academy tends to grow steadily, gradually distancing it from its primary core educational mission, which should always be to prepare them to lead troops on the battlefield. To avoid this tendency towards dispersion, scattering and constant growth of the curriculum by adding educational objectives which are sometimes far removed from the requirements of the profession of arms, the safest thing is still to be able to find support on an educational vision that focuses on what is essential.

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