

Innovation and the Military Mind

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At a recent seminar in a reputable British university, a young sociology lecturer—fresh from the process of regurgitating other people’s hypotheses but already irrecoverably enmeshed in his own—made a disdainful reference to “the military mind.” He asserted that the military mind is characterized by conventional thinking, lack of imagination, unwillingness to challenge accepted doctrine, excessive caution, professional pessimism, narrowness of outlook, and subservience to the views of higher authority. In the vigorous debate that followed his remarks, not surprisingly his preconceived ideas were challenged not only by some intelligent members of his faculty but also by several representatives of various armed services. However, just as Descartes observed that “bad ideas can stimulate the good,” in this case, the assertions prompted the reflection that even if the military mind was no more tenable a concept than the academic mind, the industrial mind, or the commercial mind, there are nevertheless, in the modern military environment, factors that can induce such characteristics. Indeed, many of these factors and their effects are not only justifiable but essential to the effectiveness of a fighting force. They should be recognized and their implications understood. If mental characteristics among military members should ever coalesce to the extent that the young lecturer’s allegation came to be sustainable, the military service concerned would be in serious trouble.

Even the most cursory survey of military history illustrates the critical importance of technological and tactical innovation. The stirrup, the longbow, barbed wire, the tank, blitzkrieg, radar, electronic countermeasures, AWACS, helicopter assault, and the astonishing aggregate of British innovation displayed during the Falklands War are random examples. Sometimes the vision of the innovators has outrun the capability of technology: the early submariners, the early

aircraft carrier advocates, the first air power theorists, the proponents of surface-to-air missiles, and, just possibly, those enthusiasts who unreservedly espouse the cause of enhanced technology as the panacea for today’s Western strategic dilemmas might be so categorized. Yet without such visionaries and without innovation, a nation’s way of war becomes predictable; and predictable means vulnerable.

It is fashionable to criticize the Soviet armed forces for the weaknesses listed by the young lecturer, and certainly there is ample tactical evidence to support this contention. But before considering whether the Western superiority implicit in the criticism is justified, one should remember this true scenario:

- A Russian four-star admiral disparaged the value of the aircraft carrier;
- Within twelve months, a Russian two-star admiral publicly challenged his commander in chief;
- and the four-star retracted, while the two-star was promoted, as was another junior two-star who equally publicly questioned the judgment of his newly promoted superior.

When did we last see a British or American four-star officer’s military judgment being publicly questioned by his subordinates, let alone see these subordinates subsequently being promoted?

One does not have to look to the Soviet armed forces to identify the factors militating against military innovation. In organized Western armed services, conformity, reliability, and teamwork have long been essential ingredients of esprit and confidence within the unit. Mutual dependence normally requires coordinated, predictable behavior from colleagues, whether in an infantry platoon or in a four-ship formation. The demands of teamwork tend to inhibit independent action. Above the level of the fighting unit, further restrictions apply. In conventional warfare, it is highly unlikely that the firepower or any other contribution of a single unit will be sufficient to achieve tactical success. The foundations of a commander’s assumptions in combat are certain knowledge of the disposition of his forces and confidence that they will react as they have been trained and ordered to do. Modern warfare, and especially air warfare, is fought by an aggregate of interdependent units: a timely matching of men, aircraft, weapons, communications, and logistic support to achieve concentration of appropriate force at the desired

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point of operational significance. Does innovation threaten such coordination?

Arguably, the time for innovation is at the planning stage, which is shrouded in secrecy to achieve surprise and confound a predictable defense. But there are several complementary factors, particularly relevant to modern air war, which inhibit innovation even then. The gestation period for the entry into service of modern aircraft and weapons considerably exceeds that of previous eras. Progression of such systems from concept, through development, to production, and, finally, operation will usually span several years. These materiel acquisitions may be accompanied by tactical manuals that explain their associated operational procedures. Moreover, there are strong and legitimate influences driving toward standardization of equipment that is increasingly expensive and complex. Yet simultaneously, many of today's military prognosticators predict that conflicts employing sophisticated weapon systems will be short wars, without the extended periods for mobilization and reinforcement that have characterized wars traditionally and offering little opportunity for tactical or technological revision or reequipment once the fighting starts. It would take a very persuasive innovator to change the direction of a weapon procurement program at the eleventh hour on military grounds alone in the face of heavily committed commercial, industrial, and political opposition. Indeed, one could argue that corporate commitment to a major weapon procurement program could inhibit innovative responsiveness to changing circumstances. Procurement inertia itself can be buttressed by legitimate military caution in the face of putative advantages from an unproven alternative.

In any event, whether in concepts, procurement, planning, training, or operations, the innovator has many problems to face. To start with, such are the day-to-day pressures on the modern service member that the individual has little time either for reflection—the essential prerequisite for innovation—or even the time to develop the habits of reflection. If an innovation does come to mind and the service member proposes it as a change, the individual is then challenging the accepted wisdom, which, presumably, is either apparently working successfully or has catastrophically failed. In the latter case, the time for innovation may be long gone. The former situation offers greater promise. However, in our military hierarchies, the accumulation of experience and wisdom is associated with increasing seniority. Weight of opinion is usually accredited according to rank. One superior's appreciated innovator can be another superior's pain in the neck. Generally it takes a big person to accept that his or her subordinate's questioning of the status quo or earlier decisions is well founded, unless perhaps the former can be persuaded that the new ideas are in fact his or her own. The restless mind can make for an uncomfortable subordinate. Paradoxically, the more powerful, competent, and confident the general, the more difficult it becomes to convince him that he may not be omniscient: it is the general who must be prepared to fight with what he has available and who there-

fore is the most conscious of the costs in training time, of the possible reduction in readiness or fighting effectiveness, or the gamble involved in changing current proven operational practices under the threat of imminent enemy attack. It is not melodramatic to remember that the general carries the responsibilities of not only the lives of his own men but possibly the fate of nations in his hands. It is scarcely surprising that he tends to approach innovation with caution.

Indeed, when one reflects on all the factors militating against innovation in modern military affairs, it is astonishing that tactical and technical innovations ever take place at all. But they must, for many reasons. "War is the province of uncertainty," observed Clausewitz. How much more so in an age when aircraft are expected to reach across oceans and continents, when command and control is increasingly important in the exercise of coordinated but widely distributed force, and when electronic warfare and other sources of friction can blind, paralyze, disrupt, or delay the plan that has been adopted. When planning, organization, coordination, and communication fail, leaders must rely on their own resourcefulness, ingenuity, flexibility, initiative, and common sense.

"When all else fails," advised Helmuth von Moltke, "march to the sound of the guns." A highly trained service member will respond instinctively in those circumstances that demand a swift, instinctive response. But the unexpected may call for more than a precondition or well-rehearsed response; even the use of initiative may be inadequate. Conditioned response contributes to conformity, and conformity certainly strengthens unit dependability, which is essential to the success of any coordinated tactics or strategy. Yet absolute conformity strangles individuality of thought, and the utterly dependable can easily become the readily predictable. A doctrine may have been observed, if not always practiced, for several years with complete confidence. But the onset of doctrinal thrombosis must be prevented by timely diagnosis and treatment, preferably before the patient endures combat conditions. Conformity will not encourage such diagnostic analysis. However, neither will placing the patient in the hands of a group of doctrinal theorists far removed from the operational theater. Any military innovation is of little value unless it can be made to work.

If innovation is essential to the successful pursuit of modern air warfare and if by definition it is a risky business with many justifiable and some not so justifiable factors inhibiting it, what can be done to encourage it in a military environment with minimum risk to existing effectiveness?

It is probable (and no doubt could be tested by case histories) that powers of innovation are associated with independence of thought, individuality, imagination, and initiative. However, few, if any, armed services recruit with the slogan "Join our service branch and become an innovator!" Conversely, if young people are naturally inclined toward invention or philosophical reflection, they are unlikely to make military service their first career choice. Nevertheless, Western armed forces, particularly air forces, set out to recruit for their officer cadres young men and women who

have strong character, above-average intelligence, and potential for initiative and leadership. The services recognize their need for a reservoir of talent that they can develop and draw on, as needed, in the future. But there is an immediate danger that instead of being encouraged to flow, the springs of creative young people will dry up long before they can contribute to the reservoir.

The first obstacle lies in the nature of traditional basic military training, “Learn to follow before you learn to lead” is a well-proven precept that should not be discarded. Is it sufficient? Good training will produce enlisted personnel and officers who will respond instinctively to anticipated, recognizable circumstances in a manner circumscribed by their training. How can an officer be trained to recognize and to be prepared for the unexpected? Further, how can an officer be taught to engineer the unexpected or to innovate? Any suggestion that rookie officers be taught powers of innovation at the expense of military training would be justifiably derided. At the other extreme, it seems unrealistic to expect an officer on achieving senior rank to undertake a postgraduate course at a war college, war-gaming center, or national defense university and make a sudden transition from responder to innovator.

The resolution of the dilemma probably lies in a much maligned word: *education*. It seems to a foreign observer that the great strength of the United States military academies lies in their striving to produce officers who are not only highly trained but who have been taught how to think. If there is a difference between training and education, it is that education should instill the mental flexibility to look beyond today’s possibilities, to anticipate and perhaps even to help shape tomorrow’s. Inevitably, there are the seeds of tension when conformity and questioning are being taught side by side. It should come as no surprise that military education can occasionally give rise to uneasiness within the military as a whole. There are many apparently incompatible objectives: discipline and individuality, conformity and initiative, responding and innovating, determination and flexibility, imagination and objectivity, fire and dispassion. However, fighting and thinking should not be incompatible, but complementary. A forthright British general observed eighty years ago that “any military service which tries to separate its fighters from its thinkers is likely to finish up with cowards doing the thinking and the fools doing the fighting.” Education from the very outset of an officer’s career should teach the officer not only to recognize the apparent incompatibilities but to accept them as the anomalies of the chosen profession. The officer is then less likely to be confused by the seemingly conflicting demands that he or she will encounter. Hopefully, we will have selected young men and women with the intellect and strength of character to master the challenges and contradictions confronting them. No doubt we shall lose those who lack either sufficient strength or flexibility—but better sooner rather than later when their responsibilities, and possibly the conflicting demands placed on them, have grown immeasurably greater.

Thereafter, when young officers go to their first units, they learn that there is a time for thought and a time for action, a time for conformity and a time for independence, a time for consolidation and a time for innovation. Whatever else military education should do, it should instill in them the good judgment to ascertain which time is appropriate for which activity. Even then, these youngsters will not be able to apply that judgment confidently without the tutelage of good leadership. In this context, the good leader is the one who has sufficient self-confidence to encourage subordinates to think about their own immediate environment and to seek improvements, revisions, or modifications that will enhance unit capability. The leader will identify those individuals who seem to have the capacity to discharge their regular tasks with the utmost effectiveness and still have the time and inclination to think constructively about what they are doing. He or she will have the patience to identify and bridle the brashness of youth and will have the wisdom to instruct subordinates in the ways of persuasion without provocation. In short, the good leader will be encouraging both activity and habits of thought and will be sensible enough to recognize that industrious, innovative officers will reflect the high quality of his or her leadership, not undermine authority. And—perhaps most important of all—the good leader will take the necessary steps to ensure that powers of innovation and practical imagination gain the attention of appointers and superiors so that any particular talent can be nurtured and given a wider canvass for its expression.

Subsequently, in this ideal air force or other service branch, such officers who attend staff and war colleges will be surprised by an environment in which there is not just a “recommended staff solution” but also credit given for coming up with an alternative. Some, though probably not all, will be officers who could make the staff solution work in an exemplary fashion if that was called for or, alternatively, harness their formidable powers of leadership and organization to “sell” an innovative solution which they themselves had devised. In every walk of life, such men and women are scarce and very valuable.

In a military service, someone has to become the intellectual master of the ever-expanding, increasingly complex technology; someone has to analyze, synthesize, plan, and recommend; someone has to identify and coolly interpret hostile capabilities; someone has to have the foresight, imagination, and courage to suggest solutions to problems that may be ten years away or more; someone has to address the ambitious bureaucrat, the single-minded politician, and the instant academic strategic analyst from the institution, confronting, discussing, arguing, and holding the corner. Clausewitz was very precise in defining the qualities which he sought in a general officer to meet the uncertainties of war; they are equally applicable for any military leader in peacetime.

A strong mind which can maintain its serenity under the most powerful excitement . . . strength of character . . . discernment clear and deep . . . energy, firmness, staunchness. . . . Here then, above all

a fine and penetrating mind is called for, to search out the truth by the tact of its judgment.

That must be the military mind. Its fostering is not the responsibility of academies and colleges only but of commanders everywhere. Independence of thought, imagination, ingenuity, and initiative are not substitutes for discipline, teamwork, conformity, tenacity of purpose, and loyalty but are military virtues complementary to them. All must be encouraged—from each individual, according to his or her talents. Therein lies the source of successful military innovation. Should anyone doubt whether the possible outcomes are really worth all the hassle, whether the idea is

indeed worth the pursuit, perhaps the words of General Henry “Hap” Arnold in November 1945 should be recalled: National safety would be engendered by an air force whose doctrines and techniques are tied solely to the equipment and processes of the moment. Present equipment is but a step in progress, and any air force which does not keep its doctrines ahead of its equipment, and its vision far into the future, can only delude the nation into a false sense of security. Timely and well-considered innovation is the practical manifestation of that vision to ensure the continued harmony of equipment and doctrine without prejudice to today’s operational effectiveness.