



The technological temptation

military-Earth thinking notebook

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Investments in high-tech military equipment allow men to expose themselves less to the enemy while continuing to inflict ever-increasing damage. However, however attractive technological advances may seem, they generate new problems both in economic and logistical terms and in terms of human relations, which may ultimately lead the military to question its actions. The point is not to deny the interest and need to modernise the technological capabilities of armies, but to identify the limits of these capabilities, since technology applied to armies is intended to be a substitute for confrontation between men and women.

The LECLERC weapon system weighs heavily each year on the budget allocated to maintaining it in operational condition. The FELIN system weighs heavily on the shoulders of our soldiers engaged in operations. Armed UAVs, with which France is certainly not yet equipped, weigh on the assessment of military action both in public opinion and among the populations benefiting from military intervention. In the end, the place occupied by technology is not neutral for the armed forces.

Admittedly, the investments made to equip the French army with high-tech equipment enable men to expose themselves less to the enemy while continuing to inflict ever greater damage on it. As attractive as technological advances may seem, they nevertheless generate new problems both in economic and logistical terms and in terms of human relations. The distancing effect of new technologies creates a new relationship to war both in public opinion and among soldiers by depersonalizing the adversary, particularly in a confrontation "from the strong to the weak". As a result, the soldier may ultimately come to question his action.

The point is not, of course, to deny the interest in and need for modernising the material capabilities of armies, but to question the limits, given that technology applied to armies is intended to be a substitute for confrontation between men.

Technology at the service of military power

War and technology are inseparable. One need only refer to past or recent history to be convinced of this. On the one hand, the desire for power inherent in the existence of an armed force is only asserted by mastering the tools that allow the domination of the other. On the other hand, the search for military success, on which the survival of a state has sometimes depended, represents a formidable driving force in the quest for technological innovation. Innovations then often find subsequent applications in the civilian sector. One need only look at the technological leaps that the tragic episodes of the two world conflicts have accelerated, in particular by promoting the development of aeronautics (during the first) or nuclear power (during the second). It is therefore not surprising to see a growing technological tropism, so much so that its assets seem to respond to the demands of power both directly and indirectly.

Directly first, because it reinforces the conviction that the decision will be made quickly. The technology responds precisely to the dual challenge of hitting the opponent by limiting one's own exposure to enemy blows. Whether it is the English longbows[1] at Crécy in 1346 or the GBU-12 [2] in Afghanistan, the idea remains the same. This technological added value designed to outperform the adversary is also found in SRI means.[3] whether it's satellites, planes or drones. The multiplier power directly provided by the technology is therefore no longer in doubt.

Moreover, in this age of hypermediatization, the use of technology makes it possible to minimize the human imponderable. Isn't a missile launched from a drone safer than a ground assault? On the one hand, the risk of friendly casualties is eliminated, which are proving increasingly difficult to make the public accept. On the other hand, this choice protects us from shocking and destructive behaviour, such as American soldiers urinating on the bodies of rebels in Afghanistan. In other words, the use of technology reduces the risk of the "strategic corporal" slipping up in the media war by keeping him or her off the "stage".

Indirectly, the deterrent nature of high-tech equipment can help to calm the warmongering of a potential adversary. The demonstration of technological know-how applied to military power is thus an insurance against direct confrontation. The mastery of nuclear power is a perfect illustration of this.

Investing in military technology is thus like a life insurance policy for the State. It provides both a deterrent capacity and a reserve of power in the event of engagement. Yet, paradoxical as it may seem, "technological" tropism carries within it the seeds of military weakening, if it is not narrow-minded.

Technological handicap - the best, the enemy of the good

The choice of sophistication is justified in part for two reasons: to maintain technological ascendancy over the potential adversary, and to provide his men with the tools most likely to bring them victory. On the other hand, this choice creates a new straitjacket that ultimately represents an obstacle to military success.

The economic aims of national military-industrial enterprises, whose objective is as much to equip national forces as to win export markets, are obvious to everyone. The first market is the national armies, which serve as a technological showcase for much more lucrative foreign markets. Will the Rafale's performance during the Harmattan operations in Libya and, to a lesser extent, Serval in Mali eventually overcome the United Arab

Emirates' last reservations and secure the contract with India? While the quality of French know-how in this area is remarkable (whether it be the Leclerc tank, the Tigre helicopter or, more recently, the FELIN system), it nevertheless comes at a cost. The defence budget being what it is, it is obvious that the acquisition of extremely sophisticated equipment is to the detriment of other needs. However, it is much more profitable in terms of exports for the State to make the most of France's technological know-how through the development of a Rafale or a Leclerc rather than a successor to the VAB (which entered service in 1976). Should the appetite for technology overshadow certain military capabilities through the non-renewal of equipment whose interest and intensive use have not waned in recent decades? Should French prestige and our national pride be satisfied by the possession of a tank that is technologically "advanced" but not very much deployed in operations, while at the same time the vehicles are not used to the full? At the same time, land logistics vehicles have not benefited (until the last five years and again, in homeopathic doses and for a specific theatre) from the most basic armoured protection? In the asymmetrical confrontation (which corresponds to the form of the current commitments), there is no need to look for a long time to determine our weaknesses and to know which are, for our adversaries, the most profitable objectives in terms of image, but also to disorganize the forward manoeuvre. It is not, for example, to question the usefulness of a heavy armoured component, which remains unavoidable, but to question a more balanced distribution of the technological effort. It is indeed this balance that should enable us to cover the broadest possible spectrum of commitments, from conventional warfare to asymmetric conflict. The risk is therefore that of a technological ambition which, faced with budgetary realism, would lead to the weakening of certain military capabilities that are not considered a priority.

This is all the more relevant because once advanced equipment is delivered, the implications of this choice do not end there. The problems of support costs come to mind, which the PEGP[4] is doing its utmost to overcome by grouping equipment together and rationalising its maintenance and use. The comparison between the cost per flying hour of a Gazelle and the ten times higher cost of a Tiger is well known. The impact of this state-of-the-art equipment, once deployed in operation, is more penalizing. This new equipment leads to a heavier logistical footprint. They make theatre support more delicate and more costly, given the technical specificities required.

Another problem associated with the possession of sophisticated equipment is its very nature. For equipment that is expensive to buy and use, will political and military decision-makers not think twice before committing it to operations, when our vital interests are not directly at stake? When equipment and budgets are counted, is the question not likely to arise, however absurd it may seem at first glance? Will the technological showcase not be condemned to a purely dissuasive role by being more frequently confined to national territory?

The dilemma is all the greater because technological superiority reassures the politician as much as it satisfies the military by strengthening confidence in victory. As the number of troops declines and threats remain, will technology increasingly be used as a stopgap measure to give the illusion that our capabilities are being maintained at the same level? As a result, will technological superiority not insidiously assert itself as the goal, taking precedence over strategic thinking? This overconfidence in the superiority provided by technology is reminiscent of the "strategic autism" [5] demonstrated by the United States with the Revolution in Military Affairs (RMA). France is not there yet, but has there not been a precedent here? Didn't the mastery of nuclear weapons, a technological instrument of absolute power, limit military strategic thinking for a few decades?

Yet we must seek the opposite, in other words, subordinating technology to our real

needs. As in everything else, it is necessary to distinguish between what is essential and what is superfluous, and therefore to maintain our thinking on the typology of our future commitments. At a time when our ever shrinking budgets determine what our capabilities can be, strategic thinking must take its rightful place in defining our right technological needs. It is probably necessary to accept equipment that is certainly modern but more rustic, in other words less sophisticated and therefore less expensive to buy and use. In addition, there are also the advantages of less complex and therefore less time-consuming training for the personnel serving these materials and for the maintenance staff, which again translates into budget savings. The idea is to emerge from a technology race that is self-feeding under pressure from states with much larger defence budgets than ours, to allocate our resources to personnel retention and training. The soldier must remain at the centre of our concerns. He is the key to tactical success, but also to strategic success through his direct action against the adversary and his indirect action on the local population and national public opinion.

A distorted relationship to military engagement

The intrusion of the technological factor into the conduct of a conflict cannot be neutral, as it alters the nature of the conflict. Power, the ability to strike at a distance, precision and discretion are all elements that upset the vision of war.

The emphasis on technological capabilities gives a truncated vision of the mission of armies and more particularly of the risks linked to the engagement of their men. The emphasis on technological input contributes to denying the risk factor inherent in confrontation, as the latter appears less direct. Don't protection, observation and remote strike capabilities and the power held give the illusion of less exposure to danger when the adversary does not have these same assets? We are far from the idea of zero dead, but shouldn't we ask ourselves about the demythologizing capacity of technology? By reassuring our population that the human potential of its army is preserved, does technology not undermine the notion of sacrifice? Doesn't it give the wrong view of risk, making the loss of a soldier the exception due to a flaw in the technological paraphernalia, instead of emphasizing courage and dedication in the face of ever-present danger? In short, is there not a danger that the attachment that a people may feel for those who are willing to sacrifice may be dulled to the point of indifference?

Conversely, this same "technological" approach makes it more difficult for public opinion, misled by reassuring rhetoric, to accept the dead in battle. Its ability to interfere in the political management of a conflict becomes all the greater as a result. The continuation of military operations may be called into question.

Outside the national sphere alone, does the ever-increasing use of technological means not lead the military to cut itself off further from the population it serves? The French soldier is known for his ability to maintain contact with the population in the countries in which he is engaged. However, modern weaponry and detection and intelligence means make it easy to cut oneself off from the population and avoid the risks of interaction with the population. But, even for a liberated population, is not the presence of this invisible friend who comes to destroy and remains locked up in its bases frustrating at the very least? "Winning hearts" requires interaction with the population, which is not self-evident when telephone tapping, drones or isolated bases encourage people to keep their distance and withdraw into themselves. If technology is an asset during the intervention phase, it can therefore become a handicap during the stabilisation phase by distancing one of the players essential to the lasting success of the operation.

Finally, whether it is the distance established with regard to the population it is helping or the perverse effect of risk minimisation on public opinion, does the soldier not risk questioning the meaning of his commitment? Confronted, on the one hand, with a local population that may come to regard him as an invader and, on the other hand, with a national population that does not measure the risks involved, he may wonder whether he is committing himself. Confronted on the one hand with a local population that may come to consider it as an invader and on the other hand with a national population that does not measure the risks involved, this may lead to questions about the meaning of its commitment, which would benefit neither from the hoped-for national support nor from that of the people for whom the army would intervene. For those whose success is guaranteed by their ability to strike in safety and whose risk-taking is non-existent, such as the operations of the army in the field, it is important to be aware of the risks involved. For those whose success is guaranteed by their ability to strike safely and whose risk-taking is non-existent, such as the operators of these armed drones, is the questioning not worse, against the backdrop of the idea that "to win without danger, one triumphs without glory"? A soldier's doubt as to the mission entrusted to him would then be a sign of the weakening of our armies, but even more so of our nation.

The American example, whose doctrine remains based on the superiority of the military tool and therefore on technological supremacy, bears witness to these abuses that make technology an end in itself. However, faced with the limitations of this model symbolized by the RMA during their engagements in Iraq and Afghanistan, they have begun to reflect in recent years on the place of technology. Although France does not seem to be exposed to such a risk given the budgetary resources allocated to Defence, the technological tropism remains no less attractive. However, it is necessary to address the technological question in terms of what it can contribute to complement the soldier's action. The soldier remains "the primary instrument of combat" in a logic that from the outset places technology in the position it should be in, namely that of subordination to both strategic and tactical thinking.

Finally, if we still need to be convinced of this, current conflicts of an asymmetrical nature remind us that war is above all a confrontation of two wills. In these conflicts, the human factor remains central because it helps to balance the balance of power between the belligerents, especially when the decisive battle is now often mediated.

1) very powerful medieval arch, about two metres long.

2) laser-guided bomb.

[3] Intelligence, Surveillance and Reconnaissance

4) Parks Employment and Management Policy

[5] "War in the 21st Century"; Colin Gray

Saint-cyrien of the promotion "Bicentennial of Saint-Cyr" (1999-2002) Commander Thierry KUNTZMANN served in the 1st RMAT of ^{Woippy} before commanding the maintenance company of the 13th DBLE in ^{Djibouti}. Assigned to the operations employment division of SMITer in 2010, he joined the CSEM in 2013 as a trainee after a projection in Kandahar within the RC-South staff.

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