
Reflections on the ethics of air warfare

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By its very nature, the military is intimately affected by ethical questioning. The gravity of the issues at stake and the inevitable consequences of decisions often taken in a hurry impose a reflection from the policy-maker and the military commander down to the ordinary soldier. As proof that this subject is being taken into account at the highest level in France, the Minister of the Armed Forces, Florence Parly, launched the creation of a Defense Ethics Committee on January 10, 2020, reminding us that “*ethics is at the very foundation of the military’s raison d’être*”¹. After the life and health sciences in 1983 and digital technology in 2019, it is now Defense that has a specific forum to address today the questions that France will no longer have time to ask tomorrow.

The minister had set two mandates for the year 2020. The first was on “the super soldier” and the opinion of the Defense Ethics Committee, submitted to the Minister in September, was published in early December 2020. On this occasion, Florence Parly mentioned the unprecedented questions that new technologies inevitably raise. In the same vein, the second study entrusted to the committee concerned “autonomy in lethal weapon systems”. Its conclusions have still not been made public at the time of writing, which is no doubt proof of the sensitivity of this subject.

However, the direction chosen by France and its strategic competitors in the autonomization of their weapon systems will determine the future of armed conflicts, particularly in the third dimension. The combination of the shrinking space-time framework of military confrontations, resulting from

1. F. Parly, *Launch of the Defense Ethics Committee* [Speech], Paris, January 10, 2020.

factors as varied as hyper-velocity or the military use of space, for example, and the information overload induced by the digital revolution, will undoubtedly give a major operational advantage, if not a decisive one, to the military structure that will have succeeded in autonomizing its aerial weapon systems in a controlled manner.

So why continue to think about these questions if the outcome seems to be a foregone conclusion? Precisely because these concepts, however difficult and complex, do not only concern the experts who handle them. Beyond the engineers who design them or the military personnel who will implement them, future weapons systems will engage society as a whole by calling into question its fundamental values. More broadly, this questioning is part of the inexorable dilemma facing any political system: how to guarantee its survival without denying its principles? In a liberal democracy, the maintenance of operational superiority cannot be considered at the pure and simple expense of respect for human life, which is by definition at the top of its scale of values. In this respect, without presuming the orientations that will be retained or even proposed, France, to its credit, refuses at least not to question itself.

On the subject of empowering lethal weapons systems, the choice is first to accept whether or not to free oneself from a final human control before any lethal action. To take the most extreme example, will long distance UAV's be able to open fire on a target designated by a facial recognition system, which would take over during an ephemeral time window, without a human operator authorizing the shot or even validating the target? In fact, the French government has already declared to renounce the use of Autonomous Lethal Weapon Systems (ALWS), at least to fully autonomous systems. On April 5, 2019, on the Saclay campus, the Minister of the Armed Forces stated bluntly that "*France refuses to entrust the decision of life or death to a machine that would act in a fully autonomous way and escape any human control. Whatever the degree of automation, or even autonomy of our current and future weapons systems, they will remain subordinate to human command*"². So what room to maneuver is left? Quite simply, to decide exactly how much autonomy to give to lethal systems, with the aim of maximizing their operational efficiency while keeping humans at the heart of the decision-making process.

At first glance, these technical questions may seem far removed from those that air power has had to face up to now. However, the ethical questioning linked to air power has appeared since its origin, with the Italian bombing of Turkish troops in Cyrenaica in November 1911. Patrick Facon notes that at the time, this new capacity was vilified, considered as a breach of the laws of war against the military and the laws of humanity against

2. F. Parly, *Artificial Intelligence and Defense* [Speech], Saclay, April 5, 2019.

civilians³. The anticipatory literature of the end of the 19th century and the beginning of the 20th century fed the fear generated by a destructive potential that is difficult to define. The law was not to be of any help since only a few attempts to regulate aerial warfare were to intervene, first between the Franco-Prussian war of 1870 and the First World War, then again during the interim between the two World Wars, without any real legal scope. The trauma of the strategic bombings of the Second World War, whose peak was undoubtedly reached with the nuclear strikes on Hiroshima and Nagasaki, relaunched the question of what is acceptable or not in terms of air warfare. If, moreover, air power has been from the outset the focus of debates on the morality of military action, it is not because of reconnaissance, fighter or transport aircraft, but because of the original focus on bombing by its theorists. Even though aerial bombardment is only responsible for a minority of the victims of conflicts, contrary to conventional portrayals. Of the one hundred and ten million victims of the conflicts of the first seven decades of the twentieth century, less than two million would be due to air strikes, that is, less than 2%⁴.

Beyond the numerous preconceived ideas, when one seriously tries to apprehend the ethical stakes of air warfare, one quickly notices that the traditional framework of the ethics of war does not offer sufficient precision. A specific ethics linked to the characteristics of air power seems to have to emerge. It manifests itself both through the way in which air weapons have transformed the relationship of the political decision-maker to war and through the dilemmas that their use does not fail to bring to light.

From the ethics of war to the ethics of air warfare

To better understand these notions, a few theoretical reminders are necessary. More commonly known as “ethics”, from the Greek term *ethos* (way of being), moral philosophy is divided into three branches: fundamental ethics or meta-ethics (what is good and evil?), morality in itself with the domain of norms (what should we do or not do?) and all the normative ethics applied to particular domains, professional for example. Military ethics, in general, and the ethics of aerial warfare, in particular, are unquestionably applied ethics. Within normative ethics, that which prescribes and therefore judges, we distinguish three large families which all concern the military. Deontology, of Kantian inspiration, is the domain of norms, obligations and absolute prohibitions. It is a sort of code of conduct requiring the respect of universal rules of behavior, whatever the expected consequences of an action. Consequentialism, on the other hand, judges an action according to its foreseeable consequences at the time it is committed, seeking the best possible

3. P. Facon, *Le bombardement stratégique*. Monaco, Éditions du Rocher, 1996.

4. G. Elliot, *Twentieth Century Book of the Dead*. Londres, Penguin Books Ltd, 1973.

results for the community. Finally, virtue ethics, inherited from Aristotelian thought, focuses on the person and advocates the perfection of the human being as a virtuous moral agent. From the coexistence of these different families arise moral dilemmas. The antinomy between deontology, that is to say, an ethics of conviction, and consequentialism, that is to say, an ethics of responsibility, according to the distinction made by Max Weber, leads him to consider them as “two totally different and irreducibly opposed maxims⁵”. The difficulty lies in avoiding the temptation, too simplistic, to arbitrarily give precedence to one over the other, like Machiavelli’s famous adage: “if the fact accuses him, the result excuses him”.

Ethical questions arise when no rational path can be traced in reference to a theory. Ethics represents the intellectual and personal path that passes a decision through the sieve of its values, with a view to reaching an ultimate objective, which philosophers call the sovereign good: beatitude for Spinoza, pleasure for Epicurus or peace according to Pascal. It is therefore consubstantial with the decision and its public expression, political action, of which war is a particular case, if we are to believe Clausewitz’ formula. Paradoxically perhaps, the gravity of the matter makes ethical questioning even more precious and indispensable.

So how can we overcome the apparent paradox of the ethics of war? War is actually far from being a simple, irrational and random outburst of violence. On the contrary, it is the result of a perpetual reasoning, to paraphrase André Beaufre, of a dialectic between two opposing wills. But it is precisely morality that allows us to distinguish violence, which is unjust, from force.

At the “higher” level, in the theory of international relations, the debate is lively. Some radical realists consider that morality has no place in international relations, while others believe that it is the consequences of actions that are important (this would be Weber’s ethics of responsibility). The idealists, of Kantian obedience, defend an ethics of conviction by giving priority to the accomplishment of a duty over the result of actions.

On a military scale, the moral dilemma of war is exacerbated by the need to win. As Michael Walzer reminds us, the choices are “difficult and painful” and can be summed up as “the dilemma between winning and fighting well⁶.” First, there is the obvious problem of reciprocity. It is tempting to refuse to impose constraints on oneself when the adversary does not restrain his action. In the war waged by liberal democracies against terrorism, we find this opposition between a deontological logic that requires democracies to fight

5. M. Weber, *Le savant et le politique*. Paris, 10x18, 2002.

6. M. Walzer, *Guerres justes et injustes : Argumentation morale avec exemples historiques*. Paris, Gallimard, Paris, 2006.

well and a consequentialist logic, according to which the end justifies the means, and which authorizes the use of terror by terrorists. Thus, in the face of the threat, can a state accept to compromise some of its most fundamental values? How, wonders Stephen Garrett about the Allied bombing of the Axis powers, can we face the challenge of the basic values of civilization without flouting these same values by trying to defend them⁷? There is a good chance that a victory obtained outside of any ethical framework would exacerbate resentments incompatible with the establishment of a lasting peace.

In any case, if war is horrible by nature, it is obvious that it would be even more horrible without ethics. Limiting the frequency and destructiveness of war seems to be in the interest of every human being and this is the goal of the famous just war theory. This normative ethics, which appeared in the West at the end of Antiquity and was built up over the centuries, has been adapted to the modern era by Michael Walzer. It divides war into three main areas: *jus ad bellum* governs the use of war, *jus in bello* governs the conduct of war and *jus post bellum* governs the transition to and return of peace⁸. For the *jus ad bellum*, which concerns the political decision-maker, the principle is simple and clearly established in international law: States must refrain from resorting to force; this is known as *jus contra bellum*⁹. As for the *jus in bello*, which concerns the military combatant, this time it is a question of limiting the suffering and horrors of war¹⁰.

These first two aspects are theoretically independent; in reality, they are inevitably linked. If the war is just, the soldier must adopt an exemplary behavior worthy of his country and his cause; if it is unjust, he must impose it on himself to restore his country's image. The ethical scandals triggered by the behavior of some Western soldiers, even though their country is most often engaged in conflicts considered legitimate, weaken this legitimacy. National public opinion then disassociates itself from the intervention, resulting in a disaster as in Algeria or Vietnam.

Ethics and law are irremediably intertwined. Ethics precedes the law, inspires it, shapes it and the latter, in return, confronts ethics with reality, sometimes influencing it. They sometimes come into conflict, when the law is morally reprehensible, such as the deportation laws of the Vichy government; it can then be ethical to break the law. For liberal democracies, however, in the field of international relations in general, as in the particular case of armed

7. S. A. Garrett, *Ethics and Airpower in World War II: The British Bombing of German Cities*. New-York, St. Martin's Press, 1993.

8. To make matters more complex, each of these areas includes both positive law and moral norms.

9. However, three exceptions exist in international law: UNSC authorization, individual self-defense, collective self-defense (intervention by invitation).

10. The *jus post bellum* concerns air power only at the margin, so it will be deliberately neglected here.

conflicts, respect for the law (national and international) has the value of a norm, even a postulate. International humanitarian law is, in a way, the legal declension of the *jus in bello* of the just war theory. But international law does not do everything. It regulates, frames, punishes when it can. But it is precisely when it reaches its limits that ethics comes into play and the articulation between legitimacy and legality is interesting. As Marc Guillaume points out, international legality is there to frame the use of legitimate violence¹¹. But in the face of a law that “*hesitates between the framing of war and its prohibition*”¹², through the modern opposition between the classical use of force and the humanitarian conception of war, the recourse to ethics takes on its full importance.

In the field that interests us here, that of air warfare, ethics is all the more important because the palliative recourse to law is not possible. Indeed, as strange as it may seem, there is no real law of aerial warfare¹³. It is rather subordinated to the law of war on land, whose principles are of general application. In positive law, only the declarations adopted at the two International Peace Conferences held in The Hague in 1899 and 1907 appear, which forbade “*the launching of projectiles and explosives from balloons or by other similar new means*”¹⁴, and, more generally, “*the attacking or bombing, by whatever means, of towns, villages, dwellings or buildings which are not defended*”¹⁵. While it is interesting to mention the existence of a Manual of International Law applicable to air and missile warfare¹⁶, drafted by a group of experts in Bern in 2009, following the example of the San Remo Manual for war at sea, it remains little known and without any real normative scope.

Moreover, the characteristics of air power, inherited from the environment in which it evolves, make it a very particular power and differentiate it from its land and naval counterparts. Its high lethality, its lightning speed, its ubiquity, as well as its technological and political dimensions, all serve to justify that we speak of the ethics of air warfare and of the strategy of air warfare. From the political leader to the crew member, in the field of *jus*

11. M. Guillaume, “Legitimacy and Legality of Military Action”, *Inflexions*, n°36, 2017/3, p. 67 - 72.

12. J.-V. Holeindre, “Les deux guerres justes. L'éthique de la guerre face aux évolutions récentes de la conflictualité internationale”, *Raisons politiques*, n°45, 2012/1, p. 81 - 101.

13. To deepen this subject, see for example P. Dupont, “Les opérations aériennes face au droit international”, *Revue Française de Droit Aérien et Spatial*, n°292, 2019/4, p. 453 - 479.

14. *Declaration on the prohibition of the launching of projectiles and explosives from balloons or by other similar new means*, signed at The Hague on 29 July 1899.

15. Article 25 of the *Annex Regulations Respecting the Laws and Customs of War on Land to the Convention (IV) Respecting the Laws and Customs of War on Land*, signed at The Hague on 18 October 1907.

16. *Manual on International Law Applicable to Air and Missile Warfare*, Office for the Coordination of Humanitarian Affairs Relief <https://reliefweb.int/sites/reliefweb.int/files/resources/8B2E-79FC145BFB3D492576E00021ED34-HPCR-may2009.pdf>

ad bellum as in that of *jus in bello*, ethics is a guide without which air power would be an uncontrollable monster.

Air warfare in the *jus ad bellum*: a weapon that has transformed the way war is waged

Since its appearance, the air weapon has not escaped the judgment of the followers of the “just” war, while imposing an adaptation of this theory to the characteristics of this new form of wielding power. The traditional criteria of *jus ad bellum* (such as last resort or proportionality, for example) and *jus in bello* (such as discrimination between combatants and non-combatants or the prohibition of reprisals), naturally continue to apply. In these two aspects, however, air warfare differs from traditional warfare.

As the final step before open confrontation, air power can help contain the explosion of violence. On the one hand, history has demonstrated the possibility of using air power below the threshold of armed conflict. The American U-2 reconnaissance plane shot down on May 1st, 1960 in Soviet airspace, like the Turkish F-4 Phantom fighter shot down by the Syrian regime in 2012, have the common characteristic of not having led to the invocation of a violation of Article 2§4 of the United Nations Charter, the prohibition of the use of force. On the other hand, air power can be used in a dissuasive manner (by preventing, through the threat of force, an adversary from acting) or in a coercive manner (by seeking the cessation by this adversary of an action that he is already committing, through the limited use of force). The dissuasive effect of air power (even conventional) has been perceived and theorized since its origin. The Wright brothers, for example, thought at the very beginning of the 20th century that no government would risk starting a war, given the extent of the devastation that aircraft would soon be able to inflict on the population¹⁷. The immediate corollary of the power of the air weapon, envisaged from the outset, is that if a war were to be unleashed despite its dissuasive effect, air power would guarantee a rapid outcome with a relatively low loss of life. This is the cynical - but not inaccurate - paradox defended by the prophets of airpower during the inter-war period: the use of extreme means of destruction out of humanitarian concern. One moves from a deontological ethics (with the limitation of bombing at the Hague conferences) to a consequentialist ethic. As for the coercive effect of air power, we can cite the example of the one-off strikes against the Syrian regime of Bashar al-Assad, carried out following its use of chemical weapons against its population. According to the monitoring carried out by the Arms Control Association, the frequency of chemical weapons use in Syria seems to have decreased since then, without however stopping for good.

17. F. C. Kelly, “The Wright Brothers’ worst brush off”, *Air Force Magazine*, n°36, 1953/12, p. 38.

A political weapon *par excellence*, air power has often been used almost exclusively in recent conflicts, as witnessed by Operations Desert Storm (1991, in Iraq), Deliberate Force (1995, in Bosnia-Herzegovina), Allied Force (1999, in Kosovo), Unified Protector (2011, in Libya) or Inherent Resolve (since 2014 in Syria and Iraq). Air power today offers the prospect of military victory without causing large-scale destruction and while limiting friendly casualties. Perhaps most importantly, it allows for increased lethality through the combination of large firepower and extreme precision. Therefore, given the potential magnitude of its effects and the growing importance of the legal framework in Western democracies, it is intimately linked to the political level, which will have to directly assume the consequences. It is for this reason, among others, that the political power regularly tends to monopolize the supervision of air operations at the central level. A *Douhetian* doctrine of absolute war - which air power would allow - is not conceivable today, as it is no longer politically acceptable. The use of nuclear weapons remains a notable exception, but it is part of the supreme emergency theorized by Michaël Walzer in his modernized view of “just war” thinking.

The corollary of the political appetite for air power is undoubtedly a somewhat too easy recourse to it, which raises the question of the legitimacy of a legally questionable action. Operation Allied Force in Kosovo, traditionally considered by its advocates to be illegal but legitimate, is perhaps the best example. The use of air power also seems appropriate in the context of the particularly controversial concept of preventive self-defence. While preventive war is illegal under international law and illegitimate under just war theory (it directly contravenes the principle of proportionality), Walzer nonetheless endorses the Israeli surprise offensive of the Six-Day War as “*a clear case of legitimate anticipation*”¹⁸. And, as is well known, air power played a decisive role in this attack. At dawn on June 5, the air offensive destroyed three hundred Egyptian, eighty Syrian, thirty Jordanian and twelve Iraqi aircraft in less than three hours, and also neutralized nineteen air bases in Egypt and one each in Syria, Jordan and Iraq. Another morally reprehensible aspect of the air weapon is the use by some armies of extraterritorial¹⁹ targeting. The assassination of the Iranian Major-General Qassem Soleimani on January 3, 2020, which received a great deal of media attention, casts opprobrium on armed drones, of which this is only one very specific use. However, from the point of view of the *jus ad bellum*, an analysis of the facts (*ex post*) seems to vindicate the American strategy of extreme firmness, then de-escalation, vis-à-vis Iran. The other side of the legitimacy question must

18. M. Walzer, *op. cit.*

19. It should be noted that targeted assassinations do not exclusively take the form of air strikes, as witnessed by the poisoning or attempted poisoning of Russian nationals or the spectacular assassination of Iranian physicist Mohsen Fakhrizadeh in November 2020 by remote-controlled machine gun.

be approached through the prism of *jus in bello*, and refers to Michael Walzer's famous naked soldier²⁰: even if the rules of war do not prohibit killing a soldier in a car, who is not engaged in combat activity, can one legitimately strike at any time, at the very moment when the target least expects it? A realist or consequentialist perspective will see no objection to this, invoking immediately and without possible dispute, the sacrosanct principle of military necessity. Let us recall in this regard that President Trump, a few hours after the air strike in question, declared that he had acted to stop a war and not to start one.

But is air power really capable of containing the scourge of war? To the great displeasure of the prophets of strategic bombing who predicted the psychological collapse of populations, this has never really happened during the various confrontations, despite the importance of the resources engaged and the sacrifices made. Conversely, the role of air power in the resolution of conflicts is, wrongly, systematically relativized. The influence of aviation in the First World War is, for example, completely ignored, while the impact of strategic bombing in the Second World War on the conclusion of hostilities is generally denied. However, Albert Speer, Minister of Armaments of the Third Reich, went so far as to assert that strategic bombing of the Reich could have led Germany to surrender²¹. Finally, is it necessary to recall that the air weapon remains largely preferable to other solutions, even though they are considered more moral? In the case of the First Gulf War, about a thousand civilians perished during the six-week Desert Storm air campaign, while according to UNICEF and WHO, no less than one million Iraqi civilians died as a result of UN sanctions between 1990 and 2002 (55% of whom were children under the age of five²²). That is a ratio of one to ten "in favor of" the air weapon. Not to mention that the real effectiveness of these sanctions remains highly questionable, as evidenced by the American decision to go back to war against Iraq in early 2003. It therefore seems imperative to go beyond the overly simple distinction between armed intervention and non-military measures (within the meaning of Articles 41 and 42 of the United Nations Charter), the former being more effective and, above all, less costly for the civilian population.

20. M. Walzer, *op. cit.*

21. P. Facon, *op. cit.* Adam Tooze's more recent work on the Nazi economy corroborates these assertions: A. Tooze, *The Wage of Destruction: Formation and Ruin of the Nazi Economy*. Paris, Les Belles Lettres, 2012.

22. P. S. Meilinger, "More bogus charges against Airpower", *Air Force Magazine*, n°85, 2002/10, p. 52 - 57.

Air warfare in the *jus in bello*: a weapon that exacerbates ethical dilemmas in the conduct of hostilities

From the outset, air power was positioned as a weapon of terror (according to Ader and Douhet, for example), even if the effects of the first bombings of civilians, on Paris and London during the First World War, were more psychological than destructive. Reviewing the atrocities of the First World War in his major work *Il dominio dell'aria*, Giulio Douhet advocated bombing opposing cities, without discrimination, to undermine the morale of the enemy and thus hasten the end of the war. Later, nuclear bombing reincarnated the terror inflicted from the sky. To date, the only atomic weapons used in wartime have been fired from an airplane, amplifying the apocalyptic image of the bomber: a single plane and a single bomb for immediate and devastating effects. This is one of the main criticisms of the air weapon: it is inherently perceived as non-discriminatory. If one believes the Prussian general and theorist Carl von Clausewitz (the people are one of the three components forming the *trinity of a state at war*²³) or the American aviator John Warden (the population is part of the five circles that make up the adversary system²⁴), the population is unquestionably one of the stakeholders in a conflict. As Grégoire Chamayou points out, as war becomes “democratized”, the targeting of civilians becomes strategically relevant: “*if all citizens participate, in one way or another, in the war effort, it is absurd to target only those who handle weapons and to spare those who, through their daily work, make their use possible*”²⁵. The demographic bombings of World War II resulted in the deaths of hundreds of thousands of people. Yet these operations were never prosecuted as war crimes, unlike the iconic German raid on Coventry in November 1940, for example. Here, the interference of *jus ad bellum* with *jus in bello* is striking: the non-discriminatory bombings of the Allies are legitimate, on the basis of consequentialist reasoning (for deontological reasoning at least rejects any non-discrimination, or even any act resulting in casualties), because their cause was just, whereas that of the Germans was not.

The underlying question of targeting the civilian population is really one of military necessity, which is all the more complex because this criterion is largely subjective.

It may be a matter of collateral damage, acceptable when all efforts have been made to avoid such impacts. This is the direct heritage of the “double effect” theorized by Thomas Aquinas, who considers that the moral quality

23. C. von Clausewitz, *De la guerre*. Paris, Editions de minuit, 1955.

24. J. A. Warden, *Strategic Warfare: The Enemy as a System*, unpublished manuscript, Air Command and Staff College, Maxwell AFB, Alabama, 1993.

25. G. Chamayou, *Théorie du drone*. Paris, La Fabrique, 2013

of an act that has two effects is affected by the intentional effect (the bad effect, however, must not be out of proportion to the good). In other words, “*an action is condemnable not because of its consequences in themselves, but because of the intention that presides over it*”²⁶, which amounts to considering that the end, in this particular case, can justify the means. A concept reinvented in the middle of the 20th Century and designating the victims among non-combatants who are affected during an act of war when they were not the object of the war, collateral damage is today provided for (and regulated) by international humanitarian law. The reduction of collateral damage is a concern that obviously does not apply only to air warfare. However, Pascal Dupont reminds us of the progress that has been made since the Second World War with the aim of reducing the collateral damage of bombing: « *whereas the precision of a bomb’s drop was 1,000 meters in the 1940s, it is now between 3 and 30 meters, depending on the type of ammunition and the configuration of its use. Guided weapons, which constituted only 8 to 9 per cent of total munitions during the 1991 Gulf War, reached 70 per cent in Iraq and Afghanistan, and then 100 per cent in Libya, hence the emergence of the concept of “targeted strikes”* »²⁷. In other words, to take an edifying comparison, in 1940, one thousand B-17 bombers armed with nine thousand bombs were needed to destroy a target that a single F-117 could destroy with only one of its two bombs in 1991, while reducing the radius of impact around the target from one kilometer to nearly 3 metres²⁸. It is useful to specify that the estimation of collateral damage, which is one of the four pillars of targeting, is today systematic before any air strike by Western standards. The air weapon is today the most precise military instrument and therefore, in a way, the most humanitarian. This being said, the risk of collateral damage, although lowered, remains unfortunately inevitable, insofar as a malfunction of the weapon system or human error are always possible or, quite simply, because of the well-known “*fog of war*” formulated by Clausewitz.

At the opposite extreme is the nuclear strike. Michael Walzer takes a strong stance on nuclear strikes when he writes: “*Nuclear weapons shatter “just war” theory. They are the first technical innovations of mankind that we cannot fit within the bounds of our familiar moral universe*”²⁹. However, this same author devotes a chapter of *Just and Unjust Wars* to what he calls “*the supreme emergency*”, an extreme situation linked to the imminence and nature of a danger and which, according to him, justifies the transgression of the moral prohibitions of war. He considered that Nazism fell within this framework and that the bombing of German cities from May 1940 to the be-

26. C. Nadeau, J. Saada, *Guerre juste, guerre injuste : Histoire, théories et critiques*. Paris, PUF, 2009.

27. P. Dupont, *op. cit.*

28. Circular impact error at 50%.

29. M. Walzer, *op. cit.*

ginning of 1942 was the only solution available to the Allies to try to stem the spread of this “*incarnate evil*”. On the other hand, in a very arbitrary manner, he considered that the Japanese “*had never represented the same threat to peace and freedom as the Nazis*” and that the use of atomic weapons against them was therefore not legitimate. But given the imperfection of the other options available to the Allies in 1945, does the ethical dilemma not deserve to be posed in these terms: which treatment is the least inhumane, and therefore the least immoral? A horrific nuclear bombardment of a circumscribed part of the Japanese population or the slow death of the whole country and of the millions of people held under the Japanese yoke by an indefinite extension of the naval blockade? Wouldn't prolonged torture be immoral when a quick victory would be possible? A deontological (rather idealistic) reasoning naturally rejects the deliberate bombing of hundreds of thousands of civilians, while a consequentialist (and realistic) logic obviously tends to favor a rapid end to the conflict that causes the fewest casualties in total and among the soldiers of one's own military in particular.

Finally, to close this controversy around discrimination, it is enlightening to address the very specific mission of sky policing. The decision to shoot down a civilian airplane in flight, in which there are many passengers around a handful of terrorists, is not insignificant. It is a question, in a particularly constrained timeframe, given the urgency of the situation, of deciding to sacrifice, in a certain way, several hundred passengers to avoid the possibility of less acceptable damage. A reasoning guided by the ethics of conviction would incite not to intervene, while an ethics of responsibility imposes to destroy the plane before it is too late.

But the criticism most regularly made against air power is that it is a departure from the traditional balance of risk between the two adversaries. The underlying dilemma is the dissymmetry, or more precisely the disproportionality, between the low risk taken by the airmen and the extent of the damage inflicted. But what about land or naval artillery, insofar as the ranges of CAESAR artillery guns³⁰ and LRUs³¹ are greater than, respectively, 40 and 80 km, while the French Navy cruise missile can be fired from a frigate sailing more than 1,000 km from its target? It seems rather rational, in any form of combat, to seek to inflict damage while avoiding receiving it oneself. Only air weapons make it possible to exploit this logic, and even to push it to its extremes, with the use of armed drones, which nevertheless crystallizes the criticism. On the subject of armed drones, we should specify that the ethical defect of the asymmetry of risk can be opposed by the ethical benefit of a vector which provides its operators with a degree of certainty about

30. CAMion Equipped with an ARtillery System.

31. Unitary Rocket Launcher.

the future target which is undoubtedly unequalled. Indeed, the observation of several people, almost unlimited in time, of the target before the strike, confers a much better understanding of the situation than that obtained, for example, from a fighter plane with limited flight time constraints between two refuelling operations, or even by special forces in the inevitable confusion of combat during a direct assault.

The mention of drones inevitably raises questions about the place of humans in aerial warfare, which is characterized by a strong technological dimension. While humans remain omnipresent in the implementation of armed drones - it is indeed human operators who determine and pilot their trajectory from a distance, who direct the on-board sensors, who identify the target and carry out the strike from the launch of the bomb to impact – the trivialization of SALA mentioned in the introduction would, on the other hand, raise the question of moral disempowerment (to whom should responsibility for an aerial strike by an autonomous system be attributed?) and that of dehumanization (the autonomous system will never be able to show humanity). Tomorrow, other systems will require new thinking, concomitant with the new challenges. But fundamentally, the humanity of war (in the sense that it is conducted by humans) is precisely what guarantees it an ounce of humanity (in the sense of benevolence towards others). John Boyd, a leading thinker on air power, rightly reminds us that “*machines do not wage war; terrain does not wage war. Men fight wars. You have to get into their brains. That is where battles are won*”³². Air warfare, whatever the degree of technology involved, will always remain a dialectic of wills and intelligence, to paraphrase General Vincent Desportes³³.

Thus, air power undeniably involves specific ethical issues, linked to the intrinsic characteristics of air weaponry and the environment in which it evolves. At the heart of these issues are men and women, airmen, necessarily marked by the force they handle and intimately imbued with an ethical identity of their own, which distinguishes them, for better or for worse, from their comrades in other armies: the airman’s ethics. But that is another story...

32. J. Boyd, quoted in R. Coram, *Boyd: The Fighter Pilot Who Changed the Art of War*. Boston, Little, Brown & Company, 2002.

33. V. Desportes, “La stratégie en théories”, *Politique étrangère*, n°2014/2, 2014, p. 165-178.