The Law of Air Warfare

by Javier Guisández Gómez

Hostile aerial action

Under aerospace doctrine an *aerial action* is a set of *aerial sorties* of the same nature which take place simultaneously in pursuit of a common aim. In other words, an action of this type would attain the objective pursued if it involved two or more aircraft engaging in any of a range of operations, namely *attacks, reconnaissance, transportation* and *special aerial missions.*

The possible situations in which aerial actions may take place range from peacetime to warfare, including all the intermediate stages. It may therefore be said that when aerial action is described as *hostile*, it is because it is actually carrying out or intended to carry out acts that have a single common characteristic, that is, *violence.*

In this context, violence must be understood as acts which are committed without the consent of the affected group or country and which therefore constitute a violation of the rights or the status of other communities or nations. It is important to clarify this point, as otherwise hostile

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aerial action would cover only aerial attack missions, while those involving transportation or reconnaissance and special missions, and also electronic warfare, in-flight refuelling and so on, would not be classified as hostile action.

A brief history

Since 7 December 1903 in Dayton, Ohio, when Orville Wright successfully carried out a 52-second flight over a distance of 260 metres at an altitude of three metres, mankind has tried to make optimum use of airspace as a medium, and of aircraft as instruments.

As in other types of industry, it is war-related uses that have really given the impetus for the development of aviation in terms of quality, although initial designs[1] were intended for peaceful purposes, mainly air transport. Indeed, in 1910 someone as well-qualified as Field Marshal Foch declared that flying was a fascinating sport but not of the slightest interest to the armed forces.

When Lt Gavotti bombed the Ain Zara oasis from the air during the Italo-Turkish war of 1911-12, he initiated what would become a decisive factor in the Balkan war of 1912-13, in that aviation was to play a significant role in the combined aerial and ground fighting.[2]

Already at the beginning of World War I, Lt Watteau and Sgt Breguet contributed to the French victory in the Battle of the Marne by informing the ground command of German troop movements in the first successful *aerial reconnaissance* operation. Shortly thereafter, Sgt Frantz and his mechanic Quenault, using a machine gun mounted on their Voisin aircraft, scored what could be considered as the first victory for *aerial fire*.[3]

Before all this, hot-air balloons had been flown for the first time, for peaceful ends, by the brothers Joseph and Etienne Montgolfier in 1783, and were first used on a belligerent mission during the Franco-Prussian War of 1870-71 for the purpose of *airborne reconnaissance*.

This overview of airborne actions and the corresponding dates leads to several conclusions.

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[1] *Enciclopedia de aviación y astronáutica*, Ediciones Garriga, 1972, Vol. I, p. 1078.

[2] Charles Rousseau, *Le droit des conflits armés*, Editions Pedone, Paris, 1983, p. 356.

[3] *Enciclopedia de aviación y astronáutica*, *op. cit.*, p. 1079.

— Belligerent missions were rarely carried out using airships or the first fixed-wing planes.

— Belligerent aerial missions were not decisive, nor were they planned as independent actions. Ignorance of their effectiveness was such that the sailors on the British cruiser *Rodney* boasted how a 2,000-pound German bomb had no more than dented their deck, not realizing in their euphoria that this was because of a faulty fuse.[4]

— No aerial action was ever accepted unless it was part of a land or aeronaval operation.

The beginnings of regulation

It is therefore not surprising that in the early days what might be described as air warfare was not subject to any specific legal regulations. This came only some years later, in 1899, when the First Hague Peace Conference adopted three Conventions and three Declarations, the first of which prohibited the launching of projectiles and explosives from balloons or by other similar new means. Although at the time this ban was perceived as somewhat restrictive and was accepted with reservations and only as a temporary measure, it can readily be understood at present. Indeed, international humanitarian law cannot be conceived of without due regard for the concept of *discrimination*: distinguishing between civilians and combatants, between military objectives and other types of installations, between cultural property and their surroundings, between medical or religious personnel and others, and between medical facilities and means of transport and the rest.

Obviously, this prohibition was justified by the inaccuracy of such methods in striking their objectives, which meant a high probability of collateral damage.[5]

The restriction was temporary, lasting only five years, from 4 September 1900 to 4 September 1905. It was intended to fill what was perceived as a loophole at the time, but its promoters did not lose sight

[4] Arthur Travers Harris, *Ofensiva de bombardeo*, Editorial Aérea, Madrid, 1947, p. 71.

[5] Targets were reached exclusively by visual or optical means and weapons were launched by the use of gravity, with no form of propulsion, and were directly affected by weather conditions.

of the fact that aeronautics was an area that was developing exponentially. This rapid development subsequently hindered the ratification by the international community of a body of rules that would have imposed definitive restrictions on States.

It is worth drawing attention to Article 29 of the Regulations annexed to Convention II adopted by that same Peace Conference. The last paragraph of the article clarified the definition of a spy, excluding from that category individuals sent in balloons to deliver dispatches and generally to maintain communication between the various parts of an army or a territory.

The rules of aerial action

The evolution of aerial warfare and the hostile acts it entails have traditionally been marked by certain characteristics, of which — without claiming to be exhaustive — the following are the most important:

— the relative *newness* of flying, in that aircraft are hardly a century old and airborne weapons date back no more than 80 years;

— the rapid technological advances made, which have led to what are now known as fourth-generation weapons;

— the importance of airborne weaponry in terms of *international trade*: owing to the high cost of the hardware and the speed with which it becomes outdated, airborne matériel accounts for an estimated 90% of the total weapons market;[6]

— the *dual-purpose* nature of aircraft, which can be used just as profitably for both civilian and military purposes.

These factors have affected and continue to influence the codification, development and acceptance of legal rules in this area.

In view of the paucity of laws relating to this specific field,[7] a number of measures have been taken, though with varying degrees of the international support that is essential for their subsequent implementation. We shall now go on to consider some doctrinal approaches.

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[6] *Informe sobre el comercio exterior de material de defensa y de doble uso (1991/94)*, Ministry of Trade and Tourism, Madrid, 1995, p. X.

[7] Juan Gonzalo Martínez Micó, *La neutralidad en la guerra aérea: Derechos y deberes de beligerantes y neutrales*, Rufino García Blanco, Madrid, 1982, p. 33.

Total absence of treaty law

The absence of positive law, in this case treaty law, certainly does not mean complete freedom in the use of means and methods, tactics and technology. Natural law on the one hand, customary law on the other, and the rules concerning air-to-ground attacks contained in 1977 Protocol I additional to the 1949 Geneva Conventions impose restrictions in this regard.

It is worth recalling that during the Gulf war, although such key nations as the United States, Iraq, Iran, Israel, the United Kingdom and France had not ratified the 1977 Protocols, the degree of compliance with the law of war throughout the operations could be described as acceptable.

Subordination of the law of air warfare to the law of ground warfare

This is perhaps the result of two rulings handed down by the Greco-German arbitration tribunal (1927-30), which condemned Germany for the aerial bombardment of the neutral cities of Salonica and Bucharest in 1916, invoking Hague Convention II of 1899 respecting the laws and customs of war on land. The tribunal considered that Article 25, prohibiting "bombardment of towns (...) which are not defended", and Article 26, requiring "the commander of an attacking force, before commencing a bombardment (...) to warn the authorities", applied.

This constituted the first application of a general legal principle whereby two weapons that produce similar effects should be evaluated in a similar fashion, and gave rise to the idea of "the analogy between land and aerial bombardment".[8]

Equivalence of the law governing air warfare to the law of war at sea

This theory stems from the similarities between airspace and the sea, and from the fact that in many countries the air force is seen as necessary for extending naval power over land, beyond the confines of the coastal strip. The concept prevailed throughout the discussion, formulation and drafting of the rules of air warfare by the Commission of Jurists at The Hague in 1922-1923.[9]

[8] Rousseau, *op cit.*, p. 360.

[9] The participating countries were the United States, the United Kingdom, France, Italy and Japan. The Netherlands was subsequently invited to take part.

Equivalence of the law governing air warfare to the law of war on land and at sea

This is the theory that has perhaps been found least acceptable. On the one hand, it gives rise to a series of postulates that would be totally irrelevant to regulations governing air warfare; this would be the case for all the issues specific to land or naval warfare. On the other hand, it leaves major, often insuperable, lacunae in regard to all matters, situations and circumstances that relate exclusively to aerial operations.

Conditional application of the law of war on land and the law of war at sea to air warfare

This would depend on the air force's sphere of activity. In other words, the rules of war on land would apply to air warfare when it was being waged over land or in support of ground forces, and the rules of war at sea would apply when the air force was fighting over the sea or in support of the navy. Although this theory met with more success than the preceding one, having been espoused by Germany during the Second World War, it cannot be considered as comprehensive in that the air force is regarded exclusively as a support force unable to carry out independent actions and operations.

Drawing up a specific doctrine for air warfare

It can be said that the foundation stone of this doctrine was laid by the Institute of International Law in its Madrid Resolution of 22 April 1911,[10] which declared that air warfare was legal provided it met certain conditions, one of these being that it must not constitute a greater threat to persons and property than war on land or war at sea.[11]

On 11 November 1920, the International Committee of the Red Cross (ICRC) drew attention to the need for specific regulations, and as a result the Washington Conference of 1922 entrusted a Commission of Jurists in The Hague with the drafting of the *Rules of Air Warfare.*[12]

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[10] José Luis Fernández Flores, *Conferencia sobre derecho de la guerra aérea*, Centro de Estudios de Derecho Internacional Humanitaria, Madrid, 1911.

[11] Lassa Oppenheim, *Tratado de derecho internacional público*, Bosch, 1967, Tome II, Vol. I, II, p. 65.

[12] Dietrich Schindler, Jiri Toman, *The laws of armed conflicts*, 3rd. ed., Martinus Nijhoff Publishers/Henry Dunant Institute, Dordrecht/Geneva, 1988, pp. 207-217.

The application of comparative law in the study of air warfare

This approach, which is the one used in the present study, is a consequence of the limited success of the aforementioned Rules of Air Warfare. Despite having been drawn up by eminent jurists, they were not ratified even by the States which were represented on the Commission.

In any event, it should be pointed out that most of the rules were already part of customary law when they were drafted, and others acquired customary status by virtue of the wide respect they gained in subsequent years. Yet others were included in Additional Protocol I.[13]

The parameters of air warfare

By this is meant the set of elements which are indispensable to the planning and execution of aerial operations and with which the commanding officer, in the decisions he makes, answers the basic questions that may be asked by his General Staff or his men. In other words, the parameters should answer questions such as the following: What is air warfare? What may be used in air warfare? Who is qualified to conduct it? How do hostile aerial operations proceed? Where or from where can they be conducted?

We shall now attempt a schematic analysis of the parameters of air warfare on the basis of comparative law, so as to determine the requirements that each one must meet if it is to be incorporated into the law of war and into international humanitarian law.

What is air warfare?

In principle, it could be said that air warfare is a set of offensive and defensive aerial operations carried out using the air force with the intention of imposing one's will on the adversary by achieving a sufficient degree of aerial superiority. On the other hand, when the court of Montpellier had to define air warfare in September 1945, it did so indirectly, limiting itself to an enumeration of the specific hardware involved, namely, balloons, dirigibles, aeroplanes, seaplanes and helicopters.[14]

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[13] José Luis Fernández Flores, *Del derecho de la guerra*, Ediciones Ejército, 1982, p. 543.

[14] Rousseau, *op cit.*, p. 355.

Without embarking on a discussion of the legality or otherwise of a given war — an issue dealt with in *jus ad bellum*, which includes declarations such as the San Francisco Charter prohibiting "the threat or the use of force" in international relations[15] — we can say that air warfare is waged using certain specific means and methods.

In any event, if those means (weapons) and methods (tactics) are legal, it may be supposed that the result of their use, namely aerial warfare, is also legal. It should be stressed that legality must cover both elements, since if one of them[16] — either weapons or tactics — is not in line with the law, any airborne operation based on them is without legal foundation.

What may be used in air warfare?

The weapons that may be used are governed by the principle of limitation and military necessity laid down in international humanitarian law, which imposes certain constraints on the choice of means of warfare and stipulates that their use must be necessary.

The 1868 Declaration of St. Petersburg provides an example of this; it states that hostile operations must be aimed exclusively at securing a military advantage and prohibits the use of projectiles weighing less than 400 grammes which are either explosive or charged with fulminating or inflammable substances. There are other prohibitions and regulations relating to the means that may be employed for air warfare, among which the following are the most important.

— *Causing superfluous injury or unnecessary suffering.* In addition to being expressly stated in Article 35, para. 2, of Additional Protocol I, this restriction stems from the application of the principle of humanity, whereby war should cause only the minimum necessary suffering: no more, as that would be inhumane and hardly effective, and no less, as that would be insufficient.

— *Causing widespread, long-term and severe damage to the natural environment.* The possible identification of this prohibition with the potential effects of nuclear weapons is perhaps what prevented the countries in possession of such weapons from ratifying Protocol I

[15] Charter of the United Nations, Art. 2, para. 4.

[16] The choice of means and methods of warfare is limited, according to Art. 35 of Protocol I additional to the Geneva Conventions. The limitation on weapons is also dealt with in Art. 23 of Hague Convention II.

additional to the Geneva Conventions. Be that as it may, it should be borne in mind that nuclear weapons have been neither banned nor even condemned by any international treaty. Only the United Nations General Assembly condemned their use in 1953, in resolution 1653 (XVI).[17]

— *The use of asphyxiating, poisonous or other gases and of bacteriological methods of warfare.* These weapons were prohibited by the Geneva Protocol of 1925, which aimed to update Declaration 3 of The Hague (1899). The issue was further addressed in the 1993 Paris Convention on the total prohibition of chemical weapons. This was perhaps the most ambitious step of all, but the treaty will not enter into force until it is ratified by at least 65 countries, and at the time of writing (April 1997) it had not yet been ratified by such key countries as the United States, the United Kingdom, France, the Russian Federation and Iraq.

— *The use of booby-traps.* These are defined in Article 2 of Protocol II to the 1980 Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which May be Deemed to be Excessively Injurious or to have Indiscriminate Effects.[18] Prime examples are the booby-trapped medicines used by the Vietcong, and the booby-trapped toys used in the war in Afghanistan.

— *The use of biological and toxin weapons.* The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (1972) covers not only the agent itself but also the means of delivering the agent. It should be pointed out in that connection that while the Western world considers toxins as biological agents, in the East they are classified as chemical agents, as they are not living organisms.

How can air warfare be conducted?

Although aerial tactics must be capable of successfully carrying out a course of action decided by the commanding officer, they must also

[17] It affirmed that the use of nuclear and thermonuclear weapons was not in keeping with the Charter of the United Nations. There were 25 votes in favour, 20 against and 26 abstentions.

[18] As amended on 3 May 1996: "Any device or material which is designed, constructed or adapted to kill or injure, and which functions unexpectedly when a person disturbs or approaches an apparently harmless object or performs an apparently safe act", *International Review of the Red Cross*, No. 312, May-June 1996, p. 369.

remain within the framework defined by the law of armed conflict and therefore the following points must be taken into account.

— *Stratagems are legal at all times.* Deceiving the enemy by camouflaging air bases, simulating traces with drones or RPVs (Remotely Piloted Vehicles), misleading by electronic means or even using the enemy's SIF (Selective Identification Feature) or IFF (Identification Friend or Foe) to penetrate its air defence system are perfectly legal aerial tactics or methods.

— *Perfidy is always illegal.* Perfidy is prohibited without any kind of qualification identifying it with any particular type of warfare.[19] In other words, it is prohibited to engage in hostile acts, regardless of the military advantage they may secure, that are designed to betray the enemy's good will. In the case of air warfare, acts such as the following would obviously be prohibited.

— Using the registration of a civil aircraft. Using a commercial flight or an overflight agreement to carry out a hostile operation, such as photographic or electronic reconnaissance, the activation of air defence systems or even a direct attack, is prohibited. All these would be carried out over enemy territory prior to the outbreak of hostilities or over neutral territory; once the conflict has started, the normal procedure would be to declare an air exclusion zone, which would preclude any type of overflight.

— Using the distinctive signs of humanitarian agencies. Carrying out hostile operations of any kind, even aerial reconnaissance, under cover of aircraft registration numbers or markings belonging to neutral countries, humanitarian agencies, non-governmental organizations and international agencies engaged in eminently humanitarian or neutral functions is prohibited.

— Taking advantage of special agreements, for example using medical or search-and-rescue aircraft to carry out any type of mission other than that for which they have been accorded special status. Here it should be recalled that during a conflict such aircraft require special and specific authorization to perform their tasks, within a predetermined area, with an acceptable degree of security.

[19] Additional Protocol I, Art. 37.

Where or from where can air warfare be conducted?

Naturally, the answer is from airspace. Two dimensions must be determined in order to define airspace: projection over land and altitude. There are two theories relating to projection.

The first is based on orthogonal projection over the airspace of the territory of the different States, including their territorial waters. This theory has not gained wide acceptance as it allows for airspace that falls outside the jurisdiction of any State.

The second, although involving an identical projection area, is calculated by polar projection, whereby the pole is the centre of the earth and the plane of projection is the surrounding airspace. This theory is currently the more widely accepted as it leaves no airspace without jurisdiction.

A further requirement that must be met by the aforementioned areas if air warfare is to be legal is that they must not belong to neutral countries or be within their territorial waters, and they must not include zones accorded special status. However, as long as there is no danger to persons and property in the areas described above, defensive air operations can be carried out.

The altitude relating to the areas within these airspaces will depend on the theory adopted. Indeed, acceptable altitudes have been changing with advances in aerial policing systems for detecting and intercepting aerial objectives. This responsibility inevitably rests with the authority of the country concerned, which may even resort to force in order to safeguard its neutrality.

Who can engage in air warfare?

Given the qualifications required of all the protagonists in this type of warfare, and despite the fact that in theory it may be waged by all those persons mentioned in Article 4 of the Third Geneva Convention and Article 43 of Protocol I, in real and historical terms combatants will most likely belong to what are known as the regular armed forces. However, there have been some anecdotal incidents involving Bosnian Serbs in the Yugoslav conflict and cases where fighter planes of the Albanian air force were seized by dissidents in Valona in 1997.

In any event it may be stated as a general rule that any pilot who enters enemy territory with an aircraft bearing the prescribed distinctive markings will never lose his status as a combatant and can therefore in no way be considered as a spy.

Another point should be made in regard to pilots, should they be forced down and placed *hors de combat.* When Additional Protocol I was being drawn up, a proposal was tabled, but not accepted, that pilots who have ejected from their aircraft in an emergency should be treated as shipwrecked persons. That would mean that they would have to be sought, recovered and cared for. This approach ran counter to the policy followed by Germany during the Second World War, whereby enemy pilots who had parachuted from their planes and were likely to land on enemy territory were shot down, while those likely to land on German territory were captured for interrogation.

Ultimately it was Article 42 of Protocol I that dealt expressly with the matter of the *hors de combat* status of a pilot parachuting from an aircraft in distress.

What may be the target of aerial attack?

Normally, hostile aerial action is taken against military objectives, excluding both the civilian population and civilian property.[20]

Unfortunately, history shows that armed conflicts are claiming an increasing number of civilian victims. The result from the military standpoint is that before deciding on an aerial attack the question of *proportionality* must be addressed. Because of the degree of subjectivity involved, this principle is considered as the Achilles' heel of the law of war. The rule could perhaps be seen in more practical terms if it stated that an aerial attack expected to cause civilian casualties would be acceptable should it have the same degree of approval as a similar action taking place over a part of the country's own territory under enemy occupation, in which case the civilian casualties would be compatriots.

A further question that may be raised in connection with military objectives concerns the ban on attacking targets whose destruction, despite the military advantage that may result, would unleash dangerous forces, as in the case of dams, dykes and nuclear electrical generating stations.[21]

Another category of objects that may not be the target of direct attack is cultural property, as long as it has been accorded special protection by

[20] Additional Protocol I, Art. 52: military objectives are limited to "those objects which by their nature, location, purpose or use make an effective contribution to military action".

[21] Additional Protocol I, Article 56.

being entered in the International Register of Cultural Property under Special Protection and is duly marked and placed under surveillance. If these conditions are met, its immunity from attack must be guaranteed by any potential adversary.[22]

In all the aforementioned cases of protection, it is the government of the country in which they are located that has primary responsibility for protecting the inhabitants and property. For example, if military installations are placed close to the civilian population as was the case in the Vietnam war, when anti-aircraft defences were set up in Vietcong villages, the adversary may only use "smart" weapons, which are less common and more costly than conventional weapons. Designed to ensure greater precision and less risk to crews and to avoid collateral damage, these weapons' relative scarcity and high cost means that they are reserved for surgical or high-precision air strikes. As a result they are deployed very infrequently; during the Gulf war this type of weapon was used in only 7% of cases.

Air warfare in the San Remo Manual

Between 1988 and 1994 a group of jurists and naval experts drew up the San Remo Manual on International Law Applicable to Armed Conflicts at Sea.[23]

Nowadays it is difficult to conceive of naval operations without the participation of aircraft. Therefore, even though the Manual does not deal with aviation as such, it does look at aerial activity in conjunction with naval operations, and its definitions, classifications and recommendations may be extrapolated to hostile aerial activity. Although the San Remo Manual does not make any surprising affirmations, it is a very useful and practical text for studying the role of aviation in naval operations. In this connection, attention should be drawn to its classification of aircraft into four categories — military, auxiliary and civil aircraft and civil airliners — and to the way in which it deals with each category.

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[22] Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict, 1954.

[23] International Institute of Humanitarian Law, *San Remo Manual on International Law Applicable to Armed Conflicts at Sea* (Louise Doswald-Beck, ed.), Grotius Publications, Cambridge University Press, Cambridge, 1995.

Some instances of belligerent aerial action

Anti-city strategy/blitz

This was used by both sides during the Second World War, in particular by the Germans and the British. The strategic justification for the practice was given by the Commander-in-Chief of the Royal Air Force Bomber Command, Air Marshal Sir Arthur Travers Harris, who might be referred to as the father of what is now known as the anti-city strategy. A famous example of this was the "Thousand-Bomber raid" on the city of Cologne in May 1942, which destroyed 242 hectares of the city centre, in response to the German blitz over the city of London.[24]

The strategic analysis was based on the following premises:

— what England needed to invade the continent at the time was 15 armoured divisions and 70 other divisions;

— Bombing German cities in the Ruhr would force the fighters of the *Luftwaffe* to defend the heart of Germany, thereby reducing their presence on other fronts, especially the Russian front;

— German anti-aircraft batteries were multi-purpose, being used also against armoured cars and other vehicles. The bombing of the major German cities meant that they would have to be withdrawn from the front and deployed around those cities.

In examining these events in the light of international humanitarian law, it should be borne in mind that during the Second World War there was no agreement, treaty, convention or any other instrument governing the protection of the civilian population or civilian property, as the Conventions then in force dealt only with the protection of the wounded and the sick on the battlefield and in naval warfare, hospital ships, the laws and customs of war and the protection of prisoners of war.

The El Dorado Canyon operation

This bombing operation was carried out by the US Air Force and the US Navy on 14 and 15 April 1986 against Libyan military targets such as the Baz Azizzia headquarters of the Libyan armed forces, the training camp for terrorist commandos in the port of Sidi Billal and the military zone of the Tripoli airport. Leaving aside the legality or otherwise of the

[24] *Enciclopedia de aviación y astronáutica, op. cit.*, Vol. 4, p. 672.

air raids and of crossing the "line of death" established by general Khadaffi along the 32°-30° parallel, the operation is mentioned in this article because the tanker aircraft that took off from British bases were accused by some sectors of the media of having overflown the airspace of a neutral country, that is, Spain.

The facts were actually quite different, since both the refuelling, which took place over the south-western United Kingdom and Cape San Vicente in Portugal, and the route taken to the targets and the return flight were outside Spanish airspace. It should perhaps be mentioned that a Spanish aircraft from the Albacete air base intercepted a US plane that had gone off course, some 60 miles to the east of Valencia, and that one US plane made an emergency landing at the Spanish base of Rota as one of its engines was overheating.

The Gulf war: Desert Shield and Desert Storm

From the start of operation Desert Shield, the High Commands benefited from the services of legal officers whose role was to advise commanders on matters relating to operational law. During the second phase of the war, the so-called *operational lawyers* were always at the side of the commanders, with at least the rank of group leader, advising them as to the choice of targets and even as to the degree to which the targets should be neutralized.[25]

Operation Deny Flight in the former Yugoslavia

The commander of the Fifth Tactical Allied Air Force has permanent access to specific and case-by-case advice on the law of war given by an operational lawyer, who attends all briefing sessions held to study and analyse the target to be hit and the recommended degree of neutralization or destruction.

Conclusions

To sum up, it may be said that air warfare, by definition, employs violence and therefore claims victims. On account of the first feature, it must comply with the law of war and with the laws and customs of war. On account of the second, it must observe international humanitarian law

[25] Lt Col. John G. Humphries, USAF, "Operational law and the rules of warfare in operations Desert Shield and Desert Storm", *Airpower Journal*, Winter 1994, p. 51.

by protecting the victims of the conflict and refraining from attacks on protected persons.

Although there is no specific body of law devoted to air warfare, as there is in the case of war on land and at sea, there are rules such as the Hague Regulations and Protocol I additional to the Geneva Conventions, which contain pertinent restrictions, prohibitions and guidelines.

Furthermore, to be legal, hostile aerial operations must comply with the four principles of humanitarian law: limitation, military necessity, humanity and proportionality.

Similarly, all the rules of customary law apply to air warfare, as do the extrapolations that can be made on the basis of comparative law.

Finally, although it is not part of treaty law, the San Remo Manual can shed a great deal of light on the use of aircraft at sea. We may therefore conclude by saying that the lack of regulations governing aerial activity does not hinder the application of the law of war to hostile aerial operations, nor do any such operations fall outside its scope. Even if it might seem desirable to draw up a specific body of rules, therefore, such a move does not seem necessary. On the contrary, there is the risk that if the new rules were too specific or restrictive they would not receive the support of most countries, and if they were not specific the existing law of war would be sufficient.

Milestones in aerial operations

24 June 1783	The Montgolfier brothers, Joseph and Etienne, go up in a balloon
23 September 1870	First belligerent operation using a balloon, during the Franco-Prussian war
29 July 1899	First Hague Peace Conference: prohibition on bombardment from balloons
7 December 1903	Orville Wright's first flight in Dayton, Ohio
1 November 1911	Lt Gavotti bombs the Ain Zara oasis during the Italo-Turkish war
20 August 1914	Lt Watteau and Sgt Breguet carry out a reconnaissance flight over the Marne
5 October 1914	Sgt Frantz and his mechanic Quenault shoot down a plane during the battle of the Marne
22 November 1920	ICRC asks for a specific set of rules pertaining to air warfare
20 February 1923	Draft code governing air warfare