

Reflecting on Russia's Statement Considering Commercial Satellites as Military Targets

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I. Introduction

In a [statement](#) read on October 26, 2022, at the United Nations General Assembly, the Deputy Head of the Delegation of the Russian Federation - speaking in a discussion relating to the disarmament of outer space - denounced an “extremely dangerous trend”, which appeared on radar only in the months of the recent conflict in Ukraine: the use, by the USA (and its allies), of *civil infrastructures and objects* for purely *military purposes*.

And the warning addressed to these States, apparently 'unaware' of the effects of their conduct, is easily anticipated: “[q]uasi-civilian infrastructure may become a legitimate target for retaliation”.

Such civilian infrastructure refers to satellites like *SpaceX's Starlink*, a “high-speed and low-latency [...] Internet service made possible through the world’s largest constellation of highly advanced satellites operating in a low orbit around the Earth”. Among *Starlink's* most renowned customers are none other than the Ukrainian armed forces, which since the first few months following the Russian invasion, received about 20,000 devices from *SpaceX*, against a cost of more than 100 million US dollars for 2022 alone (a cost that, now, the company would like the Pentagon to bear). In addition to *SpaceX* satellites, companies that sell images from space must also be mentioned (to private individuals and even to government bodies, *ça va sans dire*), among which is *Maxar Technologies*; due to their technology, the world has been able to look at what is happening on Ukrainian territory, and that Ukrainian forces manage to keep track, almost in real-time, of the situation. The debate around these fundamental space infrastructures has intensified in direct proportion to their expansion in recent years. This contribution limits its analysis to *Starlink*. The infrastructure presents itself to the world as a 'constellation' of satellites: currently, there are around 3000, but they are estimated to reach 12,000 in the next four years.

So far, commentators have discussed the *inherent risk* in launching and stationing in orbit constellations and mega-constellations. That responsibility, at the international level, falls, as is known, on the State of nationality of the space object, also for activities conducted by 'non-governmental entities' per Article VI of the Outer Space Treaty(OST). In addition, the launch State assumes responsibility for the damage caused to other objects or people, both in space and on Earth (Art. VII of the OST and Art. II, III, IV of the Liability Convention).

The Russian statement, however, does not express concern about accidental collisions or liability issues. If anything, it announces its intention to proceed, if necessary, with the *intentional* shooting down (or in any case with the neutralization) of satellites: in other words, with the conduct of military manoeuvres in the "fourth domain" of hostilities. The creation of space *debris*, where such a future operation would take place, would undoubtedly congest an already crowded 'environment' with the risk of exceeding that critical threshold of debris which marks the exponential increase of masses in mutual collision (as predicated by the Kessler Syndrome, see here).

II. The Legality of the Russian Declaration under the Laws of Armed Conflict

In this section, this contribution limits itself to international law applicable to armed conflicts or international humanitarian law (“IHL”) (with only a few forays into the *jus ad bellum*). In their [2019 Challenges Report](#), the International Committee of the Red Cross stated that IHL would apply to any military activities conducted in space during an armed conflict.

The answer must be sought, particularly in the principle condensed in [Art. 52\(2\)](#) of the First Additional Protocol to the Geneva Conventions (“Protocol”), which states that only 'military objectives' can be made the object of an attack. This rule has also crystallized itself into [customary IHL](#). Article 52(2) lists four criteria to determine what constitutes a military objective: nature, location, purpose and use. In this case, *Starlink* has a civil nature, location and purpose; however, it is being used by the Ukrainian forces to further their war effort.

This circumstance leads us to land on the widely debated theme of “[dual-use objects](#)”, i.e. objects capable of serving civilian and military interests. In this regard, satellites are the *dual-use object* most mentioned in the illustrative lists of this category: due to the costs associated with the launch and maintenance in orbit of these devices, and therefore the need to avoid duplication, they are employed for both purposes for decades ([Grimal and Sundaram](#), p. 54). Hence, the number of satellites managed by State military apparatuses is considerably [lower](#) than those owned by private entities. In practice, to ascertain whether the 'civil' or 'military' side of a specific object is predominant, reference is made to the contribution provided by the object to military operations, which will have to be verified *hic et nunc* (see [Commentary](#), p 636).

The *dual-use use* of the constellations is a necessary condition, but by itself insufficient, for them to be considered military objectives. The second requirement imposed by the provision mentioned above must also be satisfied, i.e. the achievement of a defined military advantage (which makes it possible to exclude the legitimacy of attacks likely to offer only hypothetical or generic benefits): the neutralization—permanent or temporary—of satellites which ensure the communications of the troops 'on the ground', as well as the constantly updated 'vision' of portions of territory occupied by the adversary, is undoubtedly likely to ensure such an advantage.

This, however, [does not automatically imply](#) that attacking such (military) targets is *always permissible*. The precautionary rules condensed in [Article 57](#) of the Protocol are highlighted, according to which those who plan or arrange an attack must choose means and methods to avoid or at least minimize damage to civil goods and refrain from conducting an attack likely to cause collateral damage to civilian objects. The “golden

rule” (see Commentary, p. 684) in taking such precautions aims to reduce collateral damage to people and things as much as possible, using the maximum feasible diligence. This principle is also crystallized in customary IHL as the principle of proportionality.

In other words, once it has been ascertained that the object in question qualifies as a military objective *and* that its neutralization ensures a definite military advantage, it is necessary to 'balance' this advantage with the collateral damage to civilians and objects (see Commentary, p. 637). This balancing act—an already delicate operation in itself and 'very delicate' in the microphysics of armed conflicts—can lead to unexplored scenarios in the 'fourth domain'. Destroying one or more satellites can have a significant impact—as well as, for some satellites, on road traffic and maritime and air navigation—on the ground telecommunications network.

Outer space is, for all the reasons illustrated above with reference to *debris*, an 'environment' at risk, protected—even before international standards on space and the environment—by the rules and principles of IHL. Art. 35(3) and Art. 55 of the Additional Protocol prohibit weapons and methods of warfare which result in "widespread, long-term and severe" damage to the natural environment. Commentators have depicted substantial unanimity in deeming this rule applicable to extra-atmospheric space. 'Destroying' a satellite, due to a kinetic impact with unique structures, can cause 'collateral damage' to the space environment and the human activities in it. Such activity is excessive and in contrast with the norms of IHL. The risks to the space environment have been known for years. Moreover, it is worth noting that the prohibition contained in Art. 35(3) is absolute, i.e. not admitting any reconciliation in the name of the principle of proportionality. Therefore, if (future) Russian conduct were to take the form of attacks of this kind, it would be in contravention of the existing norms of IHL.

III. Legality of Retaliation

The Russian statement seems to invoke a second level of interpretation due to the use of the term 'retaliation'. It is an expression – adopted by Russia 'in the original language' – which presupposes the commission of an international offense (including, precisely, the *targeting* of targets in space with kinetic ASATs). The premise, therefore, leads us to ask ourselves: could a possible Russian offense be justified as a reprisal or retaliation?

In the context of hostilities, it brings to mind the institution of retaliation or a form of countermeasure involving the use of force. Generally, these countermeasures clearly contrast the prohibition of the use of force enshrined in Art. 2(4) of the UN Charter; in international humanitarian law, retaliation—although traditionally admitted in the conduct

of hostilities—is today considered by many *tout court*, or in any case (and as customary law imposes) prohibited against protected persons and objects and, for the remaining instances severely limited.

The objective of a countermeasure, in all its forms, is to bring the injuring State back to obedience to the primary rule that is assumed to have been violated. Only that those conducts are not 'cleansed' of their illicit nature aimed at 'punishing' the State which committed the offence. Furthermore, retaliation is permitted only in cases of a "serious violation" of the norms of the *jus in bello* (i.e. of conduct liable to be classified as a 'war crime') and not as a reaction to *any* norm, which confirms its exceptional nature, due to the derogation it entails from the prohibition of the use of armed force. In this case, if Russia wanted to justify the shooting down of a constellation of satellites as 'retaliation', it would have to be able to demonstrate that it has suffered a "serious violation" of the rules of *jus in bello*. It is true that, since the beginning of the conflict, there have been rumours and a UN Commission reporting possible crimes committed by members of the Ukrainian armed forces, so it would not be surprising if, after reporting potential crimes in progress, Russia attacks one or more satellites to "bring Ukraine into obedience", including using kinetic ASATs.

Even if this were the case, however, this measure would still not be acceptable since a primary rule forbids this type of action precisely. Article 55(2) of the Additional Protocol states that attacks against the environment, even in cases of reprisal or retaliation, are prohibited. The rule is constructed in very general terms, forbidding any act of violence against the natural environment *tout court*, even if its harmful effects were produced indirectly. In such a scenario, an attack on a constellation of satellites would indirectly result in an attack on the extra-atmospheric environment. It is undeniable that, given the amount of *debris* that will be produced and that of debris already placed on the earth's orbits, the kinetic attack will undoubtedly end up damaging the environment.

In the compelling words of the Commentary, "this is a matter not only of protecting the natural environment against the use of weapons or techniques deliberately directed against it, nor merely of protecting the population and the combatants of the countries at war against any of these effects, but also one of protecting the natural environment itself" (p. 410). Although the correspondence to the customary law of this provision is questioned by some (compared to a practice that is not unanimous: see here for the very recent *Draft Principles on the protection of the environment in relation to armed conflicts* adopted this year by the International Law Commission, and in particular Principle No. 15, as well as Pantazopoulos, pp. 64 ff.), it will suffice, here, to recall that the Russian Federation has signed and ratified the Protocol, which only makes the provisions applicable to it which are of interest here.

In a nutshell: a kinetic attack on one or more satellites, in principle qualifying as military targets, and such as to generate (further) space *debris* in already crowded orbits, is not compatible with the rules of IHL, *not even for retaliation*.

IV. Concluding Remarks

The declaration thus marks a new step on the path of *escalation* between now revived 'blockades' and scenarios for the current use of the armed force that is about to materialize also in the space domain. It would be the first time: so far, several states have only *tested* kinetic ASATs, i.e. using them against their own satellites in orbit (the USA did it until 2008, China in 2007, India in 2019, and most recently Russia in November 2021; for an overview see [here](#)). Just last year's Russian test, moreover, had the effect of leading 8 States ([USA](#), [Canada](#), [New Zealand](#), [Japan](#), [Germany](#), [South Korea](#), [United Kingdom](#) and [Australia](#)) to unilaterally declare that they renounce to conduct any experiment of direct ascension kinetic ASATs. But reacting to an 'attack' on a constellation of satellites seems to be quite another matter: "any attack on US infrastructure will be met with a response ... in a time and manner of our choosing" (see [here](#) for the clear response from White House spokesman to a question concerning the Russian statement).

What is not overlooked is that the USA (and other States as well) may want to qualify as 'uses of force', as 'violations of the principle of non-interference' or even just as 'violations of sovereignty' (on which see more extensively [Ruys](#) and [Jamnejad and Wood](#)) the attacks on *SpaceX satellites*, and to adopt the necessary (counter)measures. Although very often owned by private entities, constellations have become an essential component of national security (see the recent [declarations](#) of the Deputy Commander of the *US Space Command*, for which the Russian discontent automatically means there's a security issue facing commercial companies that we need to think through in the future as we enter a potential crisis or conflict). The step to qualifying as an 'armed attack' and therefore allowing the use of force in self-defense is long, but the direction—as the last few months sadly confirm—towards an imminent escalation *seems* clear for both 'blocks'. The real question is how these blocks will deal with their conflict and whether they will work towards de-escalation.

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