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THE PRINCIPLE OF STATE RESPONSIBILITY
FOR THE INVOLVEMENT OF PRIVATE
SPACE ACTORS IN MILITARY OPERATIONS

INTRODUCTION

The military development of the space domain is intensifying, leading to the conclusion that outer space has become indispensable to military operations. This militarisation is intensifying, especially as the number of actors involved increases.¹ In this regard, the war in Ukraine provides a significant illustration of the consequences of these developments. That conflict followed the annexation of Crimea on 20 February 2014, which marked the outset of a dispute and the crystallisation of tensions whose intensity escalated dramatically with Russia's invasion of Ukraine on 24 February 2022, giving rise to an international armed conflict between the two States. It is not the purpose of this article to dwell on the legal characterisation of the situation or on the stakes and consequences of that conflict under public international law. It is nevertheless important to note that the Russian actions of February 2014 constitute a breach of public international law by virtue of the violation of Ukraine's territorial integrity. Likewise, it is now indisputable that the situation qualifies as an international armed conflict, with the result that the law of armed conflict and its attendant rules – whether treaty-based or customary – must apply and, above all, be respected.

Within this conflict, one notable feature is the significant involvement of private commercial companies providing space services (imagery, connectivity, etc.).² This observation is not entirely new; what is striking, however,

¹ PONCET 2025; VERNILE 2018: 121.

² DENNERLEY–POZZA 2025: 324.

is the scale of the services supplied. Equally noteworthy is the extent to which these private firms can wield disruptive capabilities. Among the actors variously implicated in the Russo–Ukrainian conflict are private operators of space activities.³ Two companies have been particularly prominent: Maxar Technologies and Starlink Services LLC, a subsidiary of SpaceX. Maxar Technologies, formed after the 2017 merger of DigitalGlobe and MDA,⁴ is a well-established space operator. Maxar’s principal contribution in the context of the Russo–Ukrainian conflict has been the provision of Earth observation imagery to Kiev; it was notably through such imagery that the Russian invasion was publicly documented.⁵ The images supplied by Maxar constitute essential, first-rate geospatial intelligence of fundamental importance, enabling Ukraine to monitor conditions on its territory in near real time. Complementing the services provided by Maxar, SpaceX – through its Starlink satellite constellation – has contributed to providing high-speed internet coverage. Starlink services were solicited during the war in Ukraine so that Ukrainian forces and the civilian population could benefit from the high-speed internet connectivity offered by the operator.

What is particularly noteworthy is the relationship between these private companies and the State. In public international law, one issue that arises in a dispute involving private actors is the potential attribution of responsibility to the State, particularly for the conduct of private entities. This question is especially pertinent in the present case study. With respect to the two companies mentioned above, there can be no doubt that they maintain a clear and undeniable nexus with the United States of America. Starlink, as a subsidiary of SpaceX, is linked to its parent company, which is established in the United States, where its headquarters are located,

³ DAVENPORT 2022.

⁴ News Desk 2017. For practical reasons, the name Maxar will be used in this article to encompass all activities, regardless of changes in name. Moreover, it should be noted that Maxar Technologies has also undergone a further change, renaming these two subsidiaries: Maxar Intelligence will now be known as Vantor and Maxar Space Systems as Lanteris (ERWIN–RAINBOW 2025).

⁵ ERWIN 2022.

facilitating identification of a connection between the U.S. and the private operator. The same applies to Maxar, whose registered office likewise remains in the United States. Moreover, both companies are subject to U.S. law and, in the event of litigation, submit to its jurisdiction. Authorisation requests and other procedural steps necessary for the relevant space activities are, in practice, addressed primarily to U.S. institutions and agencies, notably the Federal Communications Commission. These elements are essential for what follows, since they lay the initial groundwork for the exercise of U.S. jurisdiction over these entities.

If the activities carried out by these companies and the data they produce are essential and confirm the undeniable militarisation of outer space, this raises questions about the influence that such private actors may exert on the ‘course of the war’ and, more broadly, on international relations.⁶

The analysis in this article will focus on international responsibility and the possibility of holding States accountable under public international law for the conduct of private actors. The question of State responsibility for the conduct of private actors supplying satellite data essential to one party to a conflict originates in the Russo–Ukrainian conflict. In that context, the two private companies mentioned above, Maxar and SpaceX, were responsible for such actions. The two situations are relatively different: in Maxar’s case, there was an actual suspension of service, whereas SpaceX merely threatened to suspend Starlink services.⁷ To date, SpaceX has not taken any effective action regarding Starlink services. By contrast, Maxar’s service suspension was implemented following an order from the U.S. Government. Yet one question remains: Can a State be held responsible for the suspension of space services provided by a private actor?

⁶ Some information led to think that the cessation of intelligence sharing led to the death of four peoples. Such information needs to be taken with care as it is not completely certain (MELKOZEROVA 2025).

⁷ ZENGERLE 2025; ERWIN 2025; ROULETTE et al. 2025.

THE GROWING PLACE OF PRIVATE ACTORS IN THE SPACE SECTOR

The reflections undertaken begin from the growing prominence of private companies in the space sector and, consequently, from the expansion of the services they provide. These actors, predominantly commercial, pursue objectives that clearly differ from those of national space agencies or other governmental actors. Moreover, the rise of such private participants in space activities has led to market-dominant firms. The case of SpaceX is particularly illustrative in this regard. The market share captured by the American company – supported mainly by public subsidies – has enabled it to establish itself as an indispensable actor in launch services. The company's expansion is mirrored in the field of connectivity through its subsidiary Starlink. The substantial development of the latter marks a genuine transformation in the satellite internet access sector. The facilitated and widely accessible deployment of Starlink satellites and the corresponding network has enabled the company to provide internet connectivity to an ever-increasing number of users. Although this contribution does not address the ethical implications of such deployment, it raises critical strategic questions.

One of the major issues concerns the influence exerted by these private actors, both within the space sector and, more broadly, in international relations. The expansion of their capabilities enhances their capacity for action and raises significant questions. Moreover, although these actors remain formally attached to a specific State, their development also contributes to the emergence of State actors whose power is amplified through the growth of national private companies. Dependence on these State actors, particularly due to the influence of their domestic private sector, creates a clear distinction among the many entities involved in space activities. Furthermore, the existence of space powers benefiting from such development and influence generates and reinforces dependence on these dominant actors. These considerations are far from anecdotal, especially as the concepts of strategic autonomy and autonomous access to technologies re-emerge in current debates. They reflect broader inequalities among

States, with consequences that are often difficult to assess yet particularly problematic.

A private actor engaged in space activities is invariably dependent on a particular State and, in most cases, maintains financial and legal ties to that State. This dependence may be economic or procedural in nature. Consequently, space operators must navigate a dual layer of legal regulation irrespective of their status: domestic law and international space law. The domestic layer governs matters such as authorisations and licences, access to launch facilities, procurement, frequency allocation and management. The proliferation of national space agencies attests to the expansion of space activities, yet national regulatory frameworks must be read alongside international space law. Many principles of international space law have direct implications for domestic regimes, and compliance with both levels of law is therefore essential. International space law also enshrines the principle that States bear responsibility for the activities of their space actors, whether governmental or non-governmental. This principle underscores the need for robust, coherent national space legislation to ensure the safety and security of space operations, regulate private operators, and protect the interests of the State.

At the same time, the distribution of space capabilities among actors remains highly unequal. Even among States, some possess autonomous capabilities to access and operate in space, while others are still developing such capacities. Among spacefaring nations, the disparities are pronounced: some States merely host a space agency and rely on foreign actors to build and launch satellites, whereas others control the entire lifecycle of space systems. Several States lack any national space agency and depend entirely on external providers for launch and operational services. This asymmetry creates dependencies between States – spacefaring and non-spacefaring alike – which, while legally permissible and common in domains requiring specialised expertise and substantial investment, produce an imbalance of power in the space domain. That imbalance becomes particularly problematic as private actors assume an increasing role in military-relevant space activities.

Recent events have underscored the urgency of addressing these issues, prompting some States to pursue indigenous capabilities to avoid strategic dependence on others.

LAUNCHING STATE, REGISTRATION STATE OR APPROPRIATE ONE?

The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space (the Outer Space Treaty) establishes numerous principles and distinguishes a variety of State categories that may be implicated: the launching State, the State of registry and the appropriate State. Each category is associated with a specific set of rights and obligations. Within the 1967 Outer Space Treaty, Articles VI, VII and VIII are primarily relevant. Article VI provides for the responsibility of the appropriate State through a regime of authorisation and continuing supervision. Consequently, the appropriate State is responsible for all space activities carried out in outer space, whether undertaken by governmental or non-governmental entities, in Earth orbit or on celestial bodies. This means that all private and commercial space activities may engage the responsibility of the State under whose jurisdiction they operate. It is worth quoting Michelle D. Hanlon when she stated that: “In short, Article VI of the Outer Space Treaty goes beyond the standard of national ‘due diligence’ and makes States directly responsible for all private activities in space.”⁸ That State must therefore ensure that national entities conducting space activities comply with certain international standards, notably by establishing specific national authorisation procedures.

⁸ HANLON 2024: 236.

Article VII, for its part, establishes liability on the part of the launching State in case of damage.⁹ The notion of “launching State” therefore encompasses four possible categories, which may be cumulative, as clarified by both the 1972 Convention on International Liability for Damage Caused by Space Objects (Liability Convention) and the Convention on Registration of Objects Launched into Outer Space (Registration Convention):

The term ‘launching State’ refers to:

- (i) A State which launches or procures the launching of a space object;
- (ii) A state from whose territory or facility a space object is launched.¹⁰

The existence of these alternative scenarios implies that several different States may be regarded as a launching State. In such cases, the Liability Convention provides for the possibility of joint and several liability, which may be established in advance.¹¹

Complementarily, Article VIII of the Outer Space Treaty provides that the State of registry retains jurisdiction over and control of the space object in question.¹² Unlike the launching State, where multiple States may concurrently be held responsible, there can be only one State of registry,

⁹ “Each State Party to the Treaty that launches or procures the launching of an object into outer space, including the Moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air or in outer space, including the Moon and other celestial bodies” Outer Space Treaty, Article VII.

¹⁰ Liability Convention, Article I; Registration Convention, Article I (our highlighting).

¹¹ Liability Convention Article V.

¹² “A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body. Ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body or by their return to the Earth. Such objects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State Party, which shall, upon request, furnish identifying data prior to their return” Outer Space Treaty, Article VIII.

as specified in Article II (2) of the Registration Convention.¹³ In case of the State of registry, it is noteworthy that the exercise of jurisdiction and control is taken into consideration and therefore contributes to establishing a preferential link with the State, including from a legal standpoint. These elements may be understood as echoing the general regime of responsibility, which will be addressed in subsequent sections.

In sum, Articles VI, VII and VIII of the Outer Space Treaty, as clarified by subsequent instruments of space law, set out the general regime and highlight the principal duties and obligations incumbent upon States. Article VI focuses on responsibility by imposing an obligation of authorisation and continuing supervision on the appropriate State. Article VII addresses liability by making the launching State, or States, responsible in the event of damage. Article VIII establishes the obligation of the State of registry to retain jurisdiction and control over space objects. Although these obligations are relatively comprehensive and contribute to providing State coverage for actors engaged in space activities, the interplay among the notions of appropriate State, State of registry and launching State can at times be cumbersome.

INTERNATIONAL RESPONSIBILITY: GENERALIS VS. SPECIALIS

It should be stated at the outset that this analysis is conducted from the perspective of public international law and State responsibility and therefore excludes any consideration of liability. This article addresses the responsibility of States, not their liability. Although doctrinal developments have frequently conflated these two concepts, they remain distinct, and their conflation can generate confusion, as demonstrated by von der Dunk.¹⁴ Accordingly, this study excludes liability as understood under Article VII of

¹³ Registration Convention, Article II.

¹⁴ VON DER DUNK 1992: 363–371; CHENG 1997: 598–620; ALVARENGA DOS SANTOS 2020: 225–255.

the Outer Space Treaty¹⁵ and under the Liability Convention. Liability arises when damage occurs and concerns the consequences of that damage; by contrast, responsibility pertains to the breach of an international obligation and focuses on the wrongful act itself.¹⁶ Thus, the present inquiry is confined to responsibility as conceived in both general international law and space law, and as reflected in the International Law Commission Draft Articles on the Responsibility of States for Internationally Wrongful Acts.¹⁷ Under space law, and in particular Article VI of the Outer Space Treaty, responsibility entails an obligation on States to ensure that national space activities are conducted in conformity with applicable rules.¹⁸ This obligation requires the appropriate State to establish authorisation and continuing supervision over the activities of its governmental and non-governmental entities. Accordingly, the focus on responsibility rather than on liability is also justified by the fact that a breach of an international obligation does not necessarily give rise to damage, a condition without which liability, properly understood, cannot exist.

In the law of responsibility, it is necessary to distinguish between two categories of obligations: so-called primary obligations and secondary obligations.¹⁹ Primary obligations prescribe the conduct required of the State; they are generally obligations to act or to refrain from acting. These

¹⁵ Outer Space Treaty, Article VII.

¹⁶ VON DER DUNK 1992: 363–371. For a more detailed study on the law of international responsibility see CRAWFORD et al. 2010; KOLB 2017; BESSON 2022.

¹⁷ International Law Commission 2001.

¹⁸ “States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty. The activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party to the Treaty. When activities are carried on in outer space, including the Moon and other celestial bodies, by an international organization, responsibility for compliance with this Treaty shall be borne both by the international organization and by the States Parties to the Treaty participating in such organization” Outer Space Treaty, Article VI.

¹⁹ COMBACAU–ALLAND 1985: 81–109.

obligations are found across the instruments of public international law, whether general or special, treaty-based or customary. It is by assessing the act in question against the relevant primary obligation that the legality of the act will be determined.²⁰ When a primary obligation is breached, secondary obligations come into play, setting out the duties that flow from that breach. As Robert Kolb observes: “Primary rules are all the substantive and procedural rules of international law whose breach gives rise to responsibility. Secondary rules encompass all the new obligations or faculties which flow as consequences from the unlawful act.”²¹ The primary obligation may be contained in a variety of instruments and norms. It is therefore appropriate to invoke the maxim *lex specialis derogat legi generali*, according to which the special rule prevails over the general. In seeking to establish State responsibility for the actions of private actors supplying satellite data, space law must be treated as *lex specialis*.

Although the question persists whether space law should be regarded as *lex specialis* or as a self-contained legal regime,²² Article III of the Outer Space Treaty is a principal basis for treating space law as *lex specialis*. This view has been advanced by scholars such as Gennady Zhukov²³ and, more recently, Stephan Hobe.²⁴ Beyond merely requiring compliance with international law, Article III establishes the applicability of general public international law to space activities and, conversely, permits its application where space law is silent. The continued relevance of general international law is further evidenced by other provisions of the space law corpus, notably those governing liability. At the same time, certain space-specific rules constitute exceptions to general international law.

²⁰ There is debate as to whether it is possible to establish, in general terms, that an act is contrary to international law. On this point, see in particular ANZILOTTI 1929: 495; CRAWFORD 2003: 26; DE VAUCLEROY 2025: 35.

²¹ KOLB 2017: 7.

²² JOHNSON 2020: 127–160; HOBE 2023: 51–56; MARCOFF 1973: 5–7.

²³ “[L]e droit spatial international est considéré comme une branche du droit international général, avec les sources du droit et les sujets identiques” ZHUKOV 1978: 240.

²⁴ HOBE 2023: 53–54.

Article VI of the Outer Space Treaty, for example, effects an automatic attribution to the 'appropriate' State and thus manifests a special rule in this field. Stephan Hobe has pointed to Article IX of the Outer Space Treaty as an illustration of an inadequate provision that ought to be supplemented by international environmental law; Article IX envisages consultations where there is doubt about environmental harm caused by outer space activities, yet this specific consultation mechanism has never been implemented. The failure to operationalise that mechanism reflects both a lack of political will among States and the mechanism's structural shortcomings, which suggest the need to reinforce it with existing norms of public international law. For these reasons, space law is best understood as a branch of public international law that, while drawing on general principles, possesses distinct characteristics requiring specific adaptations. Manfred Lachs emphasised the need to develop particular adaptations to space law and the space sector when he stated that "[i]n fact the extension of international law to outer space and celestial bodies is only a first step, forming a basis for further development, the creation of special and specific rules which already have or will become necessary in the future".²⁵

The demonstration that space law functions as *lex specialis* must be understood in conjunction with the characterisation of the law of international responsibility as *lex generalis*. The latter provides the general rules applicable when State responsibility is at issue. Once that relationship is established, attention must return to the specific obligation whose breach could give rise to State responsibility. Considering the focus of this inquiry, it is therefore necessary to examine whether such an obligation exists within space law. In case of a suspension of service ordered by a government, the question about neutrality or, in another sense, indirect participation in hostilities could be raised. In any case, one of the duties of the appropriate State is to

²⁵ LACHS 1972: 15.

ensure that the conduct of actors under its own responsibility is compliant with the applicable international law.²⁶

However, it is sometimes held that, in the law of international responsibility, the initial step consists in establishing attribution of conduct even before determining whether that conduct constitutes a breach of an international obligation. Clearly, without attribution, it is impossible to engage international responsibility. For the purposes of the present analysis – since attention is focused on the hypothesis arising from Article VI of the 1967 Outer Space Treaty – one must rely on the premises already established: space law functions as *lex specialis*. It follows that the rules of space law govern the situation. In this respect, the derogatory regime of space law is particularly noteworthy, as it provides a mechanism that effectively extends State coverage to all activities undertaken by private actors. Consequently, unlike the difficulties that may arise under general international law when attributing conduct to a State, attribution here presents no conceptual obstacle, because the obligation falls directly on the State for activities carried out by its private entities. This mechanism operates as a State coverage, facilitating straightforward attribution to the State. It should be emphasised, however, that the conduct imputable to the State is confined to the duties envisaged by Article VI: the State is attributed the obligation to ensure that the private entity complies with the Treaty's provisions and to maintain a regime of authorisation and continuing supervision over the entity's activities. That conclusion does not preclude the State, under its domestic law, from pursuing a right of recourse against the private company concerned.²⁷ However, the State of registry, mentioned

²⁶ While it is out of the scope of our study, in the Starlink and Maxar hypothesis, the protection of civilians could easily be solicited, particularly, but not exclusively, in accordance with Article 51 of Protocol I additional to the Geneva Conventions. Protocol Additional to the Geneva Conventions and relating to the Protection of Victims of International Armed Conflicts (Protocol I), Article 51.

²⁷ Such provision already exists under various national laws, see for example Article 11, Authorization of Space Activities and the Establishment of a National Space Registry (Austrian Outer Space Act 2011); Article 15(1), Belgian Law of 17 September 2005 on the Activities of Launching, Flight Operation or Guidance of Space Objects; Article 10(3), Cypriot Space Law of 2023 [93(I) 2023]; Part 6, Danish Outer Space Act 2016; Article

in Article VIII, referring to the obligations of jurisdiction and control, could serve as an indicator to find the appropriate State responsible allowing to facilitate the attribution.²⁸

AN ANNOYING LEGACY FROM THE PAST?

The question regarding the derogating regime of attribution of space law is not out of interest. On the contrary, as it facilitates an attribution to States, it is necessary to question whether the regime is still relevant or just an untouched heritage. The current regulatory regime applicable to private enterprises conducting activities in outer space is the legacy of a significant debate between American and Soviet representatives.²⁹ Initially, the parties were divided over whether non-governmental actors should be permitted to undertake space activities: the United States advocated in favour, while the Soviet Union opposed any such involvement. Through negotiation a compromise emerged, embodied in Article VI of the 1967 Outer Space Treaty, which establishes a regime of authorisation and continuing supervision for activities undertaken by non-governmental entities, including private companies.

By opening the door to private actors, the treaty's negotiators likely did not foresee the contemporary scale and complexity of commercial space activities. The gaps in space law, particularly with respect to private operators, are largely attributable to the inherently reactive character of legal development. Had the Soviet position prevailed and private space activities been prohibited, questions of State responsibility for those activities would not have arisen. Yet the present regime is among the most protective for private operators and for all participants in space activities. By providing,

14, French Space Act 2008; Article 11(2), Greek Law 4508/2017; Article 18, Portuguese Decree Law n°16 2019, of 22 January 2019; Article 16(4) Slovenian Space Activities Act 2022.

²⁸ MARCHISIO 2010.

²⁹ HOBE et al. 2009: 104–106; VON DER DUNK 2011: 3–28; VERNILE 2018; ÇAKIR 2019: 377; HANLON 2024.

as a general rule, for State responsibility for actions undertaken by non-governmental actors, the Outer Space Treaty creates a form of State coverage that constitutes an exception within general public international law. Whereas, under general international responsibility law, it is necessary to demonstrate a link of affiliation between a private actor and the State in order to attribute responsibility, that link is effectively presumed under space law. This ease of attribution is, however, tempered by the multiplicity of concepts that determine which State is to be engaged (e.g. State of registry, launching State, appropriate State). Attribution of responsibility is, therefore, in certain respects, simplified, and the possibility of establishing joint responsibility can facilitate legal analysis. Responsibility attaches to the State for two reasons: first, by virtue of the treaty regime itself; and second, because national authorities must be engaged to authorise and enable a private actor to conduct space activities. In effect, the State functions as the guardian of private actors not yet deemed capable of operating in space without oversight. Although a private actor may, in practice, undertake measures without prior consultation with the appropriate State, the State retains the power to suspend authorisations and to take the measures necessary to restore legality. Private actions are thus always subject to, at least tacit, State authorisation, and the State preserves remedial powers in case of disagreement. The regulatory dynamic therefore operates on two levels – international and domestic law: the former lacks coercive enforcement, while the latter possesses such powers. States thus have, at least under domestic law, the instruments required to ensure compliance by their private enterprises. The enduring question remains whether capacity translates into will; contemporary international relations demonstrate that some States disregard international rules and act solely in pursuit of power. The problem, therefore, lies less in the legal rules themselves than in their implementation by human actors.

CONCLUSION

In conclusion, it is clear that the attribution regime established by space law tends to facilitate the engagement of State responsibility. States bear a fundamental obligation in the context of space activities: ensuring that the entities for which they are accountable comply with the law. Consequently, if a private company acts in a manner that appears contrary to international law, the State may, in principle, incur responsibility. Since the State must exercise continuous supervision over entities conducting space activities, it is the breach of this supervisory obligation that could be invoked to justify the State's responsibility. A private actor's failure to comply with international law would therefore implicate the relevant State, as the latter would have failed to fulfil its duty of oversight. However, the absence of precedent hinders a comprehensive understanding of the mechanisms at stake and of the practical effectiveness of the State's supervisory duty in such scenarios.

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