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LEGALITY OF TARGETING SATELLITES UNDER *JUS IN BELLO*: SPECIFIC FOCUS ON NON-KINETIC ASAT WEAPONS

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Abstract

Purpose – Satellites are attractive military objectives due to their trajectorial predictability and essential functions they provide to military operations. In the last 13 years, at least three States (namely, USA, China and India) have successfully conducted kinetic anti-satellite (ASAT) missile tests which significantly increased amount of low-Earth orbit space debris, some of which are still orbiting and pose threat to space assets (Miglani, 2019, Wolf, 2007). All of these ASAT weapon tests were conducted against the self-owned space assets of the state conducting the test, therefore, these events did not trigger application of the law of armed conflict (*jus in bello*). However, that does not mean that legal evaluation of these tests, especially in terms of *jus in bello,* is practically insignificant, bearing in mind that technical destructive capabilities are already present and legitimacy of the use of these weapons is not evident. Indeed, some authors have already stressed out difficulties of legitimizing kinetic ASAT weapons, or, to be more precise, armed attacks against space assets. It has been argued that kinetic ASAT attacks in some cases could hardly fit principle of proportionality due to unpredictability of the amount of space debris and secondary collateral damage a blast-generated space debris could potentially cause (Stephens and Steer, 2016) or even attacks themselves in some cases might be indiscriminate in nature (Koplow, 2009). It could be observed that legitimacy of ASAT weapons is questionable mainly due to effects of kinetic attacks, but there are weapons, which aim to jam communication systems or cause malfunction with directed energy without generating space debris, except probably one inactive orbiting satellite. Therefore, most of the arguments applicable to kinetic ASAT attacks may not be applied to non-kinetic ones. In this article, the author argues that the use of non-kinetic ASAT weapons in certain conditions is hardly compatible with general principles of *jus in bello*, especially rules of targeting. The purpose of this article is to analyze whether the use of non-kinetic anti-satellite weapons during armed conflict is in accordance with *jus in bello* and, if not, what are conditions of their legitimate use.

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Design/methodology/approach – this piece of research is based on information analysis, linguistic, systemic analysis and analogy methods. Research covering aspects of the law of outer space warfare will be analyzed and systemized while linguistic method is a helpful tool to interpret statutory rules governing weaponization. Analogy method is used to disclose definition of non-kinetic ASAT attacks using arguments applied to cyberattacks.

Finding – the use of non-kinetic ASAT weapons has limits under *jus in bello*.

Research limitations/implications – research is limited to non-kinetic weapons. This article does not disclose detailed technical aspects of non-kinetic ASAT weapons. It only highlights capabilities and function of these weapons and legal implications that the use those weapons against objects in outer space. Protection of persons under *jus in bello,* including targeting rules related with humans as targets, is not the object of this article.

Practical implications – since kinetic and non-kinetic space weapons are already present and still being developed, this research could contribute to determine legal boundaries of satellite attacks in practice.

Originality/Value – the focus on non-kinetic ASAT weapons is novel, since most of the research involves legal issues related to the effects of the use of kinetic ASAT weapons.

Keywords: *jus in bello,* non-kinetic ASAT weapons, law of war, distinction, precaution in attacks.

Research type: research paper.

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