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THE UNITED NATIONS' RESOLUTION 2325 “NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION” AND ITS ROLE IN PREVENTING TERRESTRIAL-BASED WMD UTILIZATION TOWARD ORBITING SPACE OBJECTS

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ABSTRACT

The 2016 United Nations' Resolution 2325 “Non-proliferation of Weapons of Mass Destruction” manifests one of the greatest challenges for humankind in relation to preventing a global catastrophe, where it reaffirms that the proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security. However, regarding the continuous technological developments of terrestrial-based WMD aimed at orbiting space objects in near-Earth orbit, it is crucial to analyze whether, and if so, how 2325 prevents their proliferation and utilization. Another relevant argument addresses the terminological factuality that, while treaty and customary law do provide some guidance on the legality of weaponization, the concept of a “space weapon” is still not clearly defined. Moreover, even though the Outer Space Treaty prohibits the placement of nuclear weapons and WMD in near-Earth orbit, installing them on the Moon or any other celestial body, or to otherwise station them in outer space, it simultaneously excludes terrestrial-based anti-satellite weapons, thus creating a legal loophole. National representatives

of superpowers, particularly of space-faring nations, are aware of the existing issue and often express their concerns toward comprehensive ASAT development and utilization. Nevertheless, the potential weaponization of outer space will not be actively recognized and accepted as an official occurrence within the international community until our current space systems are eventually utilized in order to destroy or damage another State's space object.

Key words: Space Law, Weaponization, United Nations, Weapons of Mass Destruction, Militarization.

INTRODUCTION

It is no secret that weapons of mass destruction (WMD) represent a serious threat to international peace and security, with their proliferation and utilization representing an entire complex system from multiple interdisciplinary points of view, which further makes us question what would the intentions of states, particularly space-faring nations be concerning the utilization toward extraterrestrial targets. Although various resolutions issued by the United Nations, in response, attempt to elucidate such subject matter, it is highlighted that the 2016 United Nations' Resolution 2325 "Non-proliferation of Weapons of Mass Destruction" manifests one of the greatest challenges for mankind in relation to preventing a global catastrophe. It reaffirms that the proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security. Hence, we must adapt our response to the changing nature of the threat, where 2325 (2016) is a significant step. It strengthens the resources at our disposal and, in particular, covers the risks of the growing exploitation of technological, scientific and commercial advances for the purposes of proliferation. It identifies how important it is that we focus more on the financing of proliferation and the safeguarding of sensitive materials, and on instituting rigorous controls on the export of such materials. (Delegefrance, 2018) However, given the continuous technological developments of terrestrial-based WMD aimed at orbiting space objects in near-Earth orbit, it is crucial to analyze whether, and if so, how 2325 prevents their proliferation and utilization. In addition, even though the Outer Space Treaty (OST) prohibits the placement of nuclear weapons and WMD in orbit of Earth, installing them on the Moon or any other celestial body, or to otherwise station them in outer space, Article IV seems to exclude terrestrial-based anti-satellite weapons (ASATs). The simple consideration and possibility of such harmful acts represents a serious threat to international peace and security among space-faring nations, let

alone manifesting them in practice for military-related objectives, as well as potential objectives of space terrorism.

ANALYSIS

While 2325 unequivocally concludes that the proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security, it primarily focuses on terrestrial-based weapons. On the other hand, Article IV of the OST seemingly emphasizes the legislated limits of utilization in relation to extraterrestrial-based weapons, by stating the following:

“State Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner” (United Nations, 2002)

However, the concept of a “space weapon” is not defined within any international treaty, international customary law, or domestic U.S. law. While treaty and customary law do provide some guidance on the legality of weaponization, no comprehensive definition of a “space weapon” is provided. *The importance of defining space weapon cannot be understated; for whoever defines space weapons defines the debate of weaponization.* The question of what constitutes a “space weapon” is a matter of degree. One can theorize that a broad definition of space weapon would include terrestrial and space-based systems with the capacity to destroy, damage, or interfere with a space asset or Earth-based asset from space. Conversely, a narrow definition of space weapons would limit its application to systems in space whose designed purpose is to physically destroy or damage an object in outer space. (Mineiro, 2008, p.446) Prominent international organizations, such as the United Nations, are responsible for conducting global security, in order to guarantee mutual survival as a response to the politicization of continuous strengths of science and technology in relation to weaponry. Inaccurate terminological usage, therefore, allows for the explicit characterization of ASATs as terrestrial-based space weapons, which simultaneously represents a legal loophole in both theory and practice. The stationing of nuclear weapons or any other WMD in outer space or placement of such weapons in orbit are both prohibited under the 1967 Outer Space Treaty (OST), but nuclear warheads on BMD interceptors launched from terrestrial bases are not prohibited, nor is the sub-orbital transit of outer space by nuclear warheads on ballistic missiles. (Blix, 2006, p.147) Considering the spirit of the law, “the conclusion appears to be that anti-

satellite weapons are legal, *de lege lata*, but should be illegal, *de lege ferenda*.” The type of ASAT system being considered becomes critical. While there is no formal delimitation of outer space, earth orbit is most often considered outer space. Therefore, an orbital (space-based) defense would be subject to international law, where a ground-based system would not. (Johnson-Freese, 2000, p.11) Paragraph 1 of article IV prohibits deployment in space of both nuclear and other weapons of mass destruction. When one considers the operational features of a directed-energy weapon, there is little questioning that it is covered by either proscription. Although a directed-energy weapon differs from a typical nuclear bomb, which centers its destructive force at the point of detonation, it is, nevertheless, precisely the type of weapon that paragraph 1 contemplates. A nuclear weapon utilizes, for destructive purposes, energy forces released through the splitting or union of atoms. The basic atomic physics underlying a directed-energy weapon is the projection of destructive particles that have been atomically charged through the fission or fusion processes. The fact that resultant damage may not be as catastrophic as that caused by larger typical nuclear device is not determinative. Thus, as with any nuclear weapon, a directed-energy weapon is incapable of escaping the mandates of the Treaty. (Zedalis& Wade, 1978, p.466) National representatives of superpowers, nevertheless, are aware of the existing issue and often express their concerns toward comprehensive ASAT development and utilization. For instance, among the speakers in the First Committee (Disarmament and International Security), the representative of the United States said his country was especially concerned about the continued development and testing of destructive anti-satellite, or “ASAT”, systems. Although some States had advocated for space arms control measures to prohibit the placement of weapons there, their own development of terrestrially based destructive “ASAT” capabilities was destabilizing and could trigger dangerous misinterpretations and miscalculations. (United Nations, 2014) On the other hand, however, U.S. military-related objectives contain perspectives that are believed to exercise national security principles. Denoting space as a war-fighting domain is not merely a descriptive tag; it has intended normative effects. It falls in line with arguments that the United States should try to exercise domain control in space. Many who work in national security may argue that domain control is the best way to ensure adversaries do not gain the upper hand. (Steer, 2020, p.33) According to the Dictionary of Military Terms, the concept of Space Control ultimately represents the following:

“Combat, combat support, and combat service support operations to ensure freedom of action in space for the United States and its allies and, when directed, deny any adversary freedom of action in space.” (U.S. Department of Defense, 2009, p.505)

Such definition explicitly defines foreign space-faring nations as “adversaries”, implying their indirect roles as opponents to a conflict of interests regarding outer space. Furthermore, *Marcia S. Smith*, author of the Brief for Congress entitled “U.S. Space Programs Civil, Military and Commercial” of April 2003, in relation to such weapons, says:

“... DOD has a long-standing interest in developing capabilities to protect U.S. satellite systems and to deny the use of space to adversaries. For many years, anti-satellite (ASAT) weapons designed to attack other satellites in orbit were viewed as the primary means for denying the use of space to adversaries... One disadvantage of ASAT weapons is that they may create debris that could damage other satellites.” (Benkö&Schrogl, 2005, p.164)

The destruction of satellites by ASAT weapons can produce tremendous amounts of orbital debris: the destruction of a single large satellite such as a U.S. spy satellite could by itself double the total amount of large debris currently in low Earth orbit (LEO), where nearly half of current satellites reside. There are currently no international restrictions on the testing or use of military systems intended to destroy satellites. (Union of Concerned Scientists, 2008) In addition, the United Nations within 2325 displays its distress regarding the threat of terrorism which seemingly manifests one-dimensional unfolding:

“Remaining gravely concerned by the threat of terrorism and the risk that non-State actors may acquire, develop, traffic in or use nuclear, chemical and biological weapons and their means of delivery, including by using the rapid advances in science, technology and international commerce to that end” (United Nations Security Council, 2016)

The pragmatic notion of space terrorism, however, seems to advance such concerns even though it may seem as if non-State actors would face particular difficulties. While the lack of advanced mechanical and engineering experience, difficulties in acquiring or producing an appropriate WMD payload as well as problems in developing the delivery system and getting it in the right launch position are often cited as the main obstacles for space terrorists to develop their own ASATs, technological hurdles can be overcome with the help of workers for hire and launching problems could be solved by acquiring a small satellite launcher, which after certain modifications would be suitable for launching anti-satellite weapons. (Remuss, 2009) Moreover, the devastating consequences in relation to the conduct of space terrorism are equated with the destruction of national satellites by ASAT weapons by State actors in the effort of manifesting show of force. A permanent damage to satellites might lead to secondary damages as other space objects or even astronauts could be hit and damaged by debris, thus leading to a cascading effect as new collisions create even more debris. (Remuss, 2009) Taking

this in consideration, the primary space powers that currently possess ASATs are the USA, Russia and China, as well as India, where an increased likelihood of conflict or war to occur between them is possible, however, if another non space-faring nation comes to an argument with them, the likelihood of such a concept is less assumable due to the previous manifested show of force with ASAT, thus creating a supposed reputation of international dominance enjoyed by the above-mentioned group of space-faring nations.

CONCLUSION

As technology advances, we can expect to see countries increasingly seeking to challenge American military primacy in every domain, including space. The question is whether anyone would benefit from space becoming a war zone. (Farabaugh, 2019) In reality, outer space is already both militarized and weaponized, technologically speaking, with the main difference being that while the militarization of outer space is actively recognized and accepted in the international community, the weaponization of outer space is not perceived as being conducted due to its passive activity so far. Put in another way, the weaponization of outer space will not be actively recognized and accepted as an official occurrence in the international community until our current space systems are eventually utilized in order to destroy or damage another State's space object. Therefore, the international community should draw the line between militarizing and weaponizing outer space the moment when space systems that are seemingly developed for peaceful purposes, are utilized in order to damage, destroy or interfere another State's space object, particularly including foreign intelligence satellites. As for the United Nations' Resolution 2325 "Non-proliferation of Weapons of Mass Destruction", we become aware that the international community should manifest an entirely different viewpoint toward it. Given the fact that the world is becoming more and more competitive in regards to outer space, particularly space-faring nations, it can be concluded that 2325 would soon enough become extremely relevant when addressing the notions of continuous technological efforts for the weaponization and militarization of outer space. On the other hand, however, it cannot be entirely expected for outer space to simply be excluded from political and military-related objectives of space-faring nations, as it represents the final frontier for mankind, as well as the ultimate achievement of manifesting space dominance in near-Earth orbit, which is becoming frightfully evident.

REFERENCES

- Benkö, M. & Schrogl, U. K. (2005). *Space Law: Current Problems and Perspectives for Future Regulation*. The Netherlands, Utrecht: Eleven International Publishing.
- Blix, H. (2006). *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms*. Stockholm, Sweden: Weapons of Mass Destruction Commission (WMDC).
- Delegefrance. (2018). *15 December 2016 – Proliferation of weapons of mass destruction: one of the primary challenges of our times*. Retrieved from <https://onu.delegfrance.org/Proliferation-of-weapons-of-mass-destruction-one-of-the-primary-challenges-of>
- Farabaugh, B. (2019). *Space Wars: Do we really need to be militarizing space?* Retrieved from <https://armscontrolcenter.org/space-wars-do-we-really-need-to-be-militarizing-space/>
- Johnson-Freese, J. (2000). *The Viability of U.S. Anti-Satellite (ASAT) Policy: Moving Toward Space Control*. Darby, PA: DIANE Publishing Co.
- Remuss, N. (2009). *The Need to Counter Space Terrorism – A European Perspective*. European Space Policy Institute. Retrieved from <https://www.files.ethz.ch/isn/124638/espi%20perspectives%2017.pdf>
- Steer, C. (2020). *Why Outer Space Matters for National and International Security*. Center for Ethics and the Rule of Law (CERL)
- Union of Concerned Scientists. (2008). *Space Debris from Anti-Satellite Weapons*. Retrieved from <https://www.ucsusa.org/sites/default/files/2019-09/debris-in-brief-factsheet.pdf>
- United Nations Security Council (UNSC). (15 December 2016). *Non-proliferation of Weapons of Mass Destruction (S/RES/2325[2016])*. Retrieved from [https://undocs.org/S/RES/2325\(2016\)](https://undocs.org/S/RES/2325(2016))
- United Nations. (2014). *Speakers in First Committee Urge Balance of Conventional Forces in Hotbeds in Tension, Non-Militarization of Outer Space*. Retrieved from <https://www.un.org/press/en/2014/gadis3511.doc.htm>
- United Nations. (2002). *United Nations treaties and principles on outer space: Text of treaties and principles governing the activities of states in the exploration and use of outer space, adopted by the United Nations General Assembly*. New York: United Nations.
- U.S. Department of Defense. (2009). *The Dictionary of Military Terms*. New York, NY: Skyhorse Publishing Inc.
- Zedalis, R.J. & Wade, C.L. (1978). *Anti-satellite Weapons and the Outer Space Treaty of 1967*. *California Western International Law Journal*, 8, 456-482.