The conception of outer space as a peaceful, cooperative and collaborative domain is one that has persisted within the international community over the past half-century. The United Nations (UN) has continuously emphasised that the benefits tied to the exploration and use of outer space must collectively benefit the international community as a whole and not just those countries with space programmes. Here, lawyer Jonathan Lim discusses the importance of human rights in space and how the maintenance of space as a peaceful and cooperative domain can be supported by established international law principles and agreements, including the international human rights law (IHRL) framework.

The extension of international human rights into the domain of outer space represents a necessary and foundational measure, conducive to supporting the exponential pace of humanity’s development and presence in outer space, and in reinforcing and maintaining the longstanding recognition of outer space as a “shared international commons” and the “province of all mankind”.

The intersection of human rights and space can be interpreted through two means. Firstly, the use of space technologies and applications to support the realisation and maintenance of human rights obligations terrestrially, such as the use of remote
sensing and Earth observation satellites for monitoring humanitarian developments in Burma. Secondly, the extension of terrestrial human rights into space, as a means of regulating and guiding human activities in outer space. It is this second intersection which will bear significance in shaping the ethical, moral, and philosophical character of humanity’s advance into space over the coming decades.

Introducing the contemporary IHRL framework into the domain of space gives rise to several noted benefits. First, it provides an agreed standard of norms for assessing and addressing the impact of human activities in space. Second, it facilitates understanding and engagement through shared language and values. Third, it provides an architecture to convene, deliberate and enforce such standards. Finally, it provides a positive roadmap to guide decision making, and a moral compass necessary for promoting good governance and advancing the notion of inter-generational equity.

National interests
Over the last decade, states have increasingly adopted the view of outer space as a congested, contested, and competitive environment – one that more and more governments and private entities seek to utilise as the new strategic high ground in support of their national interests. There has been growing interest in utilising outer space resources for commercial benefit, as evidenced by the Commercial Space Launch Competitiveness Act of 2015 and the pending Artemis Accords. Likewise, events such as India’s 2019 Shakti anti-satellite test (ASAT) and Russia’s alleged Kosmos-2543 ASAT in July 2020 illustrate that the weaponisation of outer space represents a significant threat to present and future human activities in space.

The commercialisation and weaponisation of outer space have predicated doubts over the continuing utility of the longstanding international legal framework in space, founded around the terms of the 1967 Outer Space Treaty, which has governed the conduct and activities of United Nations member states in space over the past 53 years. This increasingly competitive and anarchic environment threatens to erode the rule of law governing the activities of states in outer space, jeopardise the longstanding spirit of international cooperation, and splinter the international rules-based order in space.

In managing the policy, political, and social challenges entailed by the rapid commercialisation and growing militarisation of outer space, the implementation of existing IHRL values and principles provides an established, coherent, and structured means of promoting good governance, reinforcing the rule of law, preserving the international rules-based order, and maintaining international peace and stability.

What are human rights?
The notion of human rights encompasses the idea of inherent, inalienable and universal rights possessed by every person, regardless of race, sex, nationality, ethnicity, language, religion or any other status. Such rights include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, along with

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The formation of these rights originated in the aftermath of the Second World War when members of the global community, horrified at the carnage wrought by two world conflicts within the span of a generation, resolved to prevent such events from ever occurring again through international cooperation.

Accordingly, this international commitment led to the creation of the 1948 Universal Declaration of Human Rights (UDHR), articulating the fundamental rights and freedoms required to ensure the inherent dignity of all human beings, and to promote “freedom, justice and peace in the world.” Over the following decades, subsequent international human rights agreements would clarify the nature of such rights, holding states parties accountable to their citizens in clarifying their obligation to respect–protect–fulfil: to respect human rights values and principles, protect human rights, and fulfil their human rights obligations in accordance with international law.

**Human rights issues in space**

The relevance of human rights in space can be highlighted through the following hypothetical examples which we may expect to encounter in the near future.

A space mining labourer living on a remote human colony situated on the Moon, who is low on funds, is presented with a new utilities bill which has arbitrarily doubled the price of water and oxygen. How can this individual survive and make ends meet should they be unable to afford the new charges for such elements critical to their survival? This may draw upon the existing Right to Water, and the emergent Right to Clean Air, requiring the authorities to ensure the availability, accessibility, and acceptability of such elements.

Additionally, a child born on a lunar colony is faced with numerous health-related issues, including osteoporosis, heart disease and impaired vision all as a result of living in a low-gravity and high-radiation environment. How will the child’s right to healthcare be met, given the need for continuous specialist medical care and the high cost of treatments? This may draw upon the existing Right to Health, whereby authorities must take steps to safeguard the child’s right to the enjoyment of the highest attainable standard of physical and mental health.

While these examples may sound fanciful, they represent plausible challenges and issues that governments, individuals, and other stakeholders may have to grapple with over coming decades as long-term human habitation in outer space, and upon different celestial bodies, becomes an increasing reality. In continuing to comply with their human rights obligations to respect–protect–fulfil, it is foreseeable that spacefaring states will be required to consider and demonstrate how they can translate their terrestrial human rights measures to the unique environment of outer space.

**Current issues**

The emergence of various social, environmental, and cultural challenges surrounding human activities in outer space highlights the relevance and need to realise the importance of human...
rights values and principles in safeguarding fundamental freedoms and common interests among the stars.

Over the past several years, entrepreneur Elon Musk has posed the notion of creating a permanent human settlement on Mars, advancing the goal of sending 100,000 explorers to live in a proposed SpaceX colony on the red planet. In January 2020, when posed with the question of costs for those wishing to live in the colony, Musk commented that “anyone can go if they want, with loans available for those who don’t have money”, further clarifying that workers will be able to “work off the loans” on Mars. This proposition raised immediate social and labour concerns, given that his idea amounted to the implementation of an indentured servitude contract, a historically inequitable arrangement and a form of forced labour which often draws allusions to slavery, and which has been banned under IHRL agreements.

Since February 2018, SpaceX’s Starlink programme has sought to construct a global telecommunications network comprised of up to 12,000 satellites in low Earth orbit (LEO). However, the immense volume of new objects to be introduced into the LEO environment has raised concerns over the long-term dangers associated with space debris and the increased possibility of collisions, while the reflective coating and high-visibility of these satellites from Earth interferes with the science of astronomy itself. These developments pose a potential challenge under the 1970 US National Environmental Policy Act given the Federal Communications Commission’s (FCC) approval of SpaceX’s applications for the satellites, and relates to the developing Right to a Healthy Environment under international law.

The protection of cultural heritage as a human right mandates the respect, promotion and protection of everyone’s right to take part in cultural life, including the ability to access and enjoy cultural heritage, and to take relevant actions to achieve this. Since 2018, this right has been realised by the UN Human Rights Council as encompassing the protection, restoration and preservation of cultural heritage in a manner that promotes universal respect for cultural rights.

Within outer space, the preservation of cultural artefacts and historical sites as an aspect of cultural heritage bears relevance to the presence of space debris orbiting Earth and historical sites on the Moon – given the presence of numerous historically significant satellites and objects in LEO and the growing risk of collisions with other space objects, and the immense historical significance of the Apollo landing sites and artefacts scattered across the lunar surface. Drawing upon the idea of cultural heritage as a human right supports the protection and preservation of these historical artefacts and sites for future generations.

Connecting space law to human rights

Establishing the connection between IHRL and international space law provides the formal and legal basis through which the international community may introduce and uphold existing international protections, rights, and obligations within the context of space. Presently, the opportunity falls upon states parties to both the IHRL and core international space law agreements, who may elect to extend human rights into the domain of space through several means.

Firstly, under the Outer Space Treaty, Article III references that outer space activities shall be conducted “in accordance with international law”. The onus thereby falls upon states to clarify how IHRL applies within the context of space activities, and to take resolute action in promoting new international customary practices and creating new international agreements to address this continuing gap. Additionally, reference may also be made to the contents of the UN Charter, whereby Article 1(3) outlines that the objectives of the UN encompass “promoting and encouraging respect for human rights”.

Secondly, the extension of human rights into space may be established through the extraterritorial reach of human rights values and principles in safeguarding fundamental freedoms and common interests among the stars.

The notion of human rights encompasses the idea of inherent, inalienable and universal rights possessed by every person.
and principles. This has been established under international customary law – the UN Charter, the UDHR, and the Articles of State Responsibility – which provide that when states engage in activities beyond their borders and exert control over a set territory, they must act to ensure that they respect, protect and fulfil human rights.

Consequently, states have already taken noticeable steps toward realising the presence and utility of human rights across outer space affairs in the form of promoting sustainability. This has been highlighted under the 2030 Agenda for Sustainable Development, which has resulted in an increased interest within the international community as to how the use of space applications can support the realisation of the UN Sustainable Development Goals.

**Values and principles**

Technological advancements and the lowering cost of space activities associated with the Space 2.0 revolution will give rise to novel and unanticipated human rights concerns, existent in an era where the development of the law has often been outpaced by technology. However, in recognising the distinct physiological, technical, and legal challenges of outer space, continuing upon this status quo – the maintenance of which will inevitably come at the expense of human lives – is not an option.

It is evident that human rights offer a multitude of benefits conducive to the advancement of prolonged human habitation and activities in outer space. This includes supporting the lasting transference of universal values and ethical practices, maintaining the rule of law, the implementation of good governance principles, upholding basic human rights and human dignity and the promotion of environmentally sustainable practices.

As humanity extends its reach to the stars, the continuing relevance and importance of human rights values and principles is contingent upon promoting its inherent, inalienable universality for all peoples everywhere – the success of which necessitates the extension and evolution of human rights universally across the expanse of outer space.

**About the author**

Jonathan Lim is an Australian lawyer, geopolitical analyst, and Project Co-Lead of the Jus Ad Astra Project - a legal project focused upon the analysis, development, and adoption of human rights values and principles across outer space for the benefit of humanity. Jon holds a Juris Doctor and Bachelor of Arts from Monash University, and currently works as a Solicitor at WiseLaw, a specialist cyberlaw firm in Melbourne, Australia. He is a Young Leader Fellow with Pacific Forum CSIS, and Special Advisor to the SGAC Space and Cybersecurity Project Group.