

# Outer space is not the 'Wild West': There are clear rules for peace and war

August 18 2022, by Kuan-Wei Chen, Bayar Goswami, Ram S. Jakhu and Steven Freeland

---



Credit: AI-generated image ([disclaimer](#))

The release of the [first images taken by NASA's James Webb Space Telescope](#) will inspire generations with the infinite possibilities that outer space holds. Clearly, we have a responsibility to ensure that only peaceful, safe, sustainable, lawful and legitimate uses of space are

undertaken for the benefit of humanity and future generations.

In pursuit of this, over the past six years [McGill University and a host of collaborating institutions around the world](#) have been involved in the drafting of the [\*McGill Manual on International Law Applicable to Military Uses of Outer Space\*](#).

In August, the [first volume of the McGill Manual](#) was published. It contains the 52 Rules, adopted by consensus by the group of experts. The rules clarify the international law applicable to all [space](#) activities conducted during peacetime and in times of tension that pose challenges to peace.

## **Growth of space infrastructure**

Since the [beginning of the Space Age 65 years ago](#), we have witnessed tremendous strides in [space exploration](#) that [have benefited life on Earth](#). Research into space technologies [inform many of our modern conveniences](#). We [bring back and study mineral samples from asteroids](#).

For decades, we have used [satellite technologies for positioning, navigation and timing](#). The United States' global positioning system—of which there are [Chinese, European, Russian, Japanese and Indian variants](#)—is the backbone for essential applications such as [emergency search and rescue](#), [precision farming for food production](#), [air traffic navigation](#), the [security of the financial and banking system](#), and the synchronization of time across cyber networks.

Our increasing reliance on space infrastructure makes modern economies increasingly vulnerable to the impacts of accidents, as well as unlawful and irresponsible acts affecting the exploration and use of space.

## Space on Earth

In 2009, there was a communications blackout over North America after an accidental collision between a [defunct Soviet satellite and Iridium communications satellite](#). This was a stark reminder of how vulnerable Earth operations are to events in space.

Driven by geopolitical tensions, [several governments have tested anti-satellite weapons](#) that leave behind a [trail of space debris that will remain in orbit for decades, or even centuries](#).

Space debris poses a grave danger to other functioning space objects, not to mention to people and property on the ground should pieces fall to Earth. This month, China [launched several ballistic missiles that reached 200 kilometers above sea level](#), potentially threatening satellites that operate in low Earth orbit, which represents [prime space real estate used for crucial communications and remote sensing worldwide](#).

Space systems are not just vulnerable to missiles, but may be interfered with or destroyed through other means such as [lasers, spoofing, jamming and cyberattacks](#). The [human costs and consequences of a conflict in space could be devastating beyond contemplation](#).





Space Shuttle Columbia's STS-4 mission, launched from the Kennedy Space Center in 1982, carried military missile detection systems. Credit: NASA/Unsplash

## **Affirming the law**

As countries and commercial space operators study how to [explore and use the moon and other celestial bodies for valuable resources](#), we need to understand that outer space is not a lawless "Wild West." In fact, there is a clear body of fundamental legal principles that have applied to all space activities for many decades.

Since the 1957 launch of the first artificial satellite into Earth orbit (Sputnik I), [there has been clear consensus](#) that outer space, planets and asteroids must be explored and used in accordance with international law, including the [United Nations Charter](#).

These foundational principles are elaborated in [a series of United Nations treaties on space law](#) subscribed to by virtually all space-faring countries. In addition, especially with the increased number of commercial and private space operators, countries are adopting [national space laws to regulate and oversee how all national space activities are conducted in accordance with international law](#).

## **Independent and impartial**

The U.S. government and others have affirmed that "[conflict or confrontation in space is not inevitable](#)." In the current geopolitical environment, it is necessary to affirm and clarify the laws that will prevent miscalculations and misunderstandings, and in turn foster transparency, confidence-building and some co-operation in space.

A significant body of international rules and legal principles applies to all space activities, including military space activities. These are, however, sometimes subject to differing interpretations that create confusion, ambiguity and uncertainty.

The McGill Manual is an independent and impartial effort [which clarifies and reaffirms](#) that existing laws are relevant and applicable to accommodate new activities and applications. These laws impose constraints on irresponsible and dangerous actions, and meet new challenges in outer space.

The manual's development involved over [80 legal and technical experts](#). They confirmed, for instance, that there is an absolute prohibition on the

testing and use of biological, chemical and nuclear weapons in space and that harmful interference with the space assets of other states is illegal. The experts also highlighted that the right of self-defense related to military space activities must take into consideration the unique legal and physical aspects of outer space.

## Peace in space

Indigenous peoples in [Canada](#) and [Australia](#), as with [many cultures and civilizations across the globe](#), have long looked to the stars for guidance and inspiration.

Governments and commercial operators in space must understand that [space is a shared global commons](#), where the activities of one country or company will have implications for everyone else. The publication of the McGill Manual marks a major milestone in supporting [ongoing international efforts](#).

These internationally agreed laws must inform peaceful exploration and co-operation in space. The fate of future generations depends on this.

This article is republished from [The Conversation](#) under a Creative Commons license. Read the [original article](#).

Provided by The Conversation

Citation: Outer space is not the 'Wild West': There are clear rules for peace and war (2022, August 18) retrieved 27 July 2024 from <https://phys.org/news/2022-08-outer-space-wild-west-peace.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.