

WELCOME TO THE FRONTIER

FROM SCIENCE FICTION TO HYPERSTITION



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INTRODUCTION

Science fiction has long imagined the chaos of a “Wild West” in the cosmos. It explores humanity’s anxieties and aspirations through speculative narratives set on planets and galaxies far beyond Earth. However, the terms “frontier” and “Wild West” are not neutral; they carry histories of colonisation and displacement that frequently erased existing cultures and rights. As we gaze toward the stars, we confront the critical challenge of ensuring our expansion into space does not replicate colonial patterns and power inequities.

The concept of hyperstition, the idea that narratives can function as “ideas that make themselves real”, suggests that our arrival in space was scripted long before the first rocket. *Welcome to the Frontier: From Science Fiction to Hyperstition* considers the friction between human ambition and cosmic ethics as it shifts from philosophical inquiries of early authors to tangible research at UNSW. It demonstrates how academics and researchers are navigating the intersection of ethics and law, highlighting the

interdisciplinary efforts required to manage our off-world future.

Welcome to the Frontier: From Science Fiction to Hyperstition invites audiences to look at the stars not just as points of light, but as territories of responsibility—realities that began as fiction and are now manifesting as hyperstition.

Image: First Humans on Mars (Artist’s Concept).
Credit: JPL, NASA.

***Welcome to the Frontier: From Science Fiction to Hyperstition* is on display in the Law & Justice Library 20 May 2026 – early 2027**

PROTECTING SKY COUNTRY: AIR AND SPACE LAW

Australia occupies a unique legal position in the governance of airspace and space. It holds two systems of reference: the millennia of sky/star knowledge built through Aboriginal and Torres Strait Islander custodianship of sky Country, alongside the more recent Western legal frameworks that evolved into air law and space law.

For many Indigenous peoples, sky Country includes everything above the treetops and beyond the reach of an outstretched hand. From the smoke rising from a fire in a yarning circle, to the treetops where birds live and travel, to the clouds where rain cycles provide life, to the stars that guide our First Navigators and into the celestial realm where Ancestors ascend, oversee and rest.

My UNSW law student research explores the extent to which Australian and international

legal systems recognise Indigenous rights and interests within airspace and space governance. I am particularly interested in the idea that many legal frameworks continue to operate on an assumption of aer/astra nullius – the notion that the sky belongs to no one – despite the longstanding custodianship Indigenous peoples hold with all Country, including sky Country.

As Australia's space industry grows, we have an obligation to ground future governance in custodianship, responsibility, and respect.

Text by Amos Taylor, 6th year student of Bachelor of Laws and Bachelor of Arts (Indigenous Studies & Film Studies). Proud descendant of the Gija & Jaru Tribes in the Kimberley WA

EXOGEOCOONSERVATION

Exogeoconservation, a term created in 2018, refers to the conservation of important geological and geomorphological (landform-related) features on celestial bodies. On Earth, the geology and geomorphology of a place gives us insight into its history – What was this environment like in the past? How has it changed over time? What once lived here? The same can be said for the geology and geomorphology of other celestial bodies, such as planets, moons, or asteroids.

Humanity is searching for evidence of life on Mars, and while none has been found yet, many exciting discoveries give us insight into its history and past environments. To better understand Mars's past, the possibility of life, and how these relate to our own evolution, humanity needs to continue studying sites that yield this information. However, during the study of these sites, damage may occur that limits future work. Plans for human missions or the colonisation of Mars will also hinder, or even destroy, our ability to search for life.

Researching the exogeoconservation of Mars is about understanding where the line lies between scientific or human progress and irreparable damage and developing methods that allow continued exploration without damaging important sites.

Text by Dr Clare Fletcher, School of Biological, Earth & Environmental Sciences, UNSW Science

AUSTRALIA'S SPACE JOURNEY

Australia has long been deeply involved in exploring space. Rockets and satellites have been launched from the world's largest rocket range at Woomera, South Australia, and the country continues to play a crucial role in American spaceflight by hosting tracking stations that support missions to this day, such as NASA's Artemis missions. Many other space activities are less well known, from university-built small satellites to intelligence and surveillance ground facilities.

Research by historians shows not just what Australia has done in space, but why it has done it — and where it might go next. This work draws on extensive archival evidence to reveal that Australia's early space efforts were significant but shaped by a strong sense of pragmatism rather than grand ambition. This challenges popular stories about space exploration as a purely utopian or visionary pursuit.

This research also connects past and present. Recent public opinion polls show, for the first time, that Australians broadly support their country's space activities. At the same time, many remain unsure about what Australia actually does in space, or what its future role might be.

Text by Dr Tristan Moss, School of Humanities and Social Sciences, UNSW Canberra

GEOPOLITICS OF SPACE LAW

Outer space is a key domain of strategic competition between the great powers. During the Cold War, this competition was between the United States and the Soviet Union. In recent years, space has become a scene of Sino-American geopolitical rivalry. The nature of this competition is multi-dimensional, including contestation over appropriate rules of International Law for outer space—in particular, the law governing space weapons.

Since 1999, China has led efforts to negotiate a treaty banning the placement of all weapons in outer space, arguing that this would fill gaps in current space law and ensure commitment to the peaceful use of space. The United States defends the current configuration, which permits placing non-WMD and non-nuclear weapons in space, except on the Moon and other celestial bodies. It opposes Chinese efforts to enshrine a blanket ban in a legally-binding treaty.

This contestation of the rules regarding space weaponisation has itself functioned as a peaceful outlet for great power rivalry; as a means by which these powers pursue and protect their national interests.

If we are transitioning to a post-law world, we stand to lose not just the international rules governing State behaviour, but an important site of peaceful inter-State competition.

Text by Dr Michelle Chase, School of Humanities and Social Sciences, UNSW Canberra

GOVERNING OUTER SPACE FOR THE BENEFIT OF ALL?

The exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development

These words, from the foundational *Outer Space Treaty* of 1967, raise pressing questions about whether space is being used for the benefit of all – or only the powerful few.

We often hear outer space spoken about in the context of a “space race” between rival superpowers, or as a future site of commercial exploitation. Plans exist for everything from mining the lunar surface or asteroids for resources, to pharmaceutical research in microgravity, to using nuclear power for interplanetary travel to Mars.

My research examines the power, politics and policies shaping the law, regulation and governance of technologies, from space to nuclear.

It is concerned with using law to address questions of equity and justice: how to balance public and private interests, reduce the space technological gap, foster international cooperation amid competition and centre the voices of Indigenous communities and Global South nations, who are often excluded from colonial and extractivist visions of space.

How we answer these questions will have far-reaching, intergenerational consequences.

Text by Dr Art Cotterell, School of Global and Public Law, UNSW Law & Justice

DISPLAY CASE 1

1. Stromatolite

Origin: Pilbara, Western Australia.

Credit: UNSW School of Biological, Earth & Environmental Sciences

Western Australia's Pilbara contains some of the world's oldest fossils, known as stromatolites. These ancient structures were built by tiny microbes billions of years ago. Because the Martian landscape is so similar to the Pilbara, scientists study these Australian rocks to learn exactly what signs of life to look for on Mars.

2. Gypsum

Origin: unknown.

Credit: UNSW School of Biological, Earth & Environmental Sciences. UNSWG0827

Finding gypsum on Mars indicates that liquid water once flowed there. This rock contains water molecules and typically forms when minerals dissolve in water and then crystallise.

Its presence suggests a habitable past environment in which underground water moved through rock fractures, leaving this mineral behind as a lasting record.

3. Field notes from Mars Desert Research Station (MDRS) analogue station, Utah, United States, 2024

Credit: Clare Fletcher, UNSW School of Biological, Earth & Environmental Sciences

Notes on EVA (extravehicular activity) to find concretions (layered spherical rocks) which on Earth sometimes preserve evidence of life and have been found on Mars without evidence of life. Note that permanent marker is used due to the difficulty of writing in a mock space suit.

4. Clare Fletcher at the Mars Desert Research Station (MDRS)

Credit: Clare Fletcher, UNSW School of Biological, Earth & Environmental Sciences

The Mars Desert Research Station (MDRS) is the largest and longest running simulated Mars surface research facility. Built in the

early 2000s and located in Utah, it hosts small research crews that carry out scientific studies in a Mars like environment. The station includes a two story habitat, greenhouse, engineering pod, science building, and observatories. In 2024, UNSW student Clare Fletcher spent two months at the MDRS for their PhD research on exogeoconservation. Their handwritten notebooks capture their daily studies as well as the problem solving required in the Mars analogue environment. These records offer insight into practices that will shape the future of human space habitation and research.

5. *The Dusty Face of Mars*, 1973

Verso of the map: *The red planet Mars*
By National Geographic Society (U.S.)
Cartographic Division
Printed in Washington D.C. by National Geographic Society.
Credit: UNSW Library. MAP024/1973/1

6. *Encyclopedia of science fiction*, 1978

By Robert Holdstock (1948-2009)
Printed in London by Octopus Books.
Credit: UNSW Library. SQ809.387603/3

7. *The snows of Olympus: a garden on Mars*, 1994

By Arthur C. Clark (1917-2008)
Printed in London by Victor Gollancz.
Credit: UNSW Library. 523.43/1

DISPLAY CASE 2

- 8. First photo of the far side of the Moon, taken by the Soviet spacecraft Luna 3 on 7 October 1959.**

Credit: NASA - Public Domain

- 9. The first test flight of a Europa-1 first stage (F1), a repurposed British Blue Streak missile, from Woomera, Australia, 5 June 1964.**

Credit: © ESA

- 10. Lunar farside chart: LFC-1, 2nd edition, 1969**

By Aeronautical Chart and Information Center
Printed in Washington D.C. by the Aeronautical Chart and Information Center.

Credit: UNSW Library. MAP023.12/1967/1

- 11. From Jules Verne to Star Trek, 1977**

By Jeff Rovin

Printed in New York by Drake Publishers.

Credit: UNSW Library. CFA 791.43615/6

- 12. One hundred years of science fiction illustration, 1840-1940, 1974**

By Anthony Frewin

Printed in London by Jupiter Books.

Credit: UNSW Library. CFAQ 741.64/3

- 13. The science fiction book: an illustrated history, c1975**

By Franz Rottensteiner

Printed in London by Thames & Hudson.

Credit: UNSW Library. SQ 823.0876/7

- 14. The space barons: Elon Musk, Jeff Bezos, and the quest to colonize the cosmos, 2018**

By Christian Davenport

Printed in New York by Public Affairs.

Credit: UNSW Library. TL789.85.A1 D38 2018

- 15. Kepler's Dream, 1965**

(originally published 1634 in Latin)

By Johannes Kepler (1571-1630) and John Lear

Printed in Berkeley by University of California Press.

Credit: UNSW Library. P 523.3/4

German author Johannes Kepler's *Somnium* (*The Dream*) is considered to be one of the first works of science fiction. It describes a voyage to the Moon to speculate on the physical challenges of space travel and how alien life might adapt to different environments.

**16. *Islands in the Sky*, 1972
(originally published 1954)**

By Arthur C. Clarke (1917-2008)
Printed in Harmondsworth by Penguin.
Credit: UNSW Library. SCL 823.9/CLA1/6 A

Arthur C. Clarke's *Islands in the Sky* presents a narrative centred on the technical realities of living on a space station, the mechanics of orbital flight, and the future colonisation of the solar system.

**17. *Space Apprentice*, 1981
(originally published 1962 in Russian)**

By Arkady Strugatsky (1925-1991) and Boris Strugatsky (1933-2012)
Printed in New York by Macmillan.
Credit: UNSW Library. S 891.734/STR/2

Published in 1962, shortly after Yuri Gagarin became the first human in space, this Soviet novel explores themes of utopian social structures, interplanetary travel and colonisation, and scientific ethics and responsibility.

**18. *The stars my destination*, 1975
(originally published 1957)**

By Alfred Bester (1913-1987)
Printed in Boston by Gregg Press.
Credit: UNSW Library. S 813.5/BES/1

Alfred Bester's *The Stars My Destination* depicts major science fiction themes such as the corporate domination of a colonised solar system and the geopolitical tensions of interplanetary war.

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