



## MYTHOLOGIES OF OUTER SPACE

Edited by Jim Ellis and Noreen Humble

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the calgary institute for the humanities

mythologies of  
**outer space**

edited by jim ellis & noreen humble

with an afterword by astronaut **robert thirsk**

**mythologies of outer space**



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The moon belongs to everyone—  
The best things in life are free

The stars belong to everyone  
They gleam there for you and me

“The Best Things in Life Are Free”

Buddy DeSylva and Lew Brown (lyrics), Ray Henderson (music)





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jim ellis

# introduction

## ideologies of outer space

**Every** culture projects its values onto the night sky, reading stories of its origins and its aspirations. There has always been life out there, if at the very least the life our imaginations have placed there: the man or the woman in the Moon, the gods, alien beings, the afterlife. As can be seen in this collection, humans have been imaginatively travelling to the Moon since at least the time of the classical writer Lucian, and, in fact, long before, in the stories of the Blackfoot, and other Indigenous peoples. The advances of Western scientific thought in the intervening years may have changed some of the ways that we think about the cosmos, but it remains an astonishingly fruitful (and revealing) site for human fantasy and exploration, as science fiction shows us.

This book originated in the forty-second annual Community Seminar of the Calgary Institute for the Humanities, which had as its theme “The Final Frontier: Mythologies of Outer Space.” Present as speakers were space archaeologist Alice Gorman, Indigenous astronomer Hilding Neilson, and science fiction expert Chris Pak. The day also featured a reading by poet Kyle Flemmer, and a screening of the short film *Afronauts*, made in 2014 by the young Ghanaian director Noutama Frances Bodomo.

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*Afronauts* begins on the day of Apollo 11's launch, July 16, 1969. A title card tells us that "The Zambian Space Academy hopes to beat the US to the moon." Throughout the film, we hear Walter Cronkite narrating the events of the Moon mission, while we see a ragtag group preparing for the launch into space of the teenaged Matha and her one-eyed cat. The film focuses on the mostly silent but determined Matha, who is encouraged by the group's leader, Nkoloso, and dissuaded by an older woman (identified as "Auntie Sunday" in the credits). At the film's climax, Matha climbs into the improbably small, rickety-looking space craft. Its ignition sequence is intercut with that of Apollo 11, and we see a firework rising into the night sky and then exploding. Auntie Sunday runs to the wreckage of the rocket and exclaims, "She's disappeared; she's gone"; Nkoloso then declares, "to the moon, let us rejoice. My little space girl has gone to the moon." The final image is of Matha in a space suit, looking over a desert or a lunar landscape.

Bodomo's film is one of a number of artistic projects based on events from Zambia in the 1960s, in the early days of the space race, which Namwali Serpell discusses in a lengthy *New Yorker* essay and fictionalizes in her novel *The Old Drift*.<sup>1</sup> In 1964, she recounts, a week after Zambia gained independence, *Time* magazine published a story about the new president, Kenneth Kaunda, and his dreams for the new country. One paragraph in the story quickly gained international attention, for reasons unrelated to Zambian independence. The paragraph mentioned Edward Mukuka Nkoloso, the director of Zambia's National Academy of Science, Space Research and Philosophy, who proclaimed that Zambia would beat the United States and the USSR to the Moon. A number of Western journalists subsequently descended on the country and print and television stories were produced; they were for the most part characterized by a mocking, incredulous tone, often implying that Nkoloso was insane.

Certainly, the details were outlandish. Nkoloso's astronauts were eleven young men, including Godfrey Mwangi, who would be the first man on the Moon, and a sixteen-year-old girl, Matha Mwamba, who would lead the mission to Mars, along with two specially trained cats. The space training that Nkoloso put his afronauts through included rolling down a hill in a barrel to experience weightlessness, and swinging from a rope on a tree, which Nkoloso said he would cut at the highest point of the swing in order to simulate freefall. He suggested that with a long enough rope, the same method could also be used to attain orbit, although he planned to use other means, the secrets of which he was keeping from the Americans and the Russians.

Serpell suggests that what the journalists failed to see was that Nkoloso was in on the joke. She argues this was most likely a sophisticated but joyful political satire, poking



fun at the huge sums of money being spent by the United States and the USSR in the name of national prestige. Which is to say, the *Zambian space academy* may have been a critique of the motives behind the Cold War space race, undertaken when there were far more urgent problems here on the ground. Nkoloso makes clear the colonial critique intended by the *Zambian space academy* in a 1964 editorial, where he explains that there would be a missionary accompanying Matha Mwamba and her two cats to Mars: “We have been studying the planet through telescopes at our headquarters and are now certain Mars is populated by primitive natives. . . . I have warned the missionary he must not force Christianity upon the people if they do not want it.” In *Afronauts*, we see Nkoloso repeating this to Matha: “do not impose Christianity on them, Matha, do not impose the nation state on them.”

Serpell writes that Nkoloso was more famous in Zambia as a revolutionary, one who was active in the independence movement. He had been imprisoned and tortured along with members of his family (others would argue that this experience of torture was the origin of a tendency toward delusion). He was a part of Kenneth Kaunda’s United National Independence Party, and it so happened that the young afronauts were recruited from the party’s youth brigade. As it turns out, Nkoloso trained resistance fighters at the same location where he trained his afronauts. So the whole thing may also have been a cover for ongoing involvement in various African independence movements.

Calgary novelist Esi Edugyan, in her book *Out of the Sun: On Race and Storytelling*, writes about the larger significance of the *Zambian space program*: “[Nkoloso] proclaimed that Matha Mwamba would be ‘the first coloured woman on Mars,’ and that ‘our posterity, the Black scientists, will continue to explore the celestial infinity until we control the whole of outer space.’ The symbolism of launching the Black body into space at a time when life on the ground was untenable is deafening” (2021, 143). Edugyan reads the episode in relation to the artistic movement called Afrofuturism: an aesthetic associated with the African diaspora that started in the 1960s with bands like Funkadelic and Labelle, and which extends into the present with the 2018 film *Black Panther*, which imagines a technologically advanced, futuristic Africa.

We can see some early stirrings of Afrofuturism in Questlove’s 2021 documentary *Summer of Soul*, which chronicles the Harlem Cultural Festival that took place in 1969. Coincidentally, the Apollo 11 astronauts landed on the Moon while the festival was happening, and journalists were sent to get the reaction of the Harlem festivalgoers, which at least in the film were largely uniform: “The cash they wasted in getting to the moon could have been

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used to feed poor black people in Harlem”; “Never mind the moon, let’s get some of that cash in Harlem”; “It’s groovy for some people but not for the black man in America”; “What’s up there on the moon? Nothing.” The Reverend Jesse Jackson sums up the response in a way that recalls Nkoloso’s possible satire: “We are living in economic colonialism based on money, where the greedy are exploiting the needy. When we are more concerned about the moon than men, somebody better wake up.”

There is a parallel movement to Afrofuturism among Indigenous science fiction writers in Canada and the United States, seen for example in Grace L. Dillon’s *Walking the Clouds: An Anthology of Indigenous Science Fiction*, and a major exhibition entitled *Indigenous Futurisms: Transcending Past/Present/Future* at the Institute of American Indian Arts.<sup>2</sup> Joshua Whitehead, editor of the Canadian Indigenous science fiction collection *Love after the End*, notes that the post-apocalyptic theme of survivors of some civilizational cataclysm having to work together to rebuild their society is what First Nations have been living in since contact: “As we know, we have already survived the apocalypse—this, right here, right now, is a dystopian present. What better way to imagine survivability than to think about how we may flourish into being joyously animated rather than merely alive?” (2020, 11).<sup>3</sup> Edugyan makes a parallel point about the tropes of science fiction when read in the context of the African diaspora: finding oneself in a strange land, being subject to medical experimentation, unable to communicate with these strange people and/or to return home. Thus, she says, “being able to imagine yourself in the future at all is a radical act in the aftermath of having your history suppressed and extinguished” (2021, 147).

How we view the Moon, then, depends very much upon where we stand, and these examples are useful for offering us different perspectives on space travel. As Noreen Humble shows, the earliest examples of fictional trips to the Moon in the Western tradition are marked by colonialist themes; in his survey of terraforming fictions, Chris Pak shows this continues up to the present. And, of course, the famous opening line from the original *Star Trek* series would declare space to be “the final frontier,” echoing the imagining of the American frontier as a space of exploration, conquest, and colonization (in spite of *Star Trek*’s explicitly non-interventionist “prime directive”). Not only does this colonialist mindset inform some of our ideas about space travel, but both Alice Gorman and Hilding Neilson show us that this has had very direct consequences on Earth, especially in the history of space exploration: the Woomera rocket testing range in Australia was established on Indigenous land that was regarded as uninhabited and unused, and a number of telescopes have been either placed on or proposed for the slopes of

Mauna Kea, a mountain held to be sacred by Native Hawaiians.<sup>4</sup> And in his 2020 State of the Union address, announcing the establishment of a new United States Space Force, Donald Trump declared that “America has always been a frontier nation. And now we must embrace the next frontier: America’s Manifest Destiny in the stars.”

The contributions that follow will explore how different cultures have regarded space and celestial bodies, how space has been imagined in art and literature, and how this has in fact affected the ways we have gone to space. At the core of the book are essays based on the talks given by the speakers at the 2022 Community Seminar. Alice Gorman, in “How We Let the Moon Die, and Why It Isn’t Dead,” looks at earlier views of the Moon as a space of life, and how our current view of the Moon as cold, dead, and inert may lead to unintended consequences for human heritage. Hilding Neilson uses an Indigenous star story, Muin and the Seven Bird Hunters, to explore the differences in Western and Indigenous approaches to the night sky, and he shows how astro-colonialism is reproducing previous colonialist impositions in the sky above us. Chris Pak looks at the successive generations of fiction about terraforming, the process of making other planets habitable by reproducing the conditions of Earth. This has become a potent fantasy for so-called tech bros like Elon Musk and Jeff Bezos, who seek to evade problems on Earth by fleeing to other planets. Finally, we include a suite of poems by Calgary poet Kyle Flemmer based on the various stages in the life cycle of stars: white dwarf, yellow dwarf, and so on.

To extend the conversation from the Community Seminar, we have assembled a series of texts, documents, and images. We include the United Nations’ 1979 Moon Treaty, which stresses that the Moon is the common heritage of humanity. Noreen Humble looks at the first fictional account of space travel in the Western tradition, which can be found in Lucian’s satiric *True Histories*, as well as its surprisingly long afterlife, influencing accounts of space travel at least into the nineteenth century, as well as in the first cinematic voyage to the stars, George Melies’s *A Trip to the Moon*. Lucian’s influence, while waning, nonetheless reaches into the present day, through a recent opera, *The Selenites*. We also include a translation of Lucian’s fictional voyage by Keith Sidwell.

The visual arts are richly represented. Naomi Potter interviews Elyse Longair about her space-inspired collages, which reassemble elements of popular space imagery to construct new landscapes of the imagination. Dianne Bos discusses her use of an archaic photographic method, pinhole photography, to imagine constellations anew. Two contributions deal not so much with outer space as with our dreams and anxieties about

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alien visitations. We include an artist statement and portfolio of photographs by M. N. Hutchinson that explore the thinking of Charles Fort and his *Book of the Damned*, an early and influential catalogue of unexplained anomalies that looked to the stars for explanations. Nancy Tousley explores the luminous projections of David Hoffos, whose installations such as *You Will Remember When You Need to Know* (1995) and *Scenes from the Dream House* (2003–8) use cinematic and pre-cinematic technologies to evoke the complex psychological terrain of alien encounters in the popular imagination.

Reflecting the book's geographic origins in Calgary, Alberta, we include a contribution celebrating the fiftieth anniversary of the University of Calgary's Rothney Observatory (where Indigenous astronomer Rob Cardinal has made a number of discoveries). Artist and University of Calgary engineering professor Marjan Eggermont discusses her participation in NASA Vine, a group that explores how biomimicry as a design philosophy can help to develop new technologies for both space exploration and the amelioration of the environmental crisis. Stefania Forlini discusses a remarkable collection in the University of Calgary archives, the Bob Gibson Collection of Speculative Fiction, consisting of over 30,000 individual items. Gibson, a local science fiction enthusiast, collected thousands of examples of early science fiction, and, most remarkably, produced over 880 hand-made anthologies. Forlini is interested in particular in Gibson's sensitivity to the edges of genre, identifying instances where science fiction might have happened, or where science blurs with fiction. It is at these moments, she writes, that we can see "a letting go of a world in order to grasp it in a new way."

Forlini's phrasing fortuitously evokes those astronauts who slipped the bonds of Earth to bring us the striking photo of our planet known as *The Blue Marble*. We are especially fortunate to have an afterword by someone who has been able to view the Earth this way more than once, Canadian astronaut Robert Thirsk. Thirsk served as chancellor of the University of Calgary from 2014 to 2018, and in his afterword he reflects on some of the main themes of this book, as well as the importance of bringing in a wide variety of perspectives on the questions raised by space travel and exploration. As just such a group, the contributors to this book perform a valuable function, broadening our understanding of the ways we have thought about space by exploring the historical and cultural contexts that have shaped our journeys, real and imagined, to the cosmos.

## notes

1. Serpell 2017 and 2019, respectively.
2. See Dillon 2012. The exhibition in question, *Indigenous Futurisms: Transcending Past/Present/Future*, curated by Suzanne Fricke, Chelsea Herr, and Manuela Well-Off-Man, ran from February 13, 2020, to January 3, 2021, at the Institute of American Indian Arts.
3. See also Nicholson 2016.
4. In addition to their essays in this volume, see also Gorman 2005 and Neilson and Lawler 2019.

## bibliography

- Dillon, Grace L., ed. 2012. *Walking the Clouds: An Anthology of Indigenous Science Fiction*. Tucson: University of Arizona Press.
- Edugyan, Esi. 2021. *Out of the Sun: On Race and Storytelling*. Toronto: House of Anansi Press.
- Gorman, Alice. 2005. "The Cultural Landscapes of Interplanetary Space." *Journal of Social Archaeology* 5 (1): 85–107.
- Neilson, Hilding R., and Samantha Lawler. 2019. "Canadian Astronomy on Maunakea: On Respecting Indigenous Rights." *arXiv preprint arXiv:1910.03665*.
- Nicholson, Hope, ed. 2016. *Love beyond Body, Space & Time: An Indigenous LGBT Sci-Fi Anthology*. Winnipeg: Bedside Press.
- Serpell, Namwali. 2017. "The Zambian 'Afronaut' Who Wanted to Join the Space Race." *New Yorker*, March 11, 2017.
- . 2019. *The Old Drift*. London: Hogarth.
- Whitehead, Joshua, ed. 2020. *Love after the End: An Anthology of Two-Spirit and Indigiqueer Fiction*. Vancouver: Arsenal Pulp Press.