**The single standard is evaluating the resolution through a decolonial paradigm. Held 19’**

(Mirjam B. E. Held, Jan 23, 2019, “Decolonizing Research Paradigms in the context of settler colonialism unsettling, mutual and collaborative effort”<https://journals.sagepub.com/doi/full/10.1177/1609406918821574>)

This pragmatic move allowed them to combine methods and thus methodologies that were previously (and still, by some scholars) believed to be irreconcilable. From a paradigm incompatibility perspective, merging Western and Indigenous methodologies is equally impossible. Can the pragmatic paradigm thus provide a framework under which transformative and Indigenous methodologies can be used in combination? Not directly. The pragmatic paradigm was constructed to provide the flexibility to make quantitative/qualitative mixed-methods research legitimate from a philosophical/theoretical point of view. Early pragmatism (in the late 19th and early 20th centuries) was a philosophical movement that emphasized research as a social endeavor ([Maxcy, 2003](https://journals.sagepub.com/doi/full/10.1177/1609406918821574)). Today, issues of power are still important to researchers who practice mixed-methods research in the context of feminist approaches (e.g., [Hesse-Biber, 2010](https://journals.sagepub.com/doi/full/10.1177/1609406918821574); [Hesse-Biber & Griffin, 2015](https://journals.sagepub.com/doi/full/10.1177/1609406918821574)) or to generally challenge dominant views of reality (e.g., [Hesse-Biber, 2010](https://journals.sagepub.com/doi/full/10.1177/1609406918821574); [Mertens, Bledsoe, Sullivan, & Wilson, 2010](https://journals.sagepub.com/doi/full/10.1177/1609406918821574)). Yet often, current practices of mixed-methods research under the pragmatic paradigm lack a true axiological stance, either overlooking or ignoring questions of ethics or value ([Biddle & Schafft, 2015](https://journals.sagepub.com/doi/full/10.1177/1609406918821574), p. 323; [Teddlie & Tashakkori, 2009](https://journals.sagepub.com/doi/full/10.1177/1609406918821574); p. 90). Research, however, is always already political ([Denzin & Lincoln, 2008b](https://journals.sagepub.com/doi/full/10.1177/1609406918821574), p. xi) and thus any paradigm that guides transformative/Indigenous research—which is inherently emancipatory/liberatory—needs to include values and let them play a formative role. Still, the creation of the pragmatic paradigm can provide a model for rejecting the “either-or” of two seemingly incommensurable paradigms. The transformative paradigm is based on a Western worldview, while Indigenous paradigms are rooted in a holistic, localized worldview. Nevertheless, they share many of their philosophical underpinnings. Another common tenet are decolonizing aspirations. These, however, are more than just another social justice issue. Decolonization is, by default, an unsettling enterprise and therefore “cannot easily be grafted onto pre-existing discourses/frameworks” as stated by [Tuck and Yang (2012](https://journals.sagepub.com/doi/full/10.1177/1609406918821574), p. 3). In the Canadian context of settler colonialism, decolonization is about land, resources, sovereignty, and self-determination ([Tuck & Yang, 2012](https://journals.sagepub.com/doi/full/10.1177/1609406918821574)); as such, it involves the creation of a new social order. Thus, it is a mutual undertaking involving the colonizer and the colonized ([Beeman-Cadwallader, Quigley, & Yazzie-Mintz, 2011](https://journals.sagepub.com/doi/full/10.1177/1609406918821574)). I suggest applying this radical interpretation of decolonization to the decolonization of research in order to advance the discussion on multiparadigmatic research spaces. Radically decolonizing research means than any decolonizing research paradigm must be developed conjointly between Western and Indigenous researchers, creating a new research framework altogether. It also means that decolonizing paradigms is not a means to an end (e.g., to provide alternative pathways to research or to make the research endeavor more inclusive and diverse), but just a small piece in the puzzle that is the decolonization project, which is ultimately a radical social reform. Decolonizing research under these premises will be an unsettling collaboration with fraught solidarity ([Tuck & Yang, 2012](https://journals.sagepub.com/doi/full/10.1177/1609406918821574)) and an unknown outcome.

**This means we must examine outer space appropriation on whether or not it benefits or harms indigenous ways of knowing AND living. If it leads to harms on indigenous knowledge systems OR harms to indigenous people on a consequential level, then you vote against it.**

1. **The role of debate is to allow students to build advocacy skills to contest oppressive structures. However, academic spaces are an extension of colonization and can subvert students activism to support state rule, and further colonization of indigenous peoples. It follows that the only way for the debate space to be a true space of advocacy-skill building is if it’s anti-colonial. Therefore, the role of the ballot is decolonialization. This is a pre-fiat argument. Moregensen 12’**

(Scott Lauri Morgensen, Dec 2012, “Destabilizing the Settler Academy: THe Decolonial Effects of Indigenous Methodologies, https://www.jstor.org/stable/pdf/41809527.pdf?refreqid=excelsior%3A481021b795737e6acb97c1288eb68fe2)

The academy forms within settler societies as an apparatus of colonization. Indigenous researchers critically engage its colonial power by practicing Indigenous methodologies: an act that also implicates non-Indigenous people in challenging the settler academy. Indigenous meth- odologies do not merely model Indigenous research. By exposing normative knowledge production as being not only non-Indigenous but colonial, they denaturalize power within settler societies and ground knowledge production in decolonization. An activist impetus thus informs Indigenous methodologies, yet "activism" typically fails to invoke their full implications. Whereas "activ- ism" in a settler society may invest social justice in state rule, decolonization anticipates that rule's end. Decolonization is activist, but activism need not be decolonizing. Indigenous methodologies arise within the larger pursuit of Indigenous decolonization, a project that Indigenous critics theorize variously as ontological, psychic, governmental, and relational.1 Indigenous methodolo- gies present what Dylan Rodriguez (referencing João Costas Vargas) calls an "urgency imperative," which answers "the academy's long historical complicities in racial/colonial genocide" by endeavoring "to denaturalize and ultimately dismantle the conditions in which these systems of massive violence are repro- duced." Such theories seek to fundamentally transform the institutional and epistemic conditions of life and thought for Indigenous and non-Indigenous people on lands where all live relationally, in ways that settler societies and their governance cannot contain.

**1.** **Settler colonialism is the root cause of structural violence, i.e. sexism, queerphobia, racism and so on. For the Europeans to take land, they needed to create internal divisions based off of identity and imported their oppressive religious norms. Kalende 14’**

(Val Kalende, Apr 2014, “Africa: homophobia is a legacy of colonialism”, https://www.theguardian.com/world/2014/apr/30/africa-homophobia-legacy-colonialism)

Most Africans don’t recognise homophobia as a colonial legacy even though before colonialism, many traditional cultures were tolerant of different sexualities and gender relations. For instance, in my tribe, the Ganda or [Baganda](http://www.uganda-visit-and-travel-guide.com/baganda-people.html), (Uganda’s largest ethnic group) women from the royal clan are addressed with male titles and may or may not be required to perform duties expected of women. More broadly, from the [Azande](http://www.gurtong.net/Peoples/PeoplesProfiles/Azande/tabid/179/Default.aspx) of the Congo to the [Beti](http://www.britannica.com/EBchecked/topic/63490/Beti) of Cameroon, and from the Pangwe of Gabon to the Nama of Namibia, there is ethnographic evidence of same-sex relationships in pre-colonial Africa. By preying on African values of inclusive difference, however, Africa’s colonisers rewrote its history, the effects of which haunt Africa to this day. Tribal chiefs and village courts of law which were traditionally the hallmark of conflict resolution were traded for a European Penal Code system [which included the criminalisation of homosexuality](http://www.nationalarchives.gov.uk/cabinetpapers/themes/before-after-wolfenden-report.htm). It is also important to stress that so-called sodomy laws would not have impacted African sexual politics without the influence of Christianity. Christianity was used to whitewash African culture as primitive and to demonise traditional interpretations of African intimacies. The bible became the credo of African morality, disordering African sexuality to missionary positions of heteronormativity (ie. the idea that heterosexuality is the only 'natural' sexual orientation). Ugandans demonstrate against homosexuality in the streets of Jinja, Uganda. Photograph: Trevor Snapp/Corbis Photograph: Trevor Snapp/Trevor Snapp/Corbis But sexuality is not all that the colonisers rewrote about Africa. European colonies were established through military conquest, perpetuated through the politics of divide and rule, and religion. The colonisers understood that to conquer Africa they had to turn Africans against Africans such that Africans would blame themselves for their divisions, most of which culminated in ethnic hostility. Amongst other things, colonial policies of divide and rule spurred ethnic tensions. For example, by dividing Rwanda along race and class, German imperialists turned the Tutsis against the Hutus. In Sudan meanwhile, British imperialists divided the Northern Muslim region from the Southern Christian region creating divisions that perpetuate [ethnic tensions to this day](https://www.theguardian.com/global-development/gallery/2014/apr/29/south-sudan-crisis-displaced-people-conflict-in-pictures).

**1.**  **Western philosophical systems were built off of violence and hence maintain it – they can not include colonized people into their moral calculi because they consider them objects and not subjects- this makes a decolonial framework a pre-requisite to others. The reason why Europeans can claim they are civilizing the natives was because they didn’t see them as people in the first place. Let’s reverse that. Quijano 10’**

(Anibal Quijano, Dec 2010, “Coloniality and Moderntiy/Rationality”, https://pybarra.weebly.com/uploads/6/8/7/0/687099/\_\_quijano\_coloniality\_and\_modernity\_rationality.pdf)

The radical absence of the ‘other’ not only postulates an atomistic image of social existence in general; that is, it denies the idea of the social totality. As European colonial practice was to show, the paradigm also made it possible to omit every reference to any other ‘subject’ outside the European context, i.e., to make invisible the colonial order as totality, at the same moment as the very idea of Europe was establishing itself precisely in relation to the rest of the world being colonized. The emergence of the idea of the ‘West’ or of ‘Europe’, is an admission of identity that is, of relations with other cultural experiences, of differences with other cultures. But, to that ‘European’ or ‘Western’ perception in full formation, those differences were primarily above all as inequalities in the hierarchical sense. And such inequalities are perceived as being of nature: only European culture is rational, it can contain ‘subjects’ the rest are not rational, they cannot be or harbor ‘subjects’. As a consequence, the other cultures are different in the sense that they are unequal, in fact inferior, by nature. They only can be ‘objects’ of knowledge or/and of domination practices. From that perspective, the relation between European culture and the other cultures was established and has been maintained, as a relation between ‘subject’ and ‘object’. It blocked, therefore, every relation of communication, of interchange of knowledge and of modes of producing knowledge between the cultures, since the paradigm implies that between ‘subject’ and ‘object’ there can be but a relation of externality. Such a mental perspective, enduring as practice for five hundred years, could only have been the product of a relation of coloniality between Europe and the rest of the world. In other terms, the European paradigm of rational knowledge, was not only elaborated in the context of, but as part of, a power structure that involved the European colonial domination over the rest of the world. This paradigm expressed, in a demonstrable sense, the coloniality of that power structure

**Contention one: Private space appropriation violates the decolonial paradigm**

**a)** **The first impact is indigenous cultural erasure.**

**Private space companies are planning massive outer space satellite constellations.**

(Aparna Venkatesan et al., Nov 6 2020, “The Impact of satellites constellations on space as an ancestral global commons”, https://www.nature.com/articles/s41550-020-01238-3)

Near-Earth space is becoming increasingly **privatized** and industrialized, with many consequences for science and humanity. In particular, the number of satellites in low-Earth orbit is predicted to grow dramatically from a couple of thousand at present to many tens of thousands in the near future due to the launch of satellite constellations planned by **SpaceX, OneWeb, Amazon and other private companies.** Each month of this year alone has brought [headlines](https://www.nytimes.com/2020/08/10/science/amazon-project-kuiper.html) of another few hundred to tens of thousands satellites being approved by the Federal Communications Commission (FCC) for launch, confirming that an astounding 100,000 satellites in the sky by 2030 is not just feasible but quite likely. These developments are not without benefits to a number of fields. The latest generation of low-cost small satellites, especially the picosatellites or CubeSats (mass ~0.1–1 kg), have already proven very [useful for scientific research](https://www.nap.edu/catalog/23503/achieving-science-with-cubesats-thinking-inside-the-box) given how inexpensive and flexible they are (see ref. [1](https://www.nature.com/articles/s41550-020-01238-3#ref-CR1) in this issue). CubeSats have the added advantage of rapid construction with off-the-shelf components. NASA’s Heliophysics Division has made use of many CubeSats in the last six years, and the Planetary Science Division at NASA plans to utilize CubeSats in upcoming missions that are being developed. The Committee on Space Research has a task group on establishing a constellation of small satellites with the goal of being as internationally inclusive as possible, making inexpensive CubeSats an important tool for broadening participation and accessibility. Nevertheless, the rapid increase in satellite constellations is a simmering crisis that is silently approaching the point of no return, and one that is easily missed in a year with so many crises. 2020 has revealed the escalating impact of [pandemics like COVID-19](http://womeninastronomy.blogspot.com/2020/07/the-fallout-from-covid-19-on-astronomys.html) and climate change—from wildfires to floods to hurricanes—as well as the more long-standing pandemics impacting health such as systemic racism and economic inequality. The fallout from each of these crises has been borne disproportionately by the same communities. Collectively, these have revealed our vulnerabilities as a species and that we are at a crossroads as a planet. The paradigms and structural inequalities that led to this mega-crisis year are also behind how space is literally being occupied, with little coordinated international regulation, discussion of ethical considerations, or consensus-building from a shared vision for the future of humanity in space. The rush to claim near-Earth space is also leaving out the world’s most minoritized communities, including Indigenous peoples, who need to be involved as stakeholders in decision-making. The concerns around this escalating situation are broad and deep, and strike at the heart of our scientific and cultural relation to the night sky. Beyond our individual expertise and professional involvement with space, our identities as human beings and our relational view of space are also at stake. We discuss the growing scientific and cultural impact of satellite constellations, and related future initiatives for near-Earth space. We advocate for the **regulation and protection of space as a shared community resource** held in trust for future generations, much like air, water and land resources on Earth. This approach requires a radical shift in the policies of international regulatory bodies towards the view of space as an ancestral global commons that contains the heritage and future of humanity’s scientific and cultural practices. Impact on astronomy The proliferation of low-Earth orbit satellites (LEOsats) at altitudes less than 2,000 km threatens our millennia-old ability to observe, discover and analyse the cosmos from the surface of the Earth. It is a special irony that a technology indebted to centuries of study of orbits and electromagnetic radiation from space now holds the power to prevent us permanently from further exploration of the Universe. It is an additional irony that astronomy—whose many institutions and facilities were built on the traditional lands of Indigenous peoples—is itself now threatened by the colonization of space by the satellite industry, and is seeking a seat at decision-making tables to mitigate the impact of LEOsats on astronomical research

**AND, indigenous scholars state that satellite constellations are a form of colonization. Light pollution obscures a dark sky which plays an important role in indigenous ways of knowing.**

(Hilding Neilson and Elena E. Cirkovic, 2021, “Indigenous rights, peoples, and space exploration”, https://arxiv.org/ftp/arxiv/papers/2104/2104.07118.pdf)

The launch of Starlink by SpaceX has had a dramatic and damaging impact on research in astronomy and astrophysics (Clery 2020, Kocifaj 2021). These satellites have added to the amount of light pollution and future satellite constellations could have far greater impact depending on the legal requirements and the purpose of those satellites. Hamacher et al (2020) presented a compelling argument that light pollution is a form of cultural genocide (please note that in the context of the Final Report of the Truth & Reconciliation Commission we will use the term Indigenous erasure instead). In their article, the authors noted that a significant amount of Indigenous knowledge is based on star lore and observations of the sky. Those observations are connected to Indigenous stories about the land and nature - for some peoples the sky is a reflection of the land (Cajete 2000). Those observations, however, are based on a dark night sky without substantive light pollution. As such, light pollution acts to disconnect Indigenous peoples from the land they live, and as such, is a form of erasure. In the same vein, we argue that constellations of satellites are also a form of colonization, especially those that are bright enough to be visible from the ground. If light pollution results in an erasure of knowledges, then megaconstellations of satellites would also constitute an attempt to rewrite that knowledge

#### **AND, indigenous practices such as calendaring, navigating, wayfinding, religious ceremonies, and harvesting all are dependent on sky observation. Thus light pollution, indeed, futhers the descturction of native cultures.**

(Aparna Venkatesan et al., Nov 6 2020, “The Impact of satellites constellations on space as an ancestral global commons”, https://www.nature.com/articles/s41550-020-01238-3)

Numerous Indigenous scholars and knowledge-holders have drawn attention to the multigenerational experiential wealth contained holistically in Indigenous knowledge[11](https://www.nature.com/articles/s41550-020-01238-3#ref-CR11),[20](https://www.nature.com/articles/s41550-020-01238-3#ref-CR20),[21](https://www.nature.com/articles/s41550-020-01238-3#ref-CR21),[22](https://www.nature.com/articles/s41550-020-01238-3#ref-CR22), and its potential for creative solutions rooted in long-term thinking. As Leroy Littlebear notes in [a series of talks](http://indigenouseducation.org/multimedia/) hosted by the Indigenous Education Institute, Indigenous thought is relational, rooted in language, space and place, and based on renewal (sustainability). A key aspect of Indigenous identity and Indigenous knowledge is space referencing or ‘Space and Place’, learning in harmony with a specific time and place, which is part of a broader relational view of the Universe and our place in it[23](https://www.nature.com/articles/s41550-020-01238-3#ref-CR23),[24](https://www.nature.com/articles/s41550-020-01238-3#ref-CR24). For example, in D/Lakota the relational view is epitomized by the often used phrase *mitakuye oyasin*, explained by Lakota elders as a philosophy that reminds everyone that we all come from one source and so need to respect each other to maintain *wolakota* or peace[25](https://www.nature.com/articles/s41550-020-01238-3#ref-CR25). Numerous Indigenous and cultural practices around the world are based on this relational view of space, whether it is used for calendaring, sociocultural or religious events, agriculture and fishing cycles affecting food sovereignty, or celestial navigation or wayfinding. The [Never Lost](http://annex.exploratorium.edu/neverlost/) project and web resource created by Isabel Hawkins at the San Francisco Exploratorium in collaboration with the [‘Imiloa Astronomy Center of Hawai‘i](https://imiloahawaii.org/) showcases the breadth and depth of Polynesian navigation techniques; another excellent resource is the [Polynesian Voyaging Society](http://www.hokulea.com/). These navigational practices specifically depend on the circumpolar skies or the [relative rise and set locations](http://archive.hokulea.com/navigate/latitude.html) of stars, constellations, the Moon or Sun, utilizing the horizon sky at dawn or dusk. The latter is already impacted by satellite constellations; more of the night sky will probably be affected in the near future as well. In addition, unlike some scientific projects that require long-term exposures and studies, cultural practices with the night sky are in real time and cannot utilize filters or software to remove low-Earth orbit satellite constellation trails and interference with observations.

**b)** **The second impact is colonization of ancestral space commons.**

#### **Private appropriation is espically bad. Because space doesn’t belong to anyone, it shouldn’t be privately owned. In the world of the NC, there is colonization of what is considered a resource for all.**

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#### **Appropriation of space by private entities skirts OST treaties and leads to unequal access to space, an entity that should be accessible to all. This futhers colonial exclusion to space.**

(Aparna Venkatesan et al., Nov 6 2020, “The Impact of satellites constellations on space as an ancestral global commons”, https://www.nature.com/articles/s41550-020-01238-3)

Given the disastrous history of Western colonization over the past few centuries on Earth and the widespread failure to honour land treaties with Indigenous and minoritized populations, perhaps the lack of compliance with, even the active working around of, the long-term thinking and humanistic goals of the OST and other space treaties are not a surprise. Like colonization, the rush to space is rooted in a survivalist scarcity mindset, leading to a first-come first-claim strategy to obtain and maintain an arbitrary economic and militaristic advantage that is ‘on the clock’—a rushed timeline unwarranted in its speed to stake, settle and mine, whether it’s minerals and resources on Earth, asteroids and planetary environments[10](https://www.nature.com/articles/s41550-020-01238-3#ref-CR10), or knowledge itself[11](https://www.nature.com/articles/s41550-020-01238-3#ref-CR11). Although Earth and space resources are finite, and indeed the orbital space to even launch new satellites to low-Earth orbits is radically shrinking, revisiting the language and scope of space treaties from an abundance mindset is much needed, in the context of the sky we have all shared for millennia and from the perspective of space as a scientific and cultural resource for all of humanity. As Vidaurri et al. note, this requires factoring in ecological, environmental, Indigenous and ethical concerns for future space exploration and scientific missions in space[12](https://www.nature.com/articles/s41550-020-01238-3#ref-CR12). These authors also call for “anti-colonial standards and protocol to ensure equal and fair participation in space”, and for the astronomical community to prevent further ground-based colonialism.

#### **c)** **The third impact is colonial propagation by private companies.**

#### **And, Private companies aren’t beholden to regulations as governmental agencies are – this maximizes risk for corruption.**

(Aparna Venkatesan et al., Nov 6 2020, “The Impact of satellites constellations on space as an ancestral global commons”, https://www.nature.com/articles/s41550-020-01238-3)

Space is becoming the playground of billionaires[13](https://www.nature.com/articles/s41550-020-01238-3#ref-CR13), and privately funded initiatives can often be nimbler and more responsive to evolving conditions and accelerated timelines. However, private actors in space are not accountable to the public (releasing records, self-assessments of science or diversity and inclusion outcomes). Federal and state agencies, despite their ponderous bureaucracy, do have accountability to the taxpayers, and to federal laws concerning, for example, harassment, racism, a hostile workplace culture, and so on—the human part of human environments that we will surely transport to lunar bases and beyond. Federal agencies can also distil key scientific goals from peer-reviewed publications and proposals, or decadal surveys—despite their limitations, this is closer to consensus-built goals than the projects of interest to private sponsors.

**And, Private companies have played a key role in colonization on earth and will extend these exclusionary intents into space.**

(Frank Tavares, et al. 2010, “Ethical exploration and the role of planetary protection in disrupting colonial practices”, https://arxiv.org/ftp/arxiv/papers/2010/2010.08344.pdf)

Public-Private Partnerships as a Colonial Structure: Private individuals and institutions, in collaboration with governments, are a key aspect of the colonial structure. For example, the East India Company was fundamental to British expansion across the Eastern hemisphereand took a central role in colonial domination and political control as well as trade. 24 More recent examples include the influence of American fruit companies in the United States’ interventions into Latin American politics during the Cold War. 25 In the United States, treaties signed with Native American nations have repeatedly been broken, often by settler colonialist individuals working in tandem with the US government and military. The Dakota Access Pipeline,a modern reframing of the ongoing Indigenous demand to honor the Black Hills Treaty, 26 illustrates how capitalist interest intersects with colonialism today. **These examples are mirrored in the active role private industry is currently taking in space exploration**. Presently, there is little to no oversight by national governments or international structures. Private partnerships are encouraged to plan missions to the Moon and Mars, often supported by state funding. However, there is a lack of concrete and effective policy to guide their actions, and no consequences are levied when existing policies are violated. 27 For example, the privately-funded and state-operated Beresheet lunar lander crashed on the Moon and accidentally released thousands of tardigrades. 28 At present, bodies like the Moon and Mars are in practice free reign for private entities. An unfortunately accurate euphemism is that weare in a “wild west” of space policy in this regard. When faced with complex and nuanced ethical questions like the ones we will face in space exploration, privateactors, by their very structure, will prioritize economic considerations above moral ones. History, through the examples above and others, shows us that they will. These four points are a vast oversimplification of the tactics used in the multiple centuries of colonial expansion and rule, and do not cover all the ways colonial structures manifest themselves in our field. Instead, we use them to highlight structures pertinent to the ethical issues that planetary protection must tackle in the coming years.

### **C2: Space as an ancestral commons is the only hope**

#### **We must advocate against private appropriation of space, rather we should uphold space as an ancestral global commons – much like how water and air shouldn’t be owned by private entities and so with space.**

(Frank Tavares, et al. 2010, “Ethical exploration and the role of planetary protection in disrupting colonial practices”, https://arxiv.org/ftp/arxiv/papers/2010/2010.08344.pdf)

Nevertheless, the rapid increase in satellite constellations is a simmering crisis that is silently approaching the point of no return, and one that is easily missed in a year with so many crises. 2020 has revealed the escalating impact of [pandemics like COVID-19](http://womeninastronomy.blogspot.com/2020/07/the-fallout-from-covid-19-on-astronomys.html) and climate change—from wildfires to floods to hurricanes—as well as the more long-standing pandemics impacting health such as systemic racism and economic inequality. The fallout from each of these crises has been borne disproportionately by the same communities. Collectively, these have revealed our vulnerabilities as a species and that we are at a crossroads as a planet. The paradigms and structural inequalities that led to this mega-crisis year are also behind how space is literally being occupied, with little coordinated international regulation, discussion of ethical considerations, or consensus-building from a shared vision for the future of humanity in space. The rush to claim near-Earth space is also leaving out the world’s most minoritized communities, including Indigenous peoples, who need to be involved as stakeholders in decision-making. The concerns around this escalating situation are broad and deep, and strike at the heart of our scientific and cultural relation to the night sky. Beyond our individual expertise and professional involvement with space, our identities as human beings and our relational view of space are also at stake. We discuss the growing scientific and cultural impact of satellite constellations, and related future initiatives for near-Earth space. **We advocate for the regulation and protection of space as a shared community resource held in trust for future generations, much like air, water and land resources on Earth. This approach requires a radical shift in the policies of international regulatory bodies towards the view of space as an ancestral global commons that contains the heritage and future of humanity’s scientific and cultural practices.**

#### **The preservation of space as a global commons is the only hope with a any risk of avoiding replication of violent practices.**

(Frank Tavares, et al. 2010, “Ethical exploration and the role of planetary protection in disrupting colonial practices”, https://arxiv.org/ftp/arxiv/papers/2010/2010.08344.pdf)

Most students of astrophysics learn early in their careers that we, and what we consume or use daily, have been in the cores of stars multiple times or created in the death throes of stars. When we analyse the data of galaxies from billions of light years away, we know we are looking at our cosmic past. This perspective—knowing that the Universe is within us and that we and the Sun will recycle back into future generations of stars and planets—is not as removed as some may believe from the relational view of many Indigenous cultures rooted in ‘Space and Place’, or cultural views of the night sky. Space is our past and our future; we are united in this ancestry and this ultimate fate. We advocate for a radical shift in the policy framework of international regulatory bodies towards the view of space as an ancestral global commons that contains the heritage and future of humanity’s scientific and cultural practices. We do not use the term radical lightly; this shift requires a profound change in attitude towards what space means to all of us and our inherent beliefs about human ownership of space. Such an attitude contradicts the policies of many nations and actors in space today; for example, as recently as April 2020, the White House issued an [Executive Order](https://www.whitehouse.gov/presidential-actions/executive-order-encouraging-international-support-recovery-use-space-resources/) asserting that “Outer space is a legally and physically unique domain of human activity, and the United States does not view it as a global commons”. We also urge federal and private space agencies and corporations to immediately establish a cultural ethics office that can offer an integrative approach for cultural intelligence, supporting scientific progress and cultural protocols from a shared ethical space rather than artificially siloed perspectives, and that the reports and findings of such offices be at the forefront of decision-making. This will begin the long overdue process of involving all the stakeholders for dark skies and near-Earth space, especially historically marginalized and Indigenous communities, as we develop new policies for space treaties and planetary protection that avoid replicating the costly mistakes of the past. The exhilaration of space exploration must be grounded in long-term thinking, centring of Indigenous voices, and sustainability. As we grapple with an unprecedented scale and variety of crises in 2020, near-Earth space is being altered—quietly and permanently. What we do next with space, and for space, will reverberate for science and humanity for generations to come. We can choose to move away from a defensive transactional view of an inanimate space—that awaits ownership and extraction—to a more relational view of space as containing our scientific and cultural ancestry, a healthy ecosystem that holds scientific and cultural practices from all perspectives. Our understanding of our origins, as well as our collective future, in space depends on this.

#### 