

ENVISIONING A LEGAL FRAMEWORK FOR OUTER SPACE CULTURAL HERITAGE

*Lucas Lixinski, MM Losier and Hanna Schreiber**

ABSTRACT

Our desire to protect heritage on Earth is evidenced and supported by a series of treaties aimed at safeguarding intangible and tangible items and sites. The time is ripe to create a legal framework to formalize the safeguarding of such items in outer space. Indeed, it is increasingly clamant to expand the United Nations treaty regime over an area of human endeavor that continues to bear tangible and intangible elements of cultural heritage as a result of further, even yet unimaginable, progress in the exploration and use of outer space, particularly as their discernibility and inherent vulnerability increases without rules to qualify or safeguard them. The framework proposed herein goes further than simply offering means to physically protect and preserve sites and objects of historical significance on other celestial bodies. It recommends legal and institutional initiatives to ensure that space law continues to be a relevant part of global space governance by safeguarding a much wider breadth of heritage at the crossroads of cultural diversity and human creativity. These initiatives would evidence due regard not only for present and future generations, but also for past generations of humans who, across a plethora of cultures and over

* Dr. Lucas Lixinski is a Professor at the University of New South Wales in Australia. Dr. MM Losier is the Principal at Losier González, PLLC in the United States. Dr. Hanna Schreiber is an Assistant Professor at the University of Warsaw in Poland. All three authors are legal experts of cultural heritage law at For All Moonkind.

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millennia, have sought to understand and explore the universe, building upon our collective knowledge, advancing our technological capacities and increasing our physical and emotional ability to adapt longer and farther beyond our indigenous planet. It is through this cultural mechanism, galvanized by compounding individual cultural heritage segments, that humans have created outer space cultural heritage (OSCH). The authors intend this Article to be considered a “guidance document.” It suggests legal principles to govern OSCH, facilitate the progression and harmonization of space and cultural heritage law in a new space law instrument and support the legal capacity of spacefaring and not-yet spacefaring States to negotiate rules to regulate OSCH and participate in its safeguarding.

I. INTRODUCTION

A broad multilateral space law instrument may offer the best opportunity to safeguard cultural heritage (CH) existing in outer space (OSCH), including on the Moon and on other celestial bodies. For All Moonkind¹ has maintained, as a Permanent Observer (PO) to the United Nations (UN) Committee on the Peaceful Uses of Outer Space (COPUOS), that such a regime would help remedy a growing lacuna in space law,² the predominant basis of which is the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies³ (1967 UN OST) and which is otherwise comprised

¹ For All Moonkind, Inc. (For All Moonkind) is a United States of America (US) 501(c)(3) non-profit organization.

² See Comm. on the Peaceful Uses of Outer Space, Rep. of the Legal Subcomm. on its Fifty-Eighth Session, U.N. Doc. A/AC.105/1203, at Annex I, Appendix I, ¶ 2.1 (2019) [hereinafter Fifty-Eighth COPUOS LSC Report]; Comm. on the Peaceful Uses of Outer Space, Dec. and Actions of the Legal Subcomm. on its Seventy-fifth Session, U.N. Doc. A/75/20, ¶¶ 2(5), 5(13) (2020) [hereinafter Seventy-Fifth COPUOS LSC Report].

³ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty].

largely of five UN treaties⁴ (UN Space Treaties) and their supporting principles.⁵ It is increasingly clamant that space and cultural heritage law under the UN treaty regime expand over an “area of human endeavor”⁶ that will continue to bear CH as a result of “further [even yet unimaginable] progress in the exploration and use of outer space.”⁷ The proposed regime could go further than simply supporting the “strengthen[ing of] the use of space technologies and their applications ... to monitor cultural heritage sites and contribute to their preservation.”⁸ It could equip international law with the means to “safeguard [a much wider breadth of] heritage [and] promote more sustainable ways of living in resilient, inclusive and peaceful societies [, facilitate a] crossroads of heritage and creativity, and . . . play a part in achieving sustainable development” on and beyond Earth.⁹

In 2016, COPUOS asserted that “legal and institutional initiatives ... [are needed] in order to ensure that international space

⁴ In addition to the Outer Space Treaty, in this article, the term UN Space Treaties comprises: the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, Apr. 22, 1968, 19 U.S.T. 7570, 672 U.N.T.S. 119 [hereinafter Rescue and Return Agreement]; Convention on the International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187 [hereinafter Liability Convention]; Convention on Registration of Objects Launched into Outer Space, Jan. 14, 1975, 28 U.S.T. 695, 1023 U.N.T.S. 15 [hereinafter Registration Convention]; Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 18, 1979, 1362 U.N.T.S. 3 [hereinafter Moon Treaty]. Note that the Moon Treaty has only been ratified by 18 parties at the time of writing, which, alongside the lack of ratifications by the major space powers, undermines any claim for customary law status.

⁵ See e.g., G.A. Res. 1962 (XVIII) (Dec. 13, 1963); G.A. Res. 47/68 (Dec. 14, 1992); G.A. Res. 37/92 (Feb. 10, 1982); G.A. Res. 41/65 (Dec. 3, 1986); G.A. Res. 51/122 (Dec. 13, 1996).

⁶ G.A. Res. 2222 (XXI), Preamble (Dec. 19, 1966).

⁷ Moon Treaty, *supra* note 4, Preamble. See Comm. on the Peaceful Uses of Outer Space, Future Role and Activities of the Comm. On the Peaceful Uses of Outer Space, Working Paper Submitted by the Chairman, ¶ 33, U.N. Doc. A/AC.105/L.268 (2007) (“need[ing] a fresh approach to ... protecting designated areas[off] historical [and] cultural ... significance”).

⁸ Comm. on the Peaceful Uses of Outer Space, Revised Zero Draft of the “Space2030” Agenda and Implementation Plan, ¶ 20(2.8), U.N. Doc. A/AC.105/2019/CRP.15, (2019) [hereinafter COPUOS Space 2030 Agenda].

⁹ Audrey Azoulay, Foreword to the Basic Texts of the Convention for Safeguarding of the Intangible Cultural Heritage, Oct. 17, 2003, 2368 U.N.T.S. 3 (2018 ed.) [hereinafter Azoulay Foreword]. See UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, Preamble, Oct. 20, 2005, 2440 U.N.T.S. 311 [hereinafter 2005 UN CD Convention].

law is a relevant part of global space governance in the twenty-first century.”¹⁰ It thus mandated its Legal Subcommittee (LSC) to “promote the progressive development of international space law”¹¹ by “identifying areas that may require additional regulation.”¹² Those areas were generally identified as, *inter alia*, the long-term sustainability of outer space activities, space resources, space debris mitigation and remediation, space traffic management, planetary defense and space safety.¹³ A “new item to be considered by the”¹⁴ LSC for additional regulation should also be OSCH, particularly given its discernibility and inherent vulnerability in the absence of rules to identify, qualify or safeguard it.

The proposed OSCH regime endeavors to support COPUOS’s mandate while advancing two of its seven *UNISPACE+50* thematic priorities, namely, the “legal regime of outer space and global space governance”¹⁵ and “enhanced information exchange on space objects and events.”¹⁶ In so doing, this guidance document suggests legal principles to govern OSCH in its tangible and intangible manifestations beyond (not on) Earth that may come to be identified as meriting safeguarding.¹⁷ It does not discuss important rules to regulate the OSCH itself, such as: the nomination or selection criteria for inclusion of OSCH on CH lists; the positive or negative obligations towards objects or sites beyond Earth; inter or intraplanetary movement and trade of tangible OSCH, particularly following their importation to Earth; nor national rules to support an international OSCH regime. Rules, such as those mentioned above, of legal and practical consideration are left instead for future research.

¹⁰ Comm. On the Peaceful Uses of Outer Space, Rep. of the Legal Subcomm. On Its Fifty-Ninth Session, U.N. Doc. A/71/20, ¶296(2)(b) (2016) [hereinafter Fifty-Ninth COPUOS Report].

¹¹ *Id.* ¶ 296(2)(e).

¹² *Id.* ¶ 296(2). See generally Seventy-Fifth COPUOS LSC Report, *supra* note 2, ¶¶ 2(5), 5(6)(a), 5(13). See The Artemis Accords: Principles for Cooperation in the Civil Exploration and Use of the Moon, Mars, Comets, and Asteroids for Peaceful Purposes, §9 NASA, <https://www.nasa.gov/specials/artemis-accords/img/Artemis-Accords-signed-13Oct2020.pdf> (last visited Sep. 9, 2021) [hereinafter Artemis Accords].

¹³ COPUOS Space 2030 Agenda, *supra* note 8, ¶ 12.

¹⁴ Seventy-Fifth COPUOS LSC Report, *supra* note 2, ¶ 5(14).

¹⁵ Fifty-Ninth COPUOS Report, *supra* note 10, ¶ 296(2).

¹⁶ *Id.* ¶ 296(3).

¹⁷ *Id.* ¶ 296(2)(d). See Seventy-Fifth COPUOS LSC Report, *supra* note 2, ¶5(13); Fifty-Ninth COPUOS Report, *supra* note 10, ¶ 296(2)(c).

Given the extraterrestrial medium in which OSCH exists, a legal regime to regulate it may best be developed in a space law instrument. As the regime would regulate what would not solely be space objects and sites in outer space, but also CH, CH law principles already established in broad multilateral conventions,¹⁸ including six UN CH treaties¹⁹ (UN CH Treaties), should also be incorporated in that new space law instrument. Those CH law principles should be “be interpreted and applied in the context of and in a manner consistent with”²⁰ the UN Space Treaties and their principles. The resulting framework could encourage the harmonization of international law²¹ and “promote the free flow of ideas,”²² “the spread of culture”²³ and “[m]aintain, increase and diffuse knowledge [about OSCH] [b]y assuring the conservation and protection of [humanity’s] inheritance of ... monuments of history and

¹⁸ The Antarctic Treaty, art. IX, Dec. 1, 1959, 12 U.S.T. 794, 42 U.N.T.S. 71 [hereinafter Antarctic Treaty]; Antarctic Treaty, Annex V to the Protocol on Environmental Protection to the Antarctic Treaty Protocol, Oct. 17, 1991, 12 U.S.T. 794, 42 U.N.T.S. 71 [hereinafter Antarctic Treaty Annex V]; United Nations Convention on the Law of the Sea, arts. 149, 303, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

¹⁹ For the purposes of this article, the term UN CH Treaties comprises: Convention for the Protection of Cultural Property in the Event of Armed Conflict, May 14, 1954, 249 U.N.T.S. 240; Convention for the Protection of Cultural Property in the Event of Armed Conflict, First Protocol, May 14, 1954, 249 U.N.T.S. 215; Convention for the Protection of Cultural Property in the Event of Armed Conflict, Second Protocol, Mar. 26, 1999, 2253 U.N.T.S. 212; Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, Nov. 14, 1970, 823 U.N.T.S. 231 [hereinafter 1970 UN CP Convention]; Convention Concerning the Protection of the World Cultural and Natural Heritage, Nov. 16, 1972, 1037 U.N.T.S. 151 [hereinafter 1972 UN WH Convention]; Convention on the Protection of the Underwater Cultural Heritage, Nov. 2, 2001, 41 I.L.M. 37 [hereinafter 2001 UN UCH Convention]; Convention for Safeguarding of the Intangible Cultural Heritage, Oct. 17, 2003, 2368 U.N.T.S. 3 [hereinafter 2003 UN ICH Convention]; 2005 UN CD Convention, *supra* note 9.

²⁰ 2001 UN UCH Convention, *supra* note 19, art. 3.

²¹ Vienna Convention on the Law of Treaties, art. 31(3)(c), May 23, 1969, 1155 U.N.T.S. 331 [hereinafter Vienna Convention]. *See* Constitution of the United Nations Educational Scientific and Cultural Organization, art. 2, Nov. 16, 1945, 4 U.N.T.S. 275 [hereinafter UNESCO Constitution]; Seventy-Fifth COPUOS LSC Report, *supra* note 2, ¶ 5(13).

²² UNESCO Constitution, *supra* note 21, art. 1.

²³ *Id.*

science.”²⁴ International conventions are necessary to achieve “international cooperation calculated to give the people of all countries access to [knowledge] produced by any of them.”²⁵

A. *What Is OSCH?*

Cultural traditions and identity are inextricably connected to our past, present and future – all in which, in a plethora of cultures over millennia, humans have sought to understand and explore the Universe, building upon our collective knowledge, advancing our technological capacities and increasing our physical and emotional ability to adapt longer and farther beyond Earth. It is through this cultural mechanism, “one of the mainsprings of development,”²⁶ galvanized by compounding individual, what we term, ‘cultural heritage segments’ that humans have created OSCH – any element of which is innately composed of successive segments that “[c]reati[vely] draw[] on the roots of cultural tradition, but flourish[] in contact with other cultures.”²⁷

OSCH is the result of comprehensive human collaboration throughout history manifest through cultural expressions. Each element of OSCH attests to the successive “human effort and innovation [it] represent[s].”²⁸ Its innate nature prevents it from being defined as ethnically or locally nascent, or unilaterally asserted as an

²⁴ *Id.*

²⁵ *Id.* See 2005 UN CD Convention, *supra* note 9, Preamble (“culture [is a] strategic element in ... international development policies”).

²⁶ *Id.* at art. 2(5).

²⁷ United Nations Educational, Scientific and Cultural Organization Universal Declaration on Cultural Diversity, art. 7, Nov. 2, 2001, 41 I.L.M. 57, UNESCO Doc. 31C/Res. 25 [hereinafter UNESCO Cultural Diversity Declaration].

²⁸ One Small Step to Protect Human Heritage in Space Act of 2020, §2(a)(4), 2(b)(1), Pub. L. No. 116-275 [hereinafter One Small Step Act] (acknowledging “the thousands of individuals who have contributed to the[se] achievements [and whose] work ... often went unacknowledged, [but] helped broaden the scope of space travel and charted new frontiers for humanity’s exploration of space”). See 2003 UN ICH Convention, *supra* note 19, Preamble (“communities [&] individuals ... enrich cultural diversity and human creativity.”).

element of OSCH by one sovereign²⁹ (notwithstanding rights of jurisdiction, ownership and liability consistent with existing space law).³⁰

“Cultural interaction and creativity [are] ... vital ...[in] nurtur[ing,] renew[ing] and enhance[ing] the role played by those involved in the development of [OSCH] for the progress of society at large.”³¹ The proposed working legal definition for OSCH attempts to reflect this tenet by shifting the notion of CH traditionally contextualized in national or ethnic distinctions to one that instead underscores collective human ingenuity. This category of CH has deliberately and inadvertently enabled international cooperation in facilitating the exploration and use of outer space.³² The proposed working legal definition for OSCH set forth below is limited to CH that manifests or exists beyond Earth.

1. “Outer Space Cultural Heritage” means traces of human existence, together with their archaeological and natural contexts that occur in outer space, including on the Moon and other celestial bodies.

²⁹ See Antarctic Treaty Annex V, *supra* note 18, art. 8(2) (“[a]ny Party may propose”); UNCLOS, *supra* note 18, art. 149 (“particular regard [for] preferential rights of the State[s] or countr[ies] of origin, ... cultural origin, or ... historical and archaeological origin”); 2001 UN UCH Convention, *supra* note 19, art. 11(4) (“declaration ... based on a verifiable link to the [UCH], particular regard [for] preferential rights of States of cultural, historical or archaeological origin”); 1972 UN WH Convention, *supra* note 19, art. 11(3).

³⁰ Outer Space Treaty, *supra* note 3, arts VII, VIII. See generally Liability Convention, *supra* note 3; Moon Treaty, *supra* note 4, art. 12(1).

³¹ 2005 UN CD Convention, *supra* note 9, Preamble.

³² E.g., Agreement Concerning Cooperation on the Civil International Space Station, Jan. 29, 1998, 1998 U.S.T. LEXIS 212 [hereinafter ISS Agreement]; Compare the deliberate efforts to accomplish the 2020 Emirates Mars Mission (*Hope* orbiter co-created by Mohammed bin Rashid Space Centre (UAE) and three USA universities; transported from USA to UAE in Russian-operated, Ukrainian-built cargo plane; and launched from Japan in a Mitsubishi-built and operated rocket). See Kenneth Chang, *From Dubai to Mars, With Stops in Colorado and Japan*, N.Y. TIMES, Feb. 15, 2020 (updated Jul. 19, 2020), <http://nytimes.com/2020/02/15/science/mars-united-arab-emirates.html> to the inadvertent but successive advances in astrology, mathematics throughout history. See For All Moonkind Cultural Heritage Segmentation Research Initiative, FOR ALL MOONKIND, <https://www.forallmoonkind.org/about/moonkind-outer-space-cultural-heritage-segmentation-research-initiative/> (last visited May 27, 2021) [hereinafter For All Moonkind OSCH Segmentation Research Initiative].

2. Outer Space Cultural Heritage having a significant cultural, historical, archaeological, or other scientific character may include:

- a) objects, structures and cultural spaces;
- b) a first achievement of its kind that resulted directly or indirectly from human ingenuity over broad historical periods and between diverse cultural groups, and which has had a significant impact on human space exploration;
- c) human engineered methods permitting travel, human life, community and communication beyond Earth;
- d) practices, expressions, knowledge and skills that humans create in response to, and in interaction with, their extraterrestrial environment and which give them a shared sense of humanity and continuity with life on Earth; and
- e) symbolic markers in an extraterrestrial context that originate from and express human identity.³³

The term OSCH to categorize and designate a new form of CH emphasizes the human being, rather than an inanimate or natural object,³⁴ as a form of life and itself a manifestation of heritage. The term breaks from traditional CH qualifiers³⁵ to minimize the influence of legal and ethical shortcomings reflected within their respective treaty regimes; contrasts the changed socio-political dynamics

³³ Definition of Heritage in Outer Space, FOR ALL MOONKIND, <https://www.forallmoonkind.org/about/definition-of-heritage/> (last visited June 15, 2021).

³⁴ These categories are found throughout current UNESCO treaties and include the binaries of: movable/immovable cultural property; monuments, buildings and sites; natural formations; mixed cultural/natural sites/areas; underwater objects of an archaeological/historical nature; traces of human existence under water; marine areas of outstanding value; practices, representations, expressions, knowledge, skills; related instruments, objects, artifacts and cultural spaces; expressions, artistic creation, production, dissemination, distribution and enjoyment. For a discussion of these binaries in their legal context, see generally JANET BLAKE, INTERNATIONAL CULTURAL HERITAGE LAW (2015).

³⁵ *E.g.*, cultural property, cultural heritage (“CH”); “heritage of all the nations of the world,” “cultural and natural heritage,” WH; common heritage; “historic sites and monuments;” UCH; ICH; cultural expressions. For a discussion of these qualifiers and the work they are employed in the law, *see id.*

amidst which those treaties were developed;³⁶ and circumvents the continued discord sown by those factors.³⁷

II. A SPACE LAW INSTRUMENT COULD FRAME AN OSCH REGIME WITH ICH LAW PRINCIPLES

An innovative OSCH instrument could support the “progressive development of international space law,”³⁸ as well as that of international CH law, with the administrative support of COPUOS. The application of CH law is ultimately limited by the medium outside Earth in which the OSCH exists. The legal authority and practical expertise under which the UN Educational Scientific and Cultural Organization (“UNESCO”) operates to oversee and enforce rules applicable to CH on Earth is dissimilar to that under which the UN body tasked with promoting international cooperation in space, COPUOS, operates.

Nevertheless, the intersectionality of COPUOS’s mandate to “study the nature of [such] legal problems which may arise from the exploration of [OS],”³⁹ including “the interests of present and future generations,”⁴⁰ and UNESCO’s mandate to “recommend such international agreements [and] ... conventions ... to promote [and] ... assur[e] the conservation and protection of the world’s inheritance”⁴¹ offer an ideal legal framework for the qualification and safeguarding of OSCH. It is within the UNGA’s mandate to “initiate studies and make recommendations for the purpose of ... encouraging the progressive development of international law and its codifications.”⁴² Also within UNGA’s mandate is to identify the “means

³⁶ Legal and ethical shortcomings net increasingly unsatisfactory resolutions.

³⁷ *E.g.*, Outer Space Treaty, *supra* note 3, art. 1 (“province of all [hu]mankind”); *Id.* at art. 2 (“not subject to national appropriation”). *See* Asteroid Resource and Space Resource Rights, Pub. L. No. 114-90, § 401, 129 Stat. 70 (2015) (51 U.S.C.S. § 51301), Loi 674 du 20 juillet 2017 sur l’exploration et l’utilisation des ressources de l’espace [Law 674 of July 20, 2017 on the Exploration and Use of Space Resources], art. 1, JOURNAL OFFICIEL DU GRAND-DUCHE DE LUX., July 28, 2017, <http://legilux.public.lu/eli/etat/leg/loi/2017/07/20/a674/jo>.

³⁸ Fifty-Ninth COPUOS Report, *supra* note 10, ¶ 296(2)(e).

³⁹ G.A. Res. 1472 (XIV), A(1)(b) (Dec. 12, 1959).

⁴⁰ Moon Treaty, *supra* note 4, art. 4(1).

⁴¹ UNESCO Constitution, *supra* note 21, art. 2.

⁴² U.N. Charter art. 13, ¶1.

for giving effect to programmes ... which could appropriately be undertaken under the U[N] auspices,”⁴³ (i.e, COPUOUS and or UNESCO). An OSCH instrument elaborating CH law principles, but developed within the framework of the UN Space Treaties and its principles could “enhanc[e the] synergy and efficiency”⁴⁴ between UN organizational bodies and their legal frameworks. The proposed framework could support the purpose of the UN “to achieve international co-operation in solving international problems of a[]...cultural....character”⁴⁵ while “harmonizing the actions of nations in the attainment of th[is] common end[].”⁴⁶

In working to achieve its 2016 mandate, COPUOS’s LSC encouraged States “to regularly exchange information on developments in the area of national space-related regulatory frameworks.”⁴⁷ Although not structured as such, but instead in an international CH-related framework, discussion over CH law principles may inspire rules to safeguard “landing sites, artifacts, spacecraft, and other evidence of activity on celestial bodies”⁴⁸ in outer space - as well as intangible and largely physically inaccessible manifestations of OSCH that are “vehicles of identify and social cohesion [that] also need[] to be protected and promoted.”⁴⁹

International CH law, based largely upon the UN Cultural Heritage Treaties and their supporting principles, offers the LSC a “schematic overview of [an adaptable legal] framework”⁵⁰ to regulate OSCH. Although The Antarctic Treaty⁵¹ (Antarctic Treaty), the United Nations Convention on the Law of the Seas⁵² (UNCLOS) and the Convention on the Protection of the Underwater Cultural Heritage⁵³ (UN UCH Convention) may provide exemplary legal

⁴³ G.A. Res. 1472 (XIV), A(1)(a) (Dec. 12, 1959).

⁴⁴ G.A. Res. 70/1, 70 (Sep. 25, 2015).

⁴⁵ U.N. Charter art. 1, ¶3.

⁴⁶ U.N. Charter art. 1, ¶4. *See* UNESCO Constitution, *supra* note 21, art. 2(c); G.A. Res. 1721 (XVI), B(3)(c) (Dec. 20, 1961).

⁴⁷ Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 122. *See also id.*, ¶ 121; Seventy-Fifth COPUOS LSC Report, *supra* note 2, ¶ 2(5)(a).

⁴⁸ Artemis Accords, *supra* note 12, § 9.

⁴⁹ Azoulay Foreword, *supra* note 9, ¶ 1.

⁵⁰ Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 122. *See* Seventy-Fifth COPUOS LSC Report, *supra* note 2, ¶ 5(13).

⁵¹ Antarctic Treaty Annex V, *supra* note 18.

⁵² UNCLOS, *supra* note 18, arts. 149, 303.

⁵³ 2001 UN UCH Convention, *supra* note 19.

frameworks to govern objects and sites beyond national jurisdiction, the UN Cultural Heritage Treaties' intangible cultural heritage (ICH) law principles, expressed in the Convention for Safeguarding of the Intangible Cultural Heritage⁵⁴ (UN ICH Convention), may be most helpful to broaden the traditional perception of CH as merely tangible. These ICH law principles, thus, could provide a theoretical basis upon which to conceptualize and structure within the law the manifestation of human culture in a new medium which exists beyond our indigenous planet. ICH law principles can legally accommodate the diversity of tangible and intangible OSCH;⁵⁵ mitigate the physical challenges of distance and inaccessibility in safeguarding OSCH beyond Earth; and assuage legal complications relating to sovereign and proprietary rights over it without prejudicing those provided for in the UN Space Treaties.⁵⁶

Given the significant distances to and general inaccessibility of OSCH, particularly to civil society, a legal regime to safeguard it will require that it ultimately be measured against its intangible value. ICH law principles can, in spite of these factors, legally establish an ongoing cultural connection to a space object, site, event or practice without which the essence of heritage cannot be sustained and, therefore, would not merit safeguarding. A legal regime over OSCH structured upon these principles allays challenges presented by heritage that is inextricably complex in its proprietary, material, intellectual, temporal and cultural composition.

A legal regime to safeguard OSCH framed around ICH law principles also innately reflects the intangible mediums for human interaction that were created for the use and exploration of outer space, but that have subsequently been adapted for ever increasing intangible, *i.e.*, virtual, human interaction on Earth. Intangible CH

⁵⁴ 2003 UN ICH Convention, *supra* note 19.

⁵⁵ *Id.* at art. 2(1). See International Space Exploration Coordination Group, *Benefits Stemming from Space Exploration*, 5 (Sep. 2013), <https://www.nasa.gov/sites/default/files/files/Benefits-Stemming-from-Space-Exploration-2013-TAGGED.pdf> [hereinafter ISECG Report] (tangible includes objects manifesting advances in science and technology; intangible includes social and philosophical dimensions, enriching of culture, inspiration and mutual understanding).

⁵⁶ See Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 88 (“uncertainty regarding the applicability of space law and aeronautical law, . . . and that the existence of different regimes and mutually exclusive concepts, such as territorial sovereignty and the common heritage of humanity, gave the [LSC] substantial reason to keep the item on its agenda for future sessions”).

law principles also, therefore, support the increasing reliance on intangibility as a medium for the development of culture between people beyond Earth, with people on Earth and amongst people on Earth. The essence of intangibility as a result of human space exploration has become a central character for the development of CH in the Universe and should be an integral tenet in a new space law instrument to safeguard OSCH.

A. *Objects and Sites Form Part of the Intangible OSCH*

Tangible OSCH is manifest in physical objects or cultural spaces (i.e., sites), whereas intangible OSCH is the non-physical manifestation of culture (i.e., practices, representations, expressions, knowledge and skills), “as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage.”⁵⁷ Intangible OSCH comprises cultural traditions that are central to our identity as human beings. These cultural traditions have helped craft how we identify ourselves and in turn have influenced how we have given, and continue to give, meaning to our environment both on and beyond Earth.⁵⁸

ICH law creates a legal distinction (albeit for sequencing and administrative purposes) between tangible and intangible CH. It concedes, however, that there is a “deep-seated interdependence between the [two]”⁵⁹ and proscribes that nothing can “alter[] the status or diminish[] the level of protection under the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage of World Heritage properties with which an item of the intangible cultural heritage is directly associated.”⁶⁰ Intangible CH law acknowledges the artificial separation between heritage as a “thing” and the manner in which we engage with it (heritage as a “practice”), thus, it can provide for the regulation of objects, sites and non-material manifestations of OSCH existing beyond Earth. Its principles serve as a conceptual umbrella that capture human

⁵⁷ 2003 UN ICH Convention, *supra* note 19, art. 2(1).

⁵⁸ *See id.* at art. 2; 2013 ISECG Report, *supra* note 55, at 11-12 (“human activity beyond Earth ... ha[s] profound influence on cultural and intellectual life around the world and on humanity’s views and expectations of itself”).

⁵⁹ 2003 UN ICH Convention, *supra* note 19, Preamble.

⁶⁰ *Id.* at art. 3(a).

relationships with culture and their tangible manifestations. Theoretically, all CH is intangible because humans value it on the immaterial basis in which we relate to it and before, or more than, any material value ascribed to it.⁶¹

ICH law principles provide for the regulation of both material and non-material CH, which ultimately do not need to be tied to a territorial jurisdiction in the latter case when OSCH does not physically exist; and in the former case when it is so vastly inaccessible to most, if not all, humans in the province of all humankind that methods for non-material preservation, i.e., memorialization, may prove the most effective, and foremost, means to safeguard it. When tangible OSCH, including cultural spaces, can be physically safeguarded, CH lists can be employed to structure a legal mechanism to protect and preserve them by invoking positive and negative obligations to achieve this objective.⁶² *Safeguarding* underscores the importance of the CH's intangible character, whereas protection or preservation underscore the importance of its tangible elements.⁶³

B. ICH Law Has Been Adopted by 180 of 195 States

ICH law principles can help “[d]efine and develop requirements for enhanced information exchange [embedded in] guidelines for the long-term sustainability of [OSCH, including] specifically addressing risk-reduction[,] capacity-building and outreach activities [harnessed i]n transparency and confidence-building measures.”⁶⁴ The UN ICH Convention was established not to replace, but rather to supplement the preceding CH treaties in order to meet a then contemporaneous and growing appreciation for non-tangible CH, to protect its practices and to support an evolving practice of international law, which includes regional, bi-

⁶¹ See 2005 UN CD Convention, *supra* note 9, Preamble (“convey[s] identities, values [and] meanings[;] not ... solely [of] commercial value”).

⁶² See *infra* text accompanying footnotes 187 to 191.

⁶³ See OFFICE OF SCI. AND TECH. POLICY, PROTECTING & PRESERVING APOLLO PROGRAM LUNAR LANDING SITES & ARTIFACTS, 1 (2018) (“no legal definitions of ‘preservation’ and ‘protection’ precisely applicable to lunar sites and artifacts[;] ... ‘protection’ means preventing further damage, whether by nature or human activity[;] ... ‘preservation’ as ‘the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property’ [to] a site or artifact not being disturbed or harmed”).

⁶⁴ Fifty-Ninth COPUOS Report, *supra* note 10, ¶ 296(3).

lateral and domestic rules that supplement and enforce it. The authority of the Convention is limited to the territories within States that are Party to it.⁶⁵

Thus, both the authority and duty of a State Party under ICH law to safeguard culturally significant objects, sites or practices is legally derived from its jurisdiction over the object, site and or practicing heritage community located within its territory.⁶⁶ The jurisdictional tenet dictated by the UN ICH Convention to safeguard CH based on territoriality and national origin impedes its application - and generally that of other existing CH treaties - beyond Earth, as areas in the “province of all [hu]mankind”⁶⁷ are beyond the territories of SPs to any of the existing CH treaties. Additionally, Article II of the Outer Space Treaty explicitly prohibits the assertion of territorial rights by sovereignty or any other means.⁶⁸

A challenge of potentially even utilizing ICH law principles to structure an OSCH space law instrument may be reluctance by the 13 of the 110 State Parties to the Outer Space Treaty that have not ratified the UN ICH Convention. Amongst these State Parties are the current spacefaring nations of Australia, Canada, Israel, Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America.⁶⁹ This hurdle may not be insurmountable, as there are instances in which these States have nonetheless incorporated ICH law principles into their domestic regimes,⁷⁰ or are party to other UN Cultural Heritage Treaties thereby, indicating some degree of adherence to general principles

⁶⁵ 2003 UN ICH Convention, *supra* note 19, art. 11(a).

⁶⁶ *Id.*

⁶⁷ Outer Space Treaty, *supra* note 3, art. I.

⁶⁸ *Id.* at art. II.

⁶⁹ Also Guyana, Holy See, Libya, New Zealand, San Marino, Sierra Leone and South Africa. *Compare Convention for the Safeguarding of the Intangible Cultural Heritage*, UNITED NATIONS TREATY COLLECTION, <https://treaties.un.org/pages/showDetails.aspx?objid=080000028006656f> (last visited Sept. 30, 2021), *with Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies*, UNITED NATIONS TREATY COLLECTION, <https://treaties.un.org/pages/showdetails.aspx?objid=0800000280128cbd> (last visited Sept. 30, 2021).

⁷⁰ For a discussion of incorporation of ICH law in Australia and Canada, for instance, see Lucas Lixinski, *Triological Subsidiarity in International and Comparative Law: Engagement with International Treaties by Sub-State Entities as Resistance or Innovation*, 55 CANADIAN YEARBOOK OF INTERNATIONAL LAW 1-32 (2018).

of CH law, particularly, in some cases, to those that provide for the safeguarding of CH in areas beyond national jurisdiction on Earth.⁷¹

Article 34 of the Vienna Convention on the Law of Treaties (Vienna Convention) dictates that “[a] treaty does not create either obligations or rights for a third State without its consent.”⁷² Its Article 38 dictates also, however, that “[n]othing in article[] 34 ... precludes a rule set forth in a treaty from becoming binding upon a third State as a customary rule of international law, recognized as such.”⁷³ Thus, even if the UN ICH Convention is not considered an illustration of customary international law, it must still nevertheless be taken into consideration in treaty interpretation. As 180 of the 195 States in the world are party to the UN ICH Convention and 97 of the 110 Parties to the Outer Space Treaty are also parties to the UN ICH Convention,⁷⁴ there may be some consideration as to whether under Article 31(3)(c) of the Vienna Convention, “[t]here shall be taken into account, together with the context ... any relevant rules of international [ICH] law applicable in the relations between the parties”⁷⁵ of COPUOS.

III. A BROAD MULTILATERAL INSTRUMENT SHOULD SAFEGUARD OSCH

“Recognizing the great importance of international cooperation,”⁷⁶ a broad multilateral instrument may most effectively safeguard OSCH and provide a greater number of people the opportunity to exercise their “right to freely participate in the cultural life [expressed by the exploration of outer space] and to share in

⁷¹ See Antarctic Treaty Annex V, *supra* note 18 (to which Australia, Russia, the United Kingdom and the United States are parties); UNCLOS, *supra* note 18 (to which Australia, Canada, Russia, and the United Kingdom are parties); 2001 UN UCH Convention, *supra* note 19 (to which Australia, Canada, Israel, Russia, the United Kingdom and the United States have not parties).

⁷² Vienna Convention, *supra* note 21, art. 34.

⁷³ *Id.* at art. 38.

⁷⁴ One hundred and ninety-three of those 195 States are UN Member States. The Holy See and Palestine are Permanent Observers to the United Nations. States that are not party to either the Outer Space Treaty or 2003 UN ICH Convention are: Liberia, Liechtenstein and Maldives. See discussion, *supra* note 69.

⁷⁵ Vienna Convention, *supra* note 21, art. 31(c). See G.A. Res. 1962 (XVIII), art. 4 (Dec. 13, 1963). See also G.A. Res. 1721 (XVI), A(1)(a) (Dec. 20, 1961).

⁷⁶ G.A. Res. 1472 (XIV), A (Dec. 12, 1959).

[its] scientific advancement and its benefits.”⁷⁷ It could also effectively provide for “the international community [to] contribute, together with [State Parties] to ... the safeguarding of such [OSCH] in a spirit of cooperation and mutual assistance,”⁷⁸ thereby potentially establishing a more effective legal mechanism. Although national laws, regional, bilateral or other narrower multilateral agreements may be, relatively, effective in regulating CH on Earth, their reliance on sovereignty and territoriality cannot ultimately yield a like efficacy - where efficient - beyond it. The absence of territorial sovereignty and the increased national and ethnic amalgam of, albeit not lack of titular,⁷⁹ associations with OSCH increase the risk of diplomatic and legal conflict.⁸⁰ While a new OSCH instrument should not prejudice the rights, jurisdiction and duties of States under the UN Space Treaties, it should be interpreted and applied in the context of and in a manner consistent with international law.⁸¹

The aforementioned considerations may also hinder the ultimate success of narrower agreements. This is increasingly the case in complex legal disputes between individuals, groups, private and or public entities, and States over ICH, land-based movable, also immovable, CH and underwater CH on Earth – particularly when that tangible CH is discovered in areas beyond that of,⁸² or within conflicting,⁸³ national jurisdiction; or when the rules to regulate, or regimes with legal jurisdiction over it have changed.⁸⁴

Narrow agreements for the safeguarding of OSCH negotiated outside a broader multilateral forum may eventually threaten the

⁷⁷ G.A. Res. 217 (III), art. 27 (Dec. 10, 1948). *See id.*, at art. 28 (all “entitled to ... international order [where such] rights and freedoms ... can be fully realized”); 2005 UN CD Convention, *supra* note 9, Preamble (“cultural diversity [to] realiz[e] human rights”).

⁷⁸ 2003 UN ICH Convention, *supra* note 19, Preamble.

⁷⁹ Outer Space Treaty, *supra* note 3, art. VIII.

⁸⁰ *See* Vienna Convention on Succession of States in Respect of State Property, Archives and Debts, Apr. 8, 1983, 22 ILM 306 [hereinafter 1983 Vienna Convention]. This could encompass, for example, CH claims resulting from succession of States and conflicting legal regimes.

⁸¹ Vienna Convention, *supra* note 21, art. 71; G.A. Res. 1721 (XVI), A(1) (Dec. 20, 1961).

⁸² *See, e.g.*, UNCLOS, *supra* note 18, arts. 149, 303(1); 2001 UN UCH Convention, *supra* note 19, arts. 11-12.

⁸³ *See* UNCLOS, *supra* note 18, arts. 33, 303(2); 2001 UN UCH Convention, *supra* note 19, arts. 7-10.

⁸⁴ *See* 1983 Vienna Convention, *supra* note 80, art. 9.

principles and authority of those space law instruments which were, or that may be, so negotiated when the terms of the former divert from or lessen the tenets of the latter.⁸⁵ Moreover, CH may also present challenges existing on Earth where such narrower agreements may require State-by-State approval and periodic renewals, which allow the initiating State more legislative and or juridical autonomy on a case-by-case basis over disputed CH linked to other States, rather than committing to a more consistent application of CH law principles.⁸⁶ This creates inconsistency and discord in the international CH legal regime and prevents the broad multilateral conventions from achieving their potential for legal authority, effectiveness and, ultimately, the harmonization of international law. Of particular concern also is the diminished leverage States representing a segment of OSCH may experience when narrower, rather than, broader, agreements are in place, or when broader agreements fail to consider their cultural interests in the OSCH resulting from diminished leverage during treaty negotiations.

A. *Jurisdiction*

The Outer Space Treaty dictates that “[o]uter space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.”⁸⁷ It further dictates that these areas constitute “the province of all [hu]mankind,”⁸⁸ thus, indicating an absence of sovereign jurisdiction in outer space or on other celestial bodies, except over “an object launched into [outer space over which] ... the States Parties on whose registry [it was] launched ... retain[s] jurisdiction and control.”⁸⁹ The Treaty does not explicitly provide any right or obligation to its State Parties, be it positive

⁸⁵ See, e.g., 2001 UN UCH Convention, *supra* note 19, art. 5(1) (“in full conformity with [&] not dilute ... universal character”); Vienna Convention, *supra* note 21, art. 41 (if not prohibited by treaty, does not affect enjoyment by other parties, or bear provision/derogation incompatible with treaty); U.N. Charter art. 52(1).

⁸⁶ See Artemis Accords, *supra* note 12, §9 (“Signatories intend to preserve [OSCH], which *they* consider ... historically significant ...” (*emphasis added*)). Bilateral agreements can limit uniform CH policy benefitting all States of origin.

⁸⁷ Outer Space Treaty, *supra* note 3, art. II.

⁸⁸ *Id.* at art. I.

⁸⁹ *Id.* at art. VIII.

or negative, to safeguard OSCH.⁹⁰ Its text prohibiting “claim[s] of sovereignty”⁹¹ may implicitly even caution against it, aside from any intention under the Convention on the International Liability for Damage Caused by Space Objects⁹² to prevent “damage ... to a space object ... or property on board such a space object.”⁹³

An act to safeguard OSCH outside that permitted to a State over an object to which it maintains jurisdiction, control or ownership, for which it is liable as the launching State, or absent an international accord that “facilitate[s] and encourages international co-operation”⁹⁴ in that respect could be construed as a claim of sovereignty and, therefore, a violation of the Outer Space Treaty. In contrast, claims of sovereignty create such rights and obligations to safeguard CH under the UN Cultural Heritage Treaties, including the UN ICH Convention, which obligates its State Parties in respect of ICH in their individual territories.⁹⁵ Given the dichotomy between the Outer Space Treaty and the UN ICH Convention in this regard - and consistent with the proscription of the former’s Article II – under UN Cultural Heritage law, it is outside the scope of authority of any of its treaties’ State Parties to apply that law to safeguard CH in the province of humankind.

The inapplicability in outer space of existing CH treaties is predominantly due to the principle of territoriality, or the application of international law to a State’s own territory and the territories for whose external relations that State is responsible. International law can, however, apply to areas outside a State’s jurisdiction, if treaties are explicitly drafted as such.⁹⁶ That existing CH treaties have generally not been drafted as such can be attributed to several reasons. In our view, a key reasons for this is that, initially, it was understood that CH did not exist in areas beyond national jurisdiction because those areas were themselves often

⁹⁰ See *id.* art. IX; Moon Treaty, *supra* note 4, arts. 2, 4(1), 15(3); G.A. Res. 1962 (XVIII), art. 6 (Dec. 13, 1963) (introducing the concept of “due regard”).

⁹¹ Outer Space Treaty, *supra* note 3, art. II.

⁹² Liability Convention, *supra* note 4.

⁹³ *Id.* at art. 3.

⁹⁴ Outer Space Treaty, *supra* note 3, art. I.

⁹⁵ 2003 UN ICH Convention, *supra* note 19, art. 11(a). See Vienna Convention, *supra* note 21, art. 29.

⁹⁶ Vienna Convention, *supra* note 21, art. 29.

thought to be devoid of human activity and, thus, devoid also of historical and cultural presence. Other reasons include the fear of encroaching jurisdiction; the challenge of reaching agreement over jurisdictional voids or areas of overlapping jurisdiction; and the risk of deadlock on overall treaty negotiations.

These challenges have, however, been overcome in international treaty law which apply outside areas of national jurisdiction in order to safeguard CH. In those instances, the law evolved, acknowledging that continuing human engagement outside these areas resulted, and will continue to result, in the creation of CH that merits safeguarding (i.e., the Antarctic Treaty,⁹⁷ the UNCLOS⁹⁸ and the 2001 UN UCH Convention⁹⁹). This article does not advise that the texts of the Outer Space Treaty or the 2003 UN ICH Convention are amenable to extending jurisdiction over OSCH. In our view, *de lege ferenda* indicates that to safeguard OSCH, a new space law instrument could be written to allow its rules to apply in this specific context beyond areas of national jurisdiction¹⁰⁰ and, thus, for jurisdiction over OSCH to be amplified beyond that as provided for under the UN Space Treaties¹⁰¹ — or even beyond that based on national origin, which is typically the basis for jurisdiction under the UN Cultural Heritage Treaties. This could be accomplished while conserving rights of control, ownership and liability over the OSCH consistent with existing space, property, and or intellectual

⁹⁷ Antarctic Treaty, *supra* note 18 (safeguarding of Historic Sites and Monuments formally introduced in 1991 at Annex V).

⁹⁸ UNCLOS, *supra* note 18, art. 149 (“All objects of an archaeological and historical nature found in the Area [or seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction,] shall be preserved or disposed of for the benefit of mankind as a whole.”); *Id.* at art. 303(1) (“States have the duty to protect objects of an archaeological and historical nature found at sea and shall cooperate for this purpose.”).

⁹⁹ 2001 UN UCH Convention, *supra* note 19, arts. 11(1), 12 (“States Parties responsible to protect [UCH] in the Area in conformity with this Convention and Article 149 of [UNCLOS]”).

¹⁰⁰ Vienna Convention, *supra* note 21, art. 29 (“[u]nless a different intention appears [or] otherwise established”); *Id.* at art. 31(1) (“A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.”).

¹⁰¹ UN Space Treaties, *supra* note 4. *E.g.*, ISS Agreement, *supra* note 32, art. 5(2). *See* Outer Space Treaty, *supra* note 3, art. VIII; Registration Convention, *supra* note 4, art. 2(2); Rescue and Return Agreement, *supra* note 4, arts. 3-5; G.A. Res. 1962 (XVIII), art. 7 (Dec. 13, 1963); G.A. Res. 37/92, Annex F(8) (Feb. 10, 1982).

property law,¹⁰² thereby, allowing that “such a framework ...be aligned with the Outer Space Treaty and provide legal certainty and predictability”¹⁰³ for spacefaring actors.

B. Terminology Should Reflect Principles Underlying OSCH

A new OSCH instrument should reflect modern space and CH norms. It should account for the effect of advanced technologies on legal and moral principles particularly as they have modified, or condemn, previous ones. It should also adequately express physical and ethical considerations particular to human interaction with outer space. In kind, the legal qualification for OSCH should reflect contemporary contributions to human space exploration by spacefaring and non-spacefaring States, as well as the historical contributions of communities existing, or having existed, within the territories of modern States. A new legal framework over OSCH should not turn a blind eye to, but instead acknowledge such essential contributions by modern non-spacefaring States¹⁰⁴ and pre-colonized and ancient societies.¹⁰⁵

Terminology can be inadequate if it conveys a delusive understanding of which human communities have contributed to space exploration. It can fail to recognize the contributions of modern non-spacefaring States that have facilitated human space exploration by spacefaring States. It can also narrate, and inherently contribute to, a historical subjugation of communities, thus failing to recognize such essential contributions by pre-colonialized and ancient

¹⁰² *E.g.*, Law of the Russian Federation No. 5663-1 of Aug. 20, 1993 on Space Activities, at art. 16 [hereinafter Russian Space Law]. *See supra* note 30. *See also* 2005 UN CD Convention, *supra* note 9, Preamble (addressing intellectual property rights in sustaining those involved in cultural creativity).

¹⁰³ Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 248.

¹⁰⁴ For example, satellites in Australia and Spain also supported telemetry for the 1969 *Apollo 11* mission. See Sarkissian, J. (2001). On Eagle's Wings: The Parkes Observatory's Support of the Apollo 11 Mission. Publications of the Astronomical Society of Australia, 18(3), 287-310. doi:10.1071/AS01038; and Jose M Urech, Space Communication Stations in Spain and their Contributions to Solar System Exploration, 57th International Astronautical Congress (02 October 2006 - 06 October 2006 – Valencia, Spain) <https://doi.org/10.2514/6.IAC-06-E4.4.04>.

¹⁰⁵ For All Moonkind OSCH Segmentation Research Initiative, *supra* note 32. 2005 UN CD Convention, *supra* note 9, art. 7 (“recogniz[ing] the important contribution of [those] involved in the creative process, cultural communities [and] their central role in ... the diversity of cultural expressions”).

societies, particularly before they may have undergone destabilizing effects, for instance, from colonization or other calamitous political, migratory or environmental events, that ultimately curbed their continued contributions. The whole of these contributions form part—independently, or as formative factors — of OSCH. They should be researched, identified¹⁰⁶ and integrated into the legal qualification of OSCH, thereby, providing for the interests of all UN Member States and Permanent Observers in defining and safeguarding OSCH irrespective of their contemporary degree of economic or scientific development.¹⁰⁷

Generally, adverse terminology should be avoided. Terms such as those embedded in colonial discourse,¹⁰⁸ for example, could exacerbate the perceived incapacity of States to develop (past, present, or future) societies, including in outer space; broaden political divides between States at varying spacefaring stages; aggravate historical woes; deepen socio-economic and cultural biases; and ultimately create conflicts in the negotiating process for a new space law instrument to safeguard OSCH.

C. OSCH Is Culturally and Historically Comprehensive

It would be flawed to categorize OSCH within a national (rather than an international) legal framework as CH on Earth has generally been organized, albeit imperfectly.¹⁰⁹ By acknowledging and establishing a place in CH law for the irrefutable contributions by a plethora of cultures over human history, the law not only mitigates perceived disparities in national contributions to human space exploration, but also recognizes legal standing with a wider diversity of States to participate in negotiating rules to regulate and safeguard OSCH. This thereby ensures that such initiatives will be “carried out for the benefit and in the interests of all countries”¹¹⁰ – not just those of spacefaring States, or those States which

¹⁰⁶ For All Moonkind OSCH Segmentation Research Initiative, *supra* note 32.

¹⁰⁷ See Outer Space Treaty, *supra* note 3, art. I.

¹⁰⁸ Such terms include, for example, “civilization,” “civilized” and “developed.”

¹⁰⁹ See Fifty-Ninth COPUOS Report, *supra* note 10, ¶ 296(2)(d); *UNESCO Database of National Cultural Heritage Laws*, UNESCO.ORG, <https://en.unesco.org/culnatlaws> (last visited June 22, 2021); UN CH Treaties, *supra* note 19.

¹¹⁰ Outer Space Treaty, *supra* note 3, art. I. See, e.g., 1972 UN WH Convention, *supra* note 19, art. 6 (CH “constitutes a world heritage for whose protection it is the duty of the international community [to] identif[y], protect[], conserv[e] and present[]”).

generate tangible OSCH. This legal premise promises that “due regard to the corresponding interests of all other States Parties to the [Outer Space Treaty]”¹¹¹ be recognized for the contribution to space exploration that communities or individuals existing, or that historically existed, within their modern territories have made,¹¹² and may make, beyond that contribution made by those existing in contemporary spacefaring States.

The “diverse forms ... culture [has] take[n] across time and space ... is embodied in the uniqueness and plurality of the identities and cultural expressions of the peoples and societies [that have cumulatively] ma[d]e up humanity[‘s]”¹¹³ capacity for space exploration. “Due regard sh[ould] be paid to the interests of present and future,”¹¹⁴ but also past generations that contributed to the creation of OSCH. Understanding OSCH as nascent of a collective of human achievements over time and cultures not only ultimately “avoid[s] the extension of present national rivalries into this new field,”¹¹⁵ but it yields a more accurate understanding of what it is.¹¹⁶ It also theoretically advances that the regime over it be framed in a wide multilateral instrument consistent with the UN treaty regime, which could secure a more effective and diplomatically satisfactory “international mechanism for cooperation”¹¹⁷ to safeguard it.

¹¹¹ Outer Space Treaty, *supra* note 3, art. IX. G.A. Res. 41/65, Annex, IV, XII (Dec. 3, 1986).

¹¹² *E.g.*, G.A. Res. 62/200, 1 (Dec. 19, 2007) (“The year 2009 marks the 400th anniversary of the first use of the telescope for astronomical observation by the Italian scientist Galileo Galilei in 1609.”) UNESCO General Conference, *Proclamation of 2009 and the United Nations International Year of Astronomy*, U.N. Doc. 33 C/67, Ex. n. ¶ 5 (Oct. 11, 2005) (“hav[ing] great influence [on] understanding of the universe[,] technological, social and economic development[,] science, philosophy, religion and culture.”).

¹¹³ 2005 UN CD Convention, *supra* note 9, Preamble.

¹¹⁴ Moon Treaty, *supra* note 4, art. 4(1).

¹¹⁵ G.A. Res. 1472 (XIV), A (Dec. 12, 1959).

¹¹⁶ See ISECG Report, *supra* note 55, at 6 (“tangible enhancements to the quality of life” and “intangible philosophical benefits”); W.H. Siegfried, *Space Colonization—Benefits for the World*, in SPACE TECHNOLOGY AND APPLICATIONS INTERNATIONAL FORUM AIP CONFERENCE PROCEEDINGS 1270-1278 (2003).

¹¹⁷ Fifty-Ninth COPUOS Report, *supra* note 10, ¶ 208. See One Small Step Act, H.R. 3766, 116th Cong. § 2(a) (2019) (unilateral measures of “limited efficacy” without “binding international agreement”).

D. The Pre-Eminence of Time in the Determination of OSCH Should Be Diminished

In legal theory, time presents a multidisciplinary challenge particularly when considering the intersection of varying subject areas, as in the case with space law and CH law. Under international law, CH is considered as such only after a determined (explicit,¹¹⁸ or implicit¹¹⁹) amount of time has elapsed. The amount of time required to have elapsed for tangible objects to qualify as CH varies based on its category and the UN Cultural Heritage Treaty under which it is regulated. Even intangible CH, that is by definition constantly recreated, requires intergenerational continuity and, thus, elapsed time in order to qualify. CH beyond Earth spans several generations,¹²⁰ following the first successful orbital launch of *Sputnik 1* by the Union of Soviet Socialist Republics in October 1957. The relative novelty, until now, of human presence in outer space may present a general absence of elapsed time.¹²¹ This can be problematic when utilizing time as a factor to qualify OSCH.

Custom is traditionally a key source of international law. It does not arise from conventional law, but from consistent State practice derived from a legal sense of obligation, or *opinio iuris*.¹²²

¹¹⁸ 1970 UN CP Convention, *supra* note 19, art. 1 (“antiquities more than [100] years”); 2001 UN UCH Convention, *supra* note 19, art. 1 (“partially or totally under water, periodically or continuously, for at least 100 years”).

¹¹⁹ 1970 UN CP Convention, *supra* note 19, art. 1 (“objects of paleontological interest; products relating to history... products of archaeological excavations”); 2001 UN UCH Convention, *supra* note 19, art. 1 (“with their archaeological and natural context”); 1954 UN Hague Convention, *supra* note 19, art. 1 (“historical”); 1972 UN WH Convention, *supra* note 19, art. 1 (“from the point of view of history”); 2003 UN ICH Convention, *supra* note 19, art. 2 (“from generation to generation”).

¹²⁰ Generational missions can be seen to include: *Soyuz* (USSR/Russia) ((1966-present; 1680+ launches) “Launches.” *ROSCOSMOS*. Accessed September 29, 2021. en.roscosmos.ru/launch/) and *Apollo* (USA) ((1961-1972; *Apollo* 1-17) “The Apollo Missions.” *Apollo*. February 1, 2019. Accessed September 29, 2021. nasa.gov/mis-sion_pages/apollo/missions/index.html).

¹²¹ Twelve humans (1969-1972) have been on a foreign planet (Moon). “Who has Walked on the Moon?” *NASA Science: Solar System Exploration*. April 28, 2021. Accessed September 29, 2021. solarsystem.nasa.gov/news/890/who-has-walked-on-the-moon/. First human Earth orbit in 1961 (“Launches.” *ROSCOSMOS*. Accessed September 29, 2021. en.roscosmos.ru/20786/); continuous since 2000 (“International Space Station Facts and Figures?” *NASA*. September 7, 2021. Accessed September 29, 2021. nasa.gov/feature/facts-and-figures/).

¹²² Statute of the International Court of Justice, Oct. 24, 1945, art. 38, 33 U.N.T.S. 993.

With respect to space law, however, human engagement with outer space has been juridically determined to be so novel that the required passage of time implied by custom could be disregarded.¹²³ This inspired the principle of instant custom.

In structuring a legal framework for OSCH, utilizing the principle of instant custom may help bridge conceptual challenges in qualifying and safeguarding that heritage. In this situation, which we term a *legal métissage*, elements of disparate legal regimes that intersect with respect to a specific subject matter are integrated. Conceding that “the passage of only a short period of time is not necessarily, or of itself, a bar to the formation of a new rule of customary international law”¹²⁴ could abate the intergenerational requirement for intangible OSCH or requirement of elapsed time for tangible OSCH under existing CH law principles.

The safeguarding of OSCH should not be foregone due to the relatively short span of human presence in outer space, nor the short but accelerated pace of technological development facilitating it because doing so would fail to account for the millennia of cumulative human ingenuity on Earth that ushered that capability. Cumulative human ingenuity nurtured in culture could be identified as an indispensable *intergenerational* component of modern science, technology and understanding of Earth in its context within the Universe¹²⁵ without which modern human space exploration would not be possible. It could thereby potentially account for the time elapsed component required for the qualification of CH.

¹²³ See G. A. Res. 1721 (XVI), A (Dec. 20, 1961) (“urgent need to strengthen international co-operation”); G.A. Res. 1962 (XVIII), ¶ 4 (Dec. 13, 1963).

¹²⁴ North Sea Continental Shelf (Den. v. Neth.), Judgment, 1969 I.C.J. 3, ¶74 (Feb. 20) (“within ... short ... period ... though it might be, State practice ... should have been both extensive and virtually uniform in the sense of the provision invoked; - and should moreover have occurred ... to show a general recognition that a rule of law or legal obligation is involved”).

¹²⁵ See, e.g., *IAU Rules and Conventions*, INTERNATIONAL ASTRONOMICAL UNION, <https://planetarynames.wr.usgs.gov/Page/Rules> (last visited July, 6, 2021)(e.g., planetary nomenclature from Greek/Roman mythology); Memorandum, UNESCO and the IAU Sign Key Agreement on Astronomy and World Heritage, UNESCO, <https://whc.unesco.org/en/news/498> (Oct. 30, 2008) (documenting astronomical heritage on Earth (i.e., monuments, sites & landscapes; instruments and & archives) evidencing astronomical knowledge).

Despite the current paucity of intergenerationality traditionally required for heritage formation that could be overcome by employing instant custom, its importance can in addition be abated. The relatively accelerated pace of technological advances facilitating human space exploration in little over half a century also nurtures an increased availability of potential OSCH worth safeguarding. This association raises important considerations. As advancing space technologies spur the creation of tangible objects, planetary sites of cultural significance and intangible knowledge and practices that result from human interaction with outer space, the question is raised as to if, and when, those human markers could or should be qualified as OSCH and safeguarded.

Inevitably, relatively compressed periods of time alter the historical lens through which we have traditionally qualified heritage. That historical lens, nevertheless, has augmented our acumen to recognize and create legal rules to categorize CH worth safeguarding in view of a wide diversity and quantity of CH on Earth, as well as established CH laws and practice inspired by anthropology, archaeology, history and other social sciences. It is through this lens that we can better discern the extraordinary and universal value of the collaborative cultural, scientific and technical contributions of humanity over time that should qualify OSCH and dictate its safeguarding.

The unprecedented importance of a forward rather than backward looking approach to CH also diminishes the significance of time. Heeding to the traditional latter approach in order to identify OSCH may even be injurious. If OSCH is not timely identified, qualified and safeguarded soon after it occurs, it may become increasingly vulnerable to “harmful impacts.”¹²⁶ “[N]otwithstanding the precautionary measures to be taken by States and international intergovernmental organisations involved in the launching of space objects, damage may on occasion be caused by such objects.”¹²⁷ “Activities directed at”¹²⁸ or “activities incidentally affecting”¹²⁹ the

¹²⁶ The Hague Int’l Space Res. Governance Working Grp., *Building Blocks for the Development of an International Framework on Space Resource Activities*, ¶10 (Nov. 12, 2019), [universiteitleiden.nl/en/law/institute-of-public-law/institute-of-air-space-law/the-hague-space-resources-governance-working-group](https://www.universiteitleiden.nl/en/law/institute-of-public-law/institute-of-air-space-law/the-hague-space-resources-governance-working-group) [hereinafter 2019 Hague WGGB].

¹²⁷ Liability Convention, *supra* note 4, Preamble.

¹²⁸ 2001 UN UCH Convention, *supra* note 19, art. 1(6).

¹²⁹ *Id.* at art. 1(7).

heritage may also, “directly or indirectly, physically disturb or otherwise damage”¹³⁰ OSCH. Not timely identifying, qualifying and safeguarding OSCH could also cause it to be lost in the collective memory of humanity before it has even become generally known on account of humans’ overall physical inaccessibility to and lack of widespread knowledge about it by those outside the space industry,¹³¹ *i.e.*, *esse est percipi*.¹³² A legal mechanism should be established preemptively in order to effectively safeguard OSCH.

If the traditional pre-eminence of time is not mitigated, its practical perils could pose a more significant threat to OSCH in a vast Universe than they pose to CH on Earth whose presence continues to be rediscovered, arguably, with more facility resulting from gradually increased accessibility, even in the profound depths of the Earth’s oceans. Determining and safeguarding OSCH even without the legal factor of time elapsed would contemporarily acknowledge and consider its unique nature. It could meet a more immediate and “growing public interest in and appreciation”¹³³ for OSCH as a means of contemporaneous identity and association. Doing so could further inspire, in current time, the spirit and dedication of more humans to explore outer space and to utilize the knowledge therein acquired to further improve the quality of human life on Earth. This could proximately “open unlimited possibilities for the creative ability of the human spirit and ... constitute ... an incentive ... to make a better and finer world.”¹³⁴

¹³⁰ *Id.* at art. 1(6); *see also* annex III (“surrounding natural environment to damage”).

¹³¹ *See* Outer Space Treaty, *supra* note 3, art. XI (State Parties “agree to inform ... the public ... of the nature, conduct, locations, and results of such [OS] activities”); Moon Treaty, *supra* note 4, art. 5(1) (State Parties “shall inform ... the public ... of their activities concerning the exploration and use of the moon”).

¹³¹ *See* Outer Space Treaty, *supra* note 3, art. XI (State Parties “agree to inform ... the public ... of the nature, conduct, locations, and results of such [OS] activities”); Moon Treaty, *supra* note 4, art. 5(1) (State Parties “shall inform ... the public ... of their activities concerning the exploration and use of the moon”).

¹³² To be is to be perceived.

¹³³ 2001 UN UCH Convention, *supra* note 19, Recitals.

¹³⁴ Press Release, NAT’L. AERONAUTICS AND SPACE ADMIN., Apollo 11 Goodwill Messages, at 12 (July 13, 1969) https://history.nasa.gov/ap11-35ann/goodwill/Apollo_11_material.pdf.

IV. ESTABLISHING PRINCIPLES FOR AN OSCH REGIME

ICH law principles are arguably considered to represent the most comprehensive understanding of CH. Several of those principles can advance space law tenets, including the “peaceful exploration and use of outer space”¹³⁵ and “international co-operation and understanding”¹³⁶ by enhancing the connection between culture and identity.¹³⁷ In consideration of these space law tenets, the following are principles that may underlie an OSCH legal regime.

A. OSCH Is Holistic

A principle that may underlie a legal regime for OSCH is that it is holistic. ICH links *intangible* “practices, representations, expressions, knowledge [and] skills”¹³⁸ with *tangible* “instruments, objects, artefacts and cultural spaces,”¹³⁹ but concedes that this intangible/tangible distinction does not reflect how humans experience or value CH. As tangible OSCH is inextricably constituted by both tangible and intangible elements, and intangible OSCH can be realized also in tangible manifestations, the holistic principle should underlie the legal qualification and regulation of OSCH.

In existing CH law practice, occasionally there is some proximity between tangible and intangible CH under distinct UN Cultural Heritage Treaty lists.¹⁴⁰ This has led to divergent (even litigious) appreciations of CH on Earth, but the divergence between

¹³⁵ Outer Space Treaty, *supra* note 3, art. IX.

¹³⁶ *Id.* at art. III.

¹³⁷ See International Covenant on Economic, Social and Cultural Rights, art. 1, Dec. 16, 1966, 993 U.N.T.S. 3 (“All peoples have the right of self-determination. By virtue of that right they ... freely pursue their economic, social and cultural development.”); *Id.* at art. 15 (“right of every one [t]o take part in cultural life [, t]o enjoy the benefits of scientific progress ... The steps to be taken by the States Parties to the present Covenant to achieve ... this ... include those necessary for the conservation, the development and the diffusion of science and culture”) [hereinafter International Covenant]. See also G.A. Res. 217 (III), art. 27 (Dec. 10, 1948); UNESCO Cultural Diversity Declaration, *supra* note 27, art. 5 (“Cultural rights are an integral part of human rights, which are universal, indivisible and interdependent.”).

¹³⁸ 2003 UN ICH Convention, *supra* note 19, art. 2(1).

¹³⁹ *Id.*

¹⁴⁰ UN CH Treaties, *supra* note 19. Compare 1972 UN WH Convention, *supra* note 19 (UNESCO World Heritage List: Pyrénées - Mont Perdu), with 2003 UN ICH Convention, *supra* note 19 (Representative List of the Intangible Cultural Heritage of Humanity: Summer solstice fire festivals in the Pyrenees).

intangible and tangible elements is less pronounced, less neglectable, in OSCH. Maintaining a conceptual continuum between tangible and intangible OSCH comprehensively reflects (without diverging and diluting) the holistic value of the OSCH, exclusive of which it is depreciated by a deceptive distinction between the two. In fact, tandem reliance on intangible and tangible elements of OSCH is necessary to materialize human space exploration. The more traditional dichotomy between intangible and tangible CH otherwise created (even in the evolving UN Cultural Heritage Treaty regime) should be avoided in an OSCH instrument, particularly as space, international and national, laws, nonetheless, acknowledge the legal distinction between intangible and tangible property. The dichotomy defers to legal rights and obligations over space objects, including “jurisdiction,”¹⁴¹ “control,”¹⁴² “ownership,”¹⁴³ liability¹⁴⁴ and responsibility¹⁴⁵ established under the UN Space Treaties.¹⁴⁶ It also, however, allows for due regard for the cultural interests of other States and civil society over OSCH.¹⁴⁷

B. OSCH Is Non-Hierarchical

A second principle that may underlie a legal regime for OSCH is non-hierarchization wherein which the importance of CH elements is valued against themselves, as opposed to against each other.¹⁴⁸ The principle attests that each element of OSCH is equally

¹⁴¹ Outer Space Treaty, *supra* note 3, art. VIII. See Rescue and Return Agreement, *supra* note 4, art. 5; Registration Convention, *supra* note 4, art. 2(2); Moon Treaty, *supra* note 4, art. 12(1).

¹⁴² Outer Space Treaty, *supra* note 3, art. VIII.

¹⁴³ *Id.*

¹⁴⁴ *Id.* at art. VII. See generally Liability Convention, *supra* note 4.

¹⁴⁵ Outer Space Treaty, *supra* note 3, art. VI; Moon Treaty, *supra* note 4, arts. 8, 14.

¹⁴⁶ UN Space Treaties, *supra* note 4.

¹⁴⁷ See International Covenant, *supra* note 137, art. 15.

¹⁴⁸ See United Nations Educ., Sci. and Cultural Org., *Ethical Principles for Safeguarding Intangible Cultural Heritage*, 6, Decision 10. Com 15.A

(“Each community ... should assess the value of its own intangible cultural heritage and this intangible cultural heritage should not be subject to external judgements of value or worth.”); Int’l Council on Monuments and Sites, *Charter Principles for the Analysis, Conservation and Structural Restoration of Architectural Heritage*, art. 1(2) (Nov. 2011) (“Value and authenticity of architectural heritage cannot be based on fixed criteria because the respect due to all cultures also requires that physical heritage be considered within the cultural context to which it belongs”).

important to the groups who have a connection to it, thereby lending to a more inclusive framework for OSCH.¹⁴⁹ It validates the varied connections with OSCH that people throughout civil society may experience regardless of their State's spacefaring capacity and "irrespective of [its] degree of economic or scientific development."¹⁵⁰ This principle lends to a broad multilateral instrument that considers the significance of OSCH for all human communities.

C. Communities, Not States, Are the Key Holders and Transmitters Of OSCH

A third principle that may underlie a legal regime for OSCH is the focus on "communities, groups and, where appropriate, individuals,"¹⁵¹ rather than on States, particularly spacefaring States, as the keyholders who "create, maintain and transmit"¹⁵² OSCH. Attenuating the role of the modern State emphasizes the role in the development of OSCH to any one or more keyholders, keyholders attributed to more than one State,¹⁵³ and or keyholders who only now exist historically.¹⁵⁴ The principle supports the notion that space objects and or agents of modern spacefaring States are "envoys of [hu]mankind"¹⁵⁵ and provides for all people to assert OSCH as part of their CH. In addition, it underscores the importance of

¹⁴⁹ See Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 120 (view expressed: "all delegations should agree to respect the history of humans on the Moon, including the significance ...for society"); NAT'L AERONAUTICS AND SPACE ADMIN., *NASA's Recommendations To Space-Faring Entities: How To Protect And Preserve The Historic And Scientific Value Of U.S. Government Lunar Artifacts* 5 (July 2011), nasa.gov/directorates/heo/library/reports/lunar-artifacts.html ("multilateral approach is developed to reflect various nations' views on lunar hardware of scientific and historic value") [hereinafter NASA Guidelines].

¹⁵⁰ Outer Space Treaty, *supra* note 3, art. I.

¹⁵¹ 2003 UN ICH Convention, *supra* note 19, art. 15.

¹⁵² *Id.*

¹⁵³ ISS Agreement, *supra* note 32; 2020 Emirate Mars Mission (*Hope* orbiter), *supra* note 32.

¹⁵⁴ See For all Moonkind, Outer Space Cultural Heritage Segmentation Charts (on file with For All Moonkind Cultural Heritage Segmentation Research Initiative).

¹⁵⁵ Outer Space Treaty, *supra* note 3, art. V; G.A. Res. 1962 (XVIII), art. 9 (Dec. 13, 1963).

“each State Party to endeavor to ensure the widest possible participation of [these keyholders in the] transmi[ssion]”¹⁵⁶ of OSCH. The “interests [in OSCH] of the inhabitants of these territories are paramount.”¹⁵⁷ There is a responsibility “to ensure, with due respect for the culture of the peoples concerned, ... just treatment [of their interests] ... within the [UN] system.”¹⁵⁸

This principle, acknowledging collective temporal and cultural contributions, sustains that OSCH is nascent from a broad sector of humanity in incremental cultural, scientific and technical contributions over history - and not merely nascent from contemporaneous contributions of States, their instrumentalities, or private actors. The accumulation and evolution of these cultural heritage segments reflects human history on Earth and simultaneously continues to mark the trajectory for the creation OSCH.¹⁵⁹ It acknowledges especially unwitting past and present contributions to OSCH while nurturing future contributions.

This third principle prescribes that international cooperation in pursuance of an OSCH instrument be as diverse and inclusive as possible. It lends to an “international legal framework ... developed in a manner that address[es] the concerns of all States,”¹⁶⁰ rather than “to norms, guidelines, standards or other measures that would limit the access of nations with emerging space capabilities.”¹⁶¹ Acknowledging a broad breadth of keyholders as transmitters of OSCH may help in “maintaining international peace and security and promoting international co-operation and understanding.”¹⁶² The view behind this principle has, with limited application, been peripherally present in political, cultural and legal discourse since

¹⁵⁶ 2003 UN ICH Convention, *supra* note 19, art. 15. See Moon Treaty, *supra* note 4, art. 4(2) (“as wide as possible”); 2019 Hague WGGB, *supra* note 126, § 1.1 (“take into account all interests and benefits all countries”).

¹⁵⁷ U.N. Charter art. 73.

¹⁵⁸ *Id.*

¹⁵⁹ See ISECG Report, *supra* note 55, at 1.

¹⁶⁰ Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 35.

¹⁶¹ *Id.*

¹⁶² Outer Space Treaty, *supra* note 3, art. III.

the onset of space exploration.¹⁶³ Codifying it in a broad international treaty “for the benefit and in the interests of all countries,”¹⁶⁴ however, could leverage its capacity to garner wide multilateral support from both spacefaring and non-spacefaring States in deference to the “invaluable role of the intangible cultural heritage as a factor in bringing human beings closer together and ensuring exchange and understanding among them.”¹⁶⁵

D. OSCH Is Recreated in Response to Our Environment and Interaction With Nature and History

A fourth principle that may underlie a legal regime for OSCH is that CH is not static, but rather “constantly recreated by communities and groups in response to their environment, their interaction with nature and their history.”¹⁶⁶ This fourth principle is realized continuously and will become more prominent as the substance, frequency and duration of human interaction with OS increases over time. As our knowledge of the Universe expands and our technology and capacities to interact with it increase, humans yield a greater quantity and diversity of OSCH. This principle supports a legal mechanism to sustainably and “incrementally address[] at the appropriate time”¹⁶⁷ the qualification and safeguarding of future OSCH.

E. Qualifying and Safeguarding OSCH Should Be Determined Collaboratively by States With a Cultural, Historical, Scientific or Technological Link to it

A fifth principle, derived from underwater CH law principles, that may underlie a legal regime for OSCH is that of verifiable links.¹⁶⁸ Identifying OSCH to safeguard and the means in which to

¹⁶³ William Safire, *B.C./A.D. or B.C.E./C.E.?*, THE N.Y. TIMES MAGAZINE, Aug. 17, 1997 (“under God” excluded from *Apollo 11* plaque, yet nod with “A.D.”); Nat’l Aeronautics and Space Admin., *Where No Flag Has Gone Before: Political and Technical Aspects of Placing a Flag on the Moon*, NASA Contractor Report 188251 (1993), historycollection.jsc.nasa.gov/JSCHistoryPortal/history/flag/flag.htm (“We came in peace for all [hu]mankind” - not ‘for Americans’; but American, not UN, flag erected).

¹⁶⁴ Outer Space Treaty, *supra* note 3, art. I.

¹⁶⁵ 2003 UN ICH Convention, *supra* note 19, art. 4.

¹⁶⁶ *Id.* at art. 2(1).

¹⁶⁷ 2019 Hague WGBB, *supra* note 126, ¶ 2.

¹⁶⁸ 2001 UN UCH Convention, *supra* note 19, art. 11(4).

do so should be determined collaboratively by States with a verifiable link, especially a cultural, historical, archaeological, scientific or technological link, to the OSCH concerned.¹⁶⁹ A new space instrument should “reaffirm the importance of a link between culture and development for all countries, particularly”¹⁷⁰ not yet spacefaring countries, and “support actions undertaken nationally and internationally to secure recognition of the true value of this link.”¹⁷¹ This link may be expressed potentially by modern States to which there is an association with an OSCH segment and may be drawn upon to partake in the qualification and safeguarding measure for that element of OSCH.¹⁷² A formal mechanism of notification and consultation, therefore, could be strengthened around that already established in space law.¹⁷³

V. SAFEGUARDING INTANGIBLE OSCH

The “deterioration or disappearance of any item of cultural or natural heritage constitutes a harmful impoverishment of the heritage of all the nations of the world.”¹⁷⁴ Broad international cooperative measures to safeguard, develop and promote OSCH should be established in a new legal instrument to prevent this and or its “irrevocable loss [in the] collective memory” of humanity.¹⁷⁵

¹⁶⁹ See, e.g., *id.*; UNCLOS, *supra* note 18, art. 149.

¹⁷⁰ 2005 UN CD Convention, *supra* note 9, art. 1(f).

¹⁷¹ *Id.*

¹⁷² See e.g., 2001 UN UCH, *supra* note 19, arts. 11-12.

¹⁷³ See *id.*; Fifty-Ninth COPUOS Report, *supra* note 10, ¶ 296(2)(c) (e.g., registration & notification procedures); Outer Space Treaty, *supra* note 3, arts. V., IX-XII; Rescue and Return Agreement, *supra* note 4, arts. 1-3, 5; Registration Convention, *supra* note 4, art. 2; Moon Treaty, *supra* note 4, arts. 5, 7.

¹⁷⁴ 1972 UN WH Convention, *supra* note 19, at 1.

¹⁷⁵ United Nations Educ., Sci. and Cultural Org., *UNESCO Memory of the World Programme*, General Guidelines, Approved Text D, art. 2.1.2 (Dec. 2017). See, e.g., 2003 UN ICH Convention, *supra* note 19, Preamble (“international community should contribute, together with the SPs to this Convention, to the safeguarding”); 2001 UN UCH Convention, *supra* note 19, Preamble (“States, international organizations, scientific institutions, professional organizations, archaeologists, divers, other interested parties and the public at large is essential for the protection of underwater cultural heritage”); 1972 UN WH Convention, *supra* note 19, art. 7 (“international cooperation and assistance designed to support [SP]s to the Convention in their efforts to conserve and identify”); 1970 UN CP Convention, *supra* note 19, art. 2(1) (“international co-operation constitutes one of the most efficient means of protecting”).

States will have to undertake positive and negative obligations in order to safeguard OSCH. Safeguarding would entail: “measures aimed at ensuring viability of the intangible [and tangible] cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage.”¹⁷⁶ These measures express two modern tenets of CH law: first, heritage changes depending on how we relate to it, including over time and with the socio-cultural context in which it is valued; and second the law’s role is not to “freeze” heritage in time forever. Unlike safeguarding, protection and preservation imply a static, and arguably increasingly limited, view of CH given the growing importance of the intangible character of CH in legal theory.

Using ICH law principles to qualify OSCH would facilitate its safeguarding by increasing awareness about it among humans who have little, if no knowledge or physical access to it. It would increase the ability of more humans to share in it. Rules can be created to safeguard OSCH’s intangible character rather than solely “avoidance and mitigation of potentially harmful impacts”¹⁷⁷ to CH sites or objects.¹⁷⁸ Safeguarding OSCH’s intangible features could transcend practical considerations caused by extra-terrestrial distances, extraordinary physical obstacles and threats of natural and human incidence. It could enhance access to OSCH and the opportunity for potentially all humans to share in it, thereby, “enabling [them] to create and [or] strengthen their means of cultural expression [for space faring capacity], including their cultural industries, whether nascent or established at the local, national and international levels.”¹⁷⁹ Moreover, by broadening access to OSCH through ICH safeguarding principles, a new OSCH instrument could advance the 1948 UN Universal Declaration of Human Rights, particularly its tenet that every human has the “right freely to participate in ... cultural life[;] to share in scientific advancement and its benefits ”¹⁸⁰ and “to realiz[e],

¹⁷⁶ 2003 UN ICH Convention, *supra* note 19, art. 2(3).

¹⁷⁷ 2019 Hague WGBB, *supra* note 126, § 10.

¹⁷⁸ *See id.*; 2020 Artemis Accords, *supra* note 12, § 9; COPUOS Space 2030 Agenda, *supra* note 8, ¶ 20(2.8).

¹⁷⁹ 2005 UN CD Convention, *supra* note 9, art. 2(4).

¹⁸⁰ G.A. Res. 217 (III), art. 27 (Dec. 10, 1948).

through national effort and international co-operation[,] the ... cultural rights indispensable for his dignity and the free development of his personality.”¹⁸¹

A. *Categorizing OSCH Into Distinct Domains*

It is recommended that a mechanism to categorize OSCH into distinct domain-based CH lists on which they might be inscribed, if so qualified, be created. The domains could inspire three lists categorizing *intangible* elements of OSCH: first, “knowledge and practices concerning nature and the Universe”;¹⁸² second “social practices, rituals and festive events;”¹⁸³ and third, “expressions, including language as a vehicle of” OSCH.¹⁸⁴ The domain-based CH lists would inevitably include also *tangible* elements of OSCH¹⁸⁵ located in outer space, including on the Moon or on other celestial bodies, associated with the intangible element in its respective domain.¹⁸⁶

In the first instance, the domain-based CH lists would memorialize the intangible and tangible elements of OSCH inscribed, thereby, supporting their safeguarding. In the second instance, the domain-based CH lists would generate an inventory from which tangible OSCH and tangible OSCH in danger could be identified in order to support their physical protection and preservation. By prioritizing the memorialization of OSCH’s intangible elements the law can realize its CH value whether independently to, or in parallel with, any yet-to-be agreed physical means to protect or preserve its tangible elements.

i. Knowledge and Practices Concerning Nature and the Universe

A legal framework for OSCH might adopt a domain that categorizes on a list knowledge and practices concerning nature and our interaction with the universe¹⁸⁷ that have been vital to our ability

¹⁸¹ *Id.* at art. 22.

¹⁸² 2003 UN ICH Convention, *supra* note 19, art. 2(2)(d).

¹⁸³ *Id.* at art. 2(2)(c).

¹⁸⁴ *Id.* at art. 2(2)(a).

¹⁸⁵ *See id.* at art. 2(1).

¹⁸⁶ Nomination and selection criteria and mechanisms for inclusion of OSCH on such abovementioned lists are left for future research.

¹⁸⁷ *See, e.g.*, 2003 UN ICH Convention, *supra* note 19, art. 2(2)(d).

to exist physically and culturally beyond Earth. Potential intangible elements listed under this domain could be historical or contemporary knowledge and practices, as well as the “instruments, objects, artefacts and cultural spaces [existing as tangible elements in outer space] associated therewith.”¹⁸⁸ The elements in this domain may relate, *inter alia*, to: science, including the development of materials,¹⁸⁹ supporting human space exploration;¹⁹⁰ space medicine to protect the human body beyond Earth;¹⁹¹ and creative design in-
spiring and facilitating space exploration.¹⁹²

ii. Social Practices, Rituals and Festive Events

A legal framework for OSCH might adopt a domain that categorizes on a list social practices, rituals and festive events¹⁹³ comprising ongoing cultural practices performed in outer space by humans¹⁹⁴ and/or in collaboration with humans on Earth. Social practices, rituals and festive events are symbolic acts performed and “transmitted from generation to generation”¹⁹⁵ “by communities and groups in response to their environment, their interaction with nature and their history”¹⁹⁶ in outer space. It “provides them with a sense of identity and continuity.”¹⁹⁷ In addition to the practices composing the intangible elements under this domain, the domain could include also tangible elements such as the instruments, objects, artifacts and cultural spaces (*e.g.*, sites)¹⁹⁸ existing in outer space associated with the practices. Potential intangible elements

¹⁸⁸ *Id.* at art. 2(1)

¹⁸⁹ Potential examples of intangible OSCH [hereinafter Potential Intangible]: Metallurgy; creation of fabrics & plastics. Potential examples of tangible OSCH [hereinafter Potential Tangible]: Aluminum alloys; BNNT; Beta cloth.

¹⁹⁰ Potential Intangible: Physics; cartography; lasers. Potential Tangible: Radiation shields; rocket engines; objects 3D printed in space.

¹⁹¹ Potential Intangible: Lessen OS effects on physical & mental performance. Potential Tangible: Medical instruments; exercise machines; clothing.

¹⁹² Potential Intangible: Aerospace designs; geometric modelling. Potential Tangible: Telescopes; bodysuits; vehicles; modules; probes.

¹⁹³ *See, e.g.*, 2003 UN ICH Convention, *supra* note 19, art. 2(2)(c).

¹⁹⁴ Potential Intangible: Extravehicular activity; Earth-viewing. Potential Tangible: tethers; hand/ footholds; *Nikon* cameras.

¹⁹⁵ 2003 UN ICH Convention, *supra* note 19, art. 2(1).

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ Potential Tangible: Low Earth Orbit; nodes; modules; landing/crash and other archeologic sites.

listed under this domain might include, *inter alia*: specific rules of behavior;¹⁹⁹ modes of entertainment and work;²⁰⁰ and/or space agencies or organizations that govern,²⁰¹ support,²⁰² or emerge from²⁰³ space exploration. They might also include, *inter alia*, commemorative traditions, or rites, practiced in celebration²⁰⁴ and/or *in memoriam*²⁰⁵ in outer space.

Cultural practices might include annual commemorations like the UN's International Day of Human Space Flight that celebrates April 12, 1961 as the "first human space flight[] carried out by Mr. Yuri Gagarin, a Soviet citizen."²⁰⁶ They might also include rites performed when humans physically or remotely land on a celestial body. The first such ritual was in July 1969 when, together with people on Earth watching on black-and-white televisions, three humans landed on the Moon for the first time. There the American *Apollo 11* astronauts placed several objects to celebrate this milestone of humanity and *in memoriam* of those who had perished in our quest to achieve it.²⁰⁷ In these instances, the rite would be an

¹⁹⁹ Potential Intangible: Outer Space Treaty, *supra* note 3, art. XII (projected visits); Code of Conduct for the International Space Station Crew, 14 C.F.R. §1214.403 (2013); International Organization for Standardization, *Space Systems - Space Debris Mitigation Requirements*, ISO Doc. 24113:2019 (3d ed. 2019), <https://www.iso.org/standard/72383.html>.

²⁰⁰ Potential Intangible: Religious activity; education; research; zero-gravity games/sports. Potential Tangible: Canadarms; Manned Maneuvering Units.

²⁰¹ Potential Intangible: UNITED NATIONS OFFICE FOR OUTER SPACE AFFAIRS, unoosa.org/ (last visited June 15, 2021); INTERNATIONAL TELECOMMUNICATION UNION, itu.int/en/Pages/default.aspx (last visited June 15, 2021); INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, iso.org/home.html (last visited June 15, 2021).

²⁰² Potential Intangible: COMMITTEE ON SPACE RESEARCH, cosparhq.cnes.fr/ (last visited July 15, 2021); INTERNATIONAL ASTRONAUTICAL FEDERATION, iafastro.org/ (last visited July 15, 2021); Deep Space Network. See *What is the Deep Space Network*, NASA (Mar. 30, 2020), nasa.gov/directorates/heo/scan/services/networks/deep_space_network/about, for an overview of the Deep Space Network.

²⁰³ Potential Intangible: ASSOCIATION OF SPACE EXPLORERS, space-explorers.org (last visited July 15, 2021); INTERNATIONAL DARK-SKY ORGANIZATION, darksky.org (last visited July 15, 2021); space spinoff offices.

²⁰⁴ Potential Intangible: Placing of objects; live streaming landings. Potential Tangible: Flags; plaques; physical messages.

²⁰⁵ Potential Intangible: Naming landing sites; moments of silence; remembrance days. Potential Tangible: Funerary objects; human remains.

²⁰⁶ G.A. Res. 65/271, ¶ 3 (Apr. 7, 2011).

²⁰⁷ See, e.g., Plaque; Press Release, Apollo 11 Goodwill Messages, *supra* note 125, at 11 (for a list of the 73 messages from world leaders); American flag; boot print; medallions listing fallen space travelers.

intangible element; the objects and cultural spaces (*i.e.*, sites) forming part of it the tangible elements.

iii. Expressions, Including Language as a Vehicle and Manifestation of OSCH

A legal framework for OSCH might adopt a domain that categorizes on a list expressions, including language as a vehicle and manifestation of cultural heritage in outer space.²⁰⁸ Intangible elements of OSCH on this list might include, *inter alia*: expressions; space terminology; space languages; and modes of interspace and interplanetary communication.²⁰⁹ They might include expressions that entered popular language initially through actual events, but are subsequently retold, memorializing momentous occasions in human space exploration.²¹⁰ They might also comprise representations,²¹¹ phrases used in space contexts,²¹² or terminology used for off-Earth operations.²¹³ Space languages might include those used by space communities.²¹⁴ Included among intangible elements may be modes for, and means to optimize, space and inter-planetary communications, as well as the tangible elements such as the instruments, objects, artifacts and cultural spaces existing in outer space with which they are associated.²¹⁵

²⁰⁸ 2003 UN ICH Convention, *supra* note 19, at art. 2(2)(a).

²⁰⁹ Potential Intangible: Telemetry (radio; wireless; lasers). Potential Tangible: satellites; transmitters/receivers; "Snoopy Caps."

²¹⁰ Potential Intangible: Backwards count to "blast off;" "Houston, we've had a problem here." (*Apollo 13*).

²¹¹ Potential Intangible: Space agency logos; shuttle & crew patches.

²¹² Potential Intangible: *Ad Astra Per Aspera*; L/T minus; abort; Earthrise; Spacecraft Event Time.

²¹³ Potential Intangible: Periapsis/apoapsis; inferior/superior conjunction; sun synchronous orbit; nadir/zenith; up/downlink.

²¹⁴ Potential Intangible: ISS use of "Ruglish." See Megan Ansdell, *Language protocols in international human spaceflight: Time for a common tongue?*, 28 SPACE POL'Y 2, 3-4 (2012).

²¹⁵ Potential Intangible: Coding languages; virtual communication. Potential Tangible: Ham Radio; smartphones; Synchronized Position Hold, Engage, Reorient, Experimental Satellites.

VI. PHYSICAL PROTECTION AND PRESERVATION OF TANGIBLE OSCH

The domain-based CH lists could provide an inventory where instruments, objects, artefacts and cultural spaces comprising elements therein inscribed could be added to a general CH registry of tangible OSCH (*i.e.*, List of Tangible Outer Space Cultural Heritage),²¹⁶ which would support a legal mechanism to physically protect and preserve them. If needed, elements on that general CH registry of tangible OSCH could also be added to a registry of tangible OSCH in danger (*i.e.*, List of Tangible Outer Space Cultural Heritage in Danger),²¹⁷ which could invoke proximate and coordinated international efforts to implement emergency safeguarding measures.²¹⁸

To the extent possible, tangible OSCH can be protected or preserved using traditional means that include, *inter alia*, *in situ* preservation,²¹⁹ or multidimensional exclusion zones.²²⁰ Innovative methods might include technical directives customized to the nature of the object, site and its environment²²¹ and which are consistent with the Outer Space Treaty.²²² Protecting or preserving

²¹⁶ See generally Antarctic Treaty Annex V, *supra* note 18, art. 8 (“Listed Historic Sites and Monuments shall not be damaged, removed, or destroyed”); 1972 UN WH Convention, *supra* note 19, at 11 (“World Heritage List”); United Nations Educ., Sci. and Cultural Org., *UNESCO Memory of the World Register*, <https://en.unesco.org/programme/mow/register> (last visited July 15, 2021); *UNESCO Astronomy and World Heritage Initiative*, UNESCO, <https://whc.unesco.org/en/astronomy> (last visited July 15, 2021); nation CH inventories; *Moon Registry*, FOR ALL MOONKIND, moonregistry.forallmoonkind.org/ (last visited July 15, 2021).

²¹⁷ *E.g.*, 1972 UN WH Convention, *supra* note 19, art. 11(4) (“List of World Heritage in Danger”); 2003 UN ICH Convention, *supra* note 19, art. 17 (“List of Intangible Cultural Heritage in Need of Urgent Safeguarding”); *Red List Database*, Int’l Council of Museums, icom.museum/en/resources/red-lists/ (last visited July 15, 2021).

²¹⁸ *E.g.*, S.C. Res. 2199 (Feb. 12, 2015); S.C. Res. 2347 (Mar. 24, 2017). (Nomination and selection criteria and mechanisms for inclusion of OSCH on such abovementioned lists are left for future research.)

²¹⁹ See, *e.g.*, Antarctic Treaty Annex V, *supra* note 18, art. 8(4) (“shall not be damaged, removed or destroyed”); 2001 UN UCH Convention, *supra* note 19, art. 2(5).

²²⁰ *E.g.*, 1993 Russian Space Law, *supra* note 102, at art. 17(5); Artemis Accords, *supra* note 12, § 11(7); 2011 NASA Technical Guidelines, *supra* note 148, at 9. See Moon Treaty, *supra* note 4, art. 7(3); 2019 Hague WGBB, *supra* note 126, ¶ 11.

²²¹ *E.g.*, NASA Guidelines, *supra* note 149, § A1.

²²² Outer Space Treaty, *supra* note 3, art. I (“Outer space shall be free for exploration and use by all States”) *Id.* at art. IX (“shall conduct ... activities ... with due regard to ...

tangible OSCH, however, may in some cases not only be impractical, but also futile as space objects or sites could potentially: never again be seen by a human;²²³ alone succumb to natural²²⁴ or human-made threats²²⁵ that “exist or may exist in the future;”²²⁶ be superseded by other like instances;²²⁷ be impossible to safeguard given contemporaneously available scientific and technological methods; or whose safeguarding may simply even be financially or legally averse to undertake. Rules solely to protect from inadvertent or intentional interference with tangible OSCH objects, sites or the location surrounding it may also be insufficient given environmental factors affecting OSCH, which could necessitate positive obligations for safeguarding it as well. Moreover, any rules for the physical safeguarding of tangible OSCH should necessarily also include methods to memorialize it, thereby, potentially ensuring cultural access to it by all of humanity independent of its physical status.

A. *Tangible OSCH Should Have a Special Status Under the Law*

OSCH is intrinsically composed of intangible and tangible elements. If tangible elements are qualified as OSCH, in addition to being recognized for their ICH value, they would require a special status under international law to ensure their physical safeguarding while they are beyond Earth. Such status and the rules supporting it should be developed in compliance with existing space law, with a greater number of State Parties to the UN Space Treaties

interests of all other States Parties”). See Fifty-Eighth COPUOS LSC 58th Report, *supra* note 2, ¶ 247.

²²³ Potential Tangible: *Mariner 2* (launched; 1962 USA) in heliocentric orbit.

²²⁴ *E.g.*, heat, magnetic energy and ionizing radiation; galactic cosmic rays; collision with natural space objects.

²²⁵ *E.g.*, Collisions with human-made objects/space debris; plume impingement; intentional/accidental damage.

²²⁶ National Aeronautics and Space Administration Transition Authorization Act of 2017, Pub. L. No. 115-10, sec. 831(b)(1), 131 Stat. 66, 67 (2017).

²²⁷ Compare the Hubble Telescope, that was launched 1990, with the James Webb Space Telescope, that is expected to launch in 2021. See *Webb vs Hubble Telescope*, NASA, [jwst.nasa.gov/content/about/comparisonWebbVsHubble.html](https://www.nasa.gov/content/about/comparisonWebbVsHubble.html) (last visited July 16, 2021).

consolidating a more effective regime to safeguard particularly tangible OSCH.²²⁸

An initial point of compliance for a tangible element qualified as OSCH originally launched from Earth, for instance, would be that it should be subject to the 1974 Convention on Registration of Objects Launched into Outer Space.²²⁹ This Convention requires that the “launching State shall register the space object by means of an entry in an appropriate registry which it shall maintain. Each launching State shall inform the Secretary-General of the United Nations of the establishment of such a registry ... The Secretary-General shall maintain a Register with the information furnished”²³⁰ in its Outer Space Objects Index. Tangible objects qualified as OSCH would also be subject to Article VIII of the Outer Space Treaty which states that “[o]wnership of objects launched into outer space, including object landed or constructed on a celestial body, and of their component parts, is not [to be] affected by their presence in outer space or on a celestial body or by their return to the Earth.”²³¹ Although Article VIII does not impose positive or negative obligations to safeguard such objects, CH law principles could be used to create such obligations.²³²

To ensure the physical safeguarding of cultural spaces or sites of historic, inspirational and scientific nature that are qualified as tangible OSCH, a point of compliance with existing space law, for instance, would be Article II of the Outer Space Treaty, which pro-

²²⁸ Rules to support the inter or intra planetary movement and trade of tangible OSCH, as well as the proprietary rights that may relate to them if they are imported to Earth (*i.e.*, for *ex situ* preservation) would also need to be developed. Consideration of such rules are left for future research.

²²⁹ See Registration Convention, *supra* note 4 (72 State Parties have ratified). Comm. on the Peaceful Uses of Outer Space, Status of International Agreements Relating to Activities in Outer Space as at 1 January 2021, U.N. Doc. A/AC.105/C.2/2021/CRP.10 (2021); *Status of Treaties*, UNITED NATIONS OFFICE OF OUTER SPACE AFFAIRS, <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/status/index.html> (last visited Oct. 1, 2021).

²³⁰ *Id.* at arts. 2-4. See G.A. Res. 1721 (XVI), B (Dec. 20, 1961).

²³¹ Outer Space Treaty, *supra* note 3, art. VIII.

²³² See, *e.g.*, Antarctic Treaty Annex V, *supra* note 18; UNCLOS, *supra* note 18, arts 149, 303; 2001 UN UCH Convention, *supra* note 19, arts 11, 12; UN CH Treaties, *supra* note 19. Consideration of any such positive or negative obligations are left for future research.

scribes any such sites to “national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.”²³³ Ostensibly, those proscribed “by other means”²³⁴ may include: an association of intangible cultural significance, or when a tangible element of OSCH under a State’s jurisdiction, control and ownership is located on, below or above it.²³⁵ The sites, however, being of particular cultural importance as “places of memory whose existence is necessary for expressing”²³⁶ OSCH could be “report[ed] to other States Parties and to the Secretary-General concerning areas of the moon having special scientific interest in order that, without prejudice to the rights of other States Parties, consideration may be given to designation of such areas as international ... preserves for which special protective arrangements [can] be agreed.”²³⁷

Scientific and technological guidelines will need to be developed for object and site protection and preservation.²³⁸ Those guidelines could inform rules established in CH law principles and established to comply with existing space law. The guidelines could ensure that these sites, and or objects *in situ* contributing to their significance, be physically safeguarded²³⁹ with “particular regard being paid to the preferential rights of States of cultural, historical or archeological origin”²⁴⁰ and who have “declare[d their] interest in being consulted on how to ensure the[ir] effective protection.”²⁴¹

²³³ Outer Space Treaty, *supra* note 3, art. 2.

²³⁴ *Id.*

²³⁵ *Id.* at arts. 2, 8; Moon Treaty, *supra* note 4, art. 11(3).

²³⁶ 2003 UN ICH Convention, *supra* note 19, art. 14(c).

²³⁷ Moon Treaty, *supra* note 4, art. 7(3). 18 State Parties have ratified. *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies*, UNITED NATIONS TREATY COLLECTION, https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXIV-2&chapter=24&clang=_en (last visited Oct. 5, 2021).

²³⁸ *E.g.*, NASA Guidelines, *supra* note 149.

²³⁹ *See* Antarctic Treaty Annex V, *supra* note 18; UNCLOS, *supra* note 18, art. 303; 2001 UN UCH Convention, *supra* note 19, arts 2, 6, 11, 12 (“State Parties are encouraged to enter bilateral, regional or other multilateral agreements.... [and] may invite States with a verifiable link ... to join such agreements”) (duty to report “intent[ion] to engage [to allow a]ny States Parties declare ... interest”); 1972 UN WH Convention, *supra* note 19, §§ 2-3.

²⁴⁰ 2001 UN UCH Convention, *supra* note 19, art.11(4).

²⁴¹ *Id.* *See supra* note 29; Outer Space Treaty, *supra* note 3, art. IX (“international consultations before[;] may request consultation”); *Id.* at art. XII (“advance notice [so] consultations may be held”); Rescue and Return Agreement, *supra* note 4, art. 1 (“close

Akin to space law principles, CH law principles encourage the creation of “bilateral, regional or other multilateral agreements or [the] develop[ment of] existing agreements”²⁴² in order to “adopt rules and regulations which would ensure better protection of”²⁴³ CH sites and objects than those afforded in existing legal instruments, like the UN Space Treaties.²⁴⁴ This is generally providing that all such agreements would be in conformity with the provisions of a broad multilateral OSCH instrument and would not dilute the broader instrument’s universal character.²⁴⁵

VII. INSTITUTIONAL MEASURES TO SAFEGUARD OSCH

Safeguarding OSCH may be accomplished through positive obligations by States to “take all practicable measures to raise public awareness regarding the value and significance of [the] cultural heritage and the importance of protecting it.”²⁴⁶ If a new space law instrument were created to safeguard OSCH, the UN Secretary General may consider expanding the mandate of the UN Office for Outer Space Affairs (OOSA) to implement such a convention in addition to the current UN Space Treaties. OOSA maintains the UN Outer Space Objects Index,²⁴⁷ which could potentially come also to include OSCH CH domain-based CH lists and tangible CH registries established under a new instrument.²⁴⁸ These inventories could promote OSCH by recognition, respect and enhancement, which could thereby, make OSCH “more accessible to and better known by all sectors of civil society.”²⁴⁹ Alternatively, such duties

and continuing consultation[s]”]; *Id.* at arts. 3, 5(3) (“upon the request of”); Moon Treaty, *supra* note 4, arts 7(3), 15; see 2019 Hague WGBB, *supra* note 126, ¶ 11.4.

²⁴² 2001 UN UCH Convention, *supra* note 19, art. 6.

²⁴³ *Id.*

²⁴⁴ UN Space Treaties, *supra* note 4.

²⁴⁵ See 2001 UN UCH Convention, *supra* note 19, art. 6.

²⁴⁶ *Id.* at art. 20.

²⁴⁷ G.A. Res. 62/101, ¶ 5 (Jan. 10, 2008). See Registration Convention, *supra* note 4; G.A. Res. 1721 (XVI), § B (Dec. 20, 1961).

²⁴⁸ G. A. Res. 1721 (XVI), § B(3)(c) (Dec. 20, 1961).

²⁴⁹ Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 127. See ISECG Report, *supra* note 55, at 6 (“Cultural benefits may depend on exploration mission stories and images spreading broadly across society. Educational organizations, the media and communications industries play a role in interpreting and amplifying exploration data, so that citizens may understand and appreciate their significance.”). See generally Fifty-Eighth COPUOS LSC Report, *supra* note 2, § VII.

could be undertaken by, or in conjunction with, public/private partnerships.

A. *Capacity-Building, Training and Education*

Capacity-building measures serve to safeguard the intangible elements of OSCH, strengthen support for the physical protection and preservation of its tangible elements and facilitate “the widest possible participation of communities, groups and where appropriate individuals that create, maintain and transmit such [OSC]heritage and to involve them actively in its management.”²⁵⁰ Such measures could

promote the free dissemination and mutual exchange of information and knowledge [about OSCH] in cultural and scientific fields, assist in educational, social and economic development, particularly in the developing countries [have the potential to] enhance the qualities of life of all peoples and provide recreation with due respect to the political and cultural integrity of [all] States.²⁵¹

They also bolster the tenet that “the wide diffusion of culture, and the education of humanity ... are indispensable to the dignity of [hu]man [beings] and constitute a sacred duty which all the nations must fulfill in a spirit of mutual assistance and concern.”²⁵²

Capacity-building initiatives around OSCH could include:²⁵³ 1) information and awareness programs, particularly aimed at the general public and youth;²⁵⁴ 2) training programs;²⁵⁵ 3) promoting

²⁵⁰ 2003 UN ICH Convention, *supra* note 19, art. 15.

²⁵¹ G.A. Res. 37/92, Annex A(2) (Feb. 10, 1982).

²⁵² UNESCO Constitution, *supra* note 21, Preamble.

²⁵³ *See generally* 2003 UN ICH Convention, *supra* note 19, arts. 13-14.

²⁵⁴ E.g., Space museums; virtual space access; publications/broadcasts; cultural products (e.g., movies, books & other visuals).

²⁵⁵ E.g., Astronaut training programs. *See* Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 127.

research in science and technology;²⁵⁶ 4) non-formal means of heritage transmission;²⁵⁷ 5) establishing institutions for the management and transmission of heritage²⁵⁸ through formal²⁵⁹ and non-formal education,²⁶⁰ and revitalization;²⁶¹ 6) establishing institutions to archive and facilitate access to heritage;²⁶² 7) maintaining the public informed of threats to heritage and efforts to curtail them;²⁶³ and 8) promoting the protection of objects or sites whose existence is necessary for expressing the intangible heritage.

The OOSA could facilitate public awareness regarding the value and significance of OSCH through such “capacity-building, training and education,”²⁶⁴ initiatives that already fall within its capacity-building mandates under the UN Programme on Space Applications.²⁶⁵ Through that program, OOSA disseminates information and builds capacity on space-related topics, as well as initiatives on space law in several thematic areas among which OSCH could come to be included. Moreover, implementation of the aforementioned initiatives could support OOSA’s “national, regional and international efforts to further develop the practical aspects of space science[, exploration] and technology, in particular in developing countries, and to increas[e] knowledge of the legal framework within which space activities were carried out.”²⁶⁶

²⁵⁶ See Outer Space Treaty, *supra* note 3, arts. IX–XI; Moon Treaty, *supra* note 4, art. 6.

²⁵⁷ E.g., Cultural practices (*i.e.*, Astro-mythology; solstice/eclipse festivals; annual celebrations).

²⁵⁸ E.g., International Astronomical Union.

²⁵⁹ E.g., Science, technology, engineering, mathematics, law, humanities & multicultural astronomy programs.

²⁶⁰ See Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶¶ 127-140. E.g., Agriculture & navigation; oral/written literature; planet watching.

²⁶¹ E.g., Etymology; replication & commercial sale; annual celebrations; virtual experiences.

²⁶² E.g., OOSA; online space libraries; observatories; For All Moonkind.

²⁶³ E.g., OOSA, *Space Mission Planning and Advisory Group*, unoosa.org/oosa/en/our-work/topics/neos/smpag.html (last visited July 16, 2021); INTERNATIONAL ASTEROID WARNING NETWORK, iawn.net/ (last visited July 16, 2021); *International Dark Sky Places*, INTERNATIONAL DARK-SKY ASSOCIATION, darksky.org/our-work/conservation/idsp/ (last visited July 16, 2021).

²⁶⁴ Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 127; COPUOS Space 2030 Agenda, *supra* note 8, at 5. See Seventy-Fifth COPUOS LSC Report, *supra* note 2, at 3.

²⁶⁵ G.A. Res. 37/90, ¶ 7 (Dec. 10, 1982); G.A. Res. 54/68, ¶ 11(d) (Feb. 11, 2000).

²⁶⁶ Fifty-Eighth COPUOS LSC Report, *supra* note 2, ¶ 127. See generally G.A. Res. 51/122, (Dec. 13, 1996).

Capacity-building measures could create a collective memory of OSCH that forms a sense of shared identity and connection to a “common heritage of mankind.”²⁶⁷ They could effectively create a quantitatively and qualitatively greater cultural connection to OSCH than could otherwise be achieved by: solely the physical protection or preservation of a tangible object or site for the benefit of significantly few, or no humans, to enjoy; or the view that the heritage originated from one or few States instead of from a temporally cumulative and culturally diverse human effort. The results of such initiatives could potentially also dampen sovereign and jurisdictional conflicts, as well as the economic costs, labor and demand for coordinated diplomatic and technical efforts to physically protect and preserve tangible OSCH, where and if possible. Memorialization through the safeguarding of intangible OSCH may be the most long-lasting and effective means to safeguard it for “present and future generations”²⁶⁸ and for generally a greater aggregate of humans.

VIII. CONCLUSION

It has generally been the human experience, formalized most recently in cultural heritage law, to celebrate “preserve[], develop[], enrich[] and transmit[]”²⁶⁹ cultural heritage “to future generations as a record of [our] human experience and aspirations in order to encourage creativity in all its diversity and to inspire a genuine dialogue between cultures.”²⁷⁰ We have already evidenced our desire to continue this pattern with cultural heritage beyond Earth as we celebrate our achievements in outer space and seek means to safeguard them, thereby, ensuring, even if not legally as of yet, an interconnectivity between past, present and future generations. The time is ripe to create a legal framework to formalize the safeguarding of OSCH and to facilitate the natural progression and harmonization of space and cultural heritage law in a new space law instrument under the UN treaty system that would memorialize and reflect on humanity’s collective accomplishments and potential.

²⁶⁷ Moon Treaty, *supra* note 4, art. 11.

²⁶⁸ *Id.* art. 4(1).

²⁶⁹ U.N., Econ. & Soc. Council, General comment No. 21, ¶50(a), U.N. Doc. E/C.12/GC/21 (2009).

²⁷⁰ *Id.*