

CYBERSPACE AS A COMMON HERITAGE OF MANKIND: GOVERNING NORMATIVE LIMITATIONS OF THE INTERNET BY VIRTUE OF INTERNATIONAL LAW

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Abstract: Cyberspace, which consists of a global web of linked networks and computers, transcends the traditional concept of sovereignty, inviting a multi-disciplinary approach and an inclusive policy-making strategy. The international architecture of cyberspace connects with the real world with geographical servers and governments, as well as the material effects of the development of international law. As a result, the nature of cyberspace governance has become international. This article will reflect on the phenomena of common space areas under international law and employ a retrospective and normative approach to analyse the applicability of the common heritage of mankind (CHM) principle to cyberspace. The doctrinal approach taken in this research is within the conceptual framework of *de lege ferenda*. Cyberspace possesses a similar philosophical foundation to the seabed, Antarctica, and outer space. As a legal consequence, cyberspace must exclusively be used for peaceful purposes, demilitarized, and all activities must be carried out for the benefit of all humankind. Conclusively, as the Internet changes at a revolutionary pace – expanding the size of cyberspace – the law must also respond adequately. This research proposes an answer for such adequacy, fundamentally built on the conceptions and virtue of international law, featuring the CHM principle for cyberspace governance.

Keywords: cyberspace; common heritage of mankind; governance; international law

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1. INTRODUCTION

The first-ever recorded social interaction of computers worldwide through dispersed networks began in 1962¹ and humankind has taken significant steps since then. Now, cyberspace has undergone a massive transition, with the Internet enabling unprecedented levels of economic growth and allowing people to connect and engage in new and exciting ways.² The term “cyberspace” was first coined to describe “the emerging world”, a new environment and dimension oppositional to physical reality. Because of the Internet’s rapid expansion, legal challenges about how and if cyberspace

¹ BORDO, M. – TAYLOR, A. – WILLIAMSON, J. (eds.). *Globalization in Historical Perspective*. Chicago: University of Chicago Press, 2003, p. 1.

² MBANASO, U. – DANDAURA, E. *The Cyberspace: Redefining a New World*. *IOSR Journal of Computer Engineering*. 2015, Vol. 17, No. 3, pp. 17–24.

should be governed have arisen. By expanding its theoretical limitations into unexpected circumstances, the law has constantly been challenged to keep up with addressing problems posed by technological revolutions.³

It is a conundrum that while no particular entity can claim ownership or control over the Internet, there are bodies of international institutions that are attempting to govern it.⁴ Governments, corporations, private entities, civil society, and international actors will always have an interest in this oddity.⁵ According to Wolfgang Kleinwächter of the Working Group on Internet Governance (WGIG), governing the Internet entails infrastructure, information, communication, and commerce in shared decision-making. All the materials presented above culminate in an admirable political, technological, and organizational understanding of Internet governance. It is, nevertheless, impossible to separate sovereignty and governance from their natural domain: the state. As a result, an international law approach hopes to provide illumination by taking a broader view of the state and its sovereignty as a participant engaging in cyberspace and governing the Internet.

The principle of CHM then inspired into at least two international laws. First, the application of regulating high seas, which are governed by the United Nations Convention on the Law of the Sea (UNCLOS). Second, the regulation of parts of outer space. High seas and some parts of outer space are where humankind owns the resources and may utilize them by virtue of technology unique to each nation. At least four aspects are featured on the CHM principle. There are prohibitions towards a claim for sovereignty, peaceful uses and purposes of the territory, shared governance, and benefits of its exploitation for all humankind. Out of the four, the first two will gain more traction for this research because they are strongly tied to the realm of public international law.

The role of international law and the Internet has always been an interesting topic to be discussed. The author's first experience that sparked an interest to explore the role of CHM in cyberspace is based on the work of Jean Buttigieg, titled "The CHM: from the law of the sea to the human genome and Cyberspace". His work starts with a historical perspective on CHM. He then equated it into two domains: The Human Genome and Cyberspace. His methods both stem from an optic viewpoint of intellectual property, with a focus on non-appropriation and communal usage for CHM. Buttigieg's views, however, are distinct from this legal research which explores legal relationships and the outcome of CMH towards cyberspace. The second literature comes from the work of Antonio Segura-Serrano, titled "Internet Regulation and the Role of International Law". Antonio has adequately articulated the possible scenarios for CHM to be applied to the Internet from the standpoint of international law. He has defined CHM as a legal regime, a concept, and a principle. While Antonio's work continues to be the foundation of this research's conceptual framework, our distinct focus resulted in an exclusion of his work on the application of CHM for the issues of freedom of expression, harmful content, and intellectual property.

³ LIM, Y. *Cyberspace Law*. Melbourne: Oxford University Press, 2007, p. 1.

⁴ Ibid.

⁵ DRAKE, J. *The Working Group on Internet Governance: 10th Anniversary Reflections*. Johannesburg: The Association for Progressive Communications, 2016.

The concept of how and why the Internet should be governed has prompted this research. The revelation arose from the absence of a common global legal framework or principles agreed upon by governments for governing the use of the Internet, particularly regarding the constraints of state sovereignty over cyberspace and internet jurisdiction.⁶ Explicitly, the importance of applying the CHM principle to cyberspace is at least two-fold. It is to protect and guarantee its peaceful uses and prevent misconducts or crimes committed via the Internet. It should be done by revealing jurisdictional limitations under which states are obligated to share rights and obligations for its use. In an idealized sense, this research will serve as a worthiness test for cyberspace to be recognized as a common heritage of mankind.

Based on the aforementioned issues, this article will try to explain the necessities of adopting the CHM principle for cyberspace and the legal ramifications of its adoption. There are two complementary approaches for this research: historical and doctrinal. The historical analysis will trace the origin and the development of the concept, including its theoretical underpinning. The framework used to analyse the research hypothesis will strictly be confined within the domain of public international law. Hence, it will not dwell on the developments of the private sector. In this light, the research will also draw an analysis of values and principles contained in CHM. The process of extracting the substance of the principle will be traced back in time from its genesis to its current state. This method will be very reflective of CHM's past, present, and future.

2. THE COMMON HERITAGE OF MANKIND: A CONTEMPORARY RETROSPECTIVE

The principle of a common heritage for all mankind first emerged in 1967, related to seabed and ocean floor exploitation and peaceful purposes for all mankind.⁷ CHM means areas beyond the limits of national jurisdiction where it is not subject to appropriation, claims, the exercise of sovereignty or sovereign rights and is exclusive for all states to be used for peaceful purposes under international law.⁸ The idea of common heritage may be traced back to Roman law.⁹ According to Roman law, air, water, and seashores are subject to natural law and are regarded *res nullius* or *res communis*, or land over which no sovereign has authority.¹⁰ Despite this subtle clarity for its origin,

⁶ The author acknowledges that at the time of writing this article, the Budapest Convention on Cybercrime has been ratified by several countries. However, this article will not consider discussions related to the Cybercrime Convention; because it has taken on a broader scope that is not only limited to cybercrimes.

⁷ MIRZAE, S. The Conceptual Foundations of the Common Heritage of Mankind. *Евразийский юридический журнал*. 2015, Vol.10, No. 113, pp. 50–54.

⁸ Declaration of Principles Governing the Seabed and the Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction, G.A. Res. 2749, U.N. GAOR, 25th Session, Supp. No. 28, U.N. Doc. A/8028, December 17 1970; GUNTRIP, E. The common heritage of mankind: an adequate regime for managing the deep seabed? *Melbourne journal of international law*. 2003, Vol. 4, No. 2, pp. 376–405.

⁹ ALLEN, M. An Intellectual History of the Common Heritage of Mankind as Applied to Oceans. In: *Open Access Master's Theses* [online]. MA thesis, Marine Affairs, University of Rhode Island, 1992 [cit. 2023-08-12]. Available at: <https://digitalcommons.uri.edu/theses/1088/>.

¹⁰ QURESHI, W. Protecting the CHM Beyond National Jurisdiction. *Arizona Journal of International and Comparative Law*. 2019, Vol. 36, No. 1, pp. 82–109.

there are still dissenting opinions on what CHM exactly is; a notion, doctrine, regime,¹¹ theory, rule, concept, or principle.¹²

First, it is not difficult to undermine the term “notion” for its applicability in the sense of CHM. Amongst other terms, this would probably be the widest and most far-fetched expression. Having its Latin origin; a notion basically means an idea, encompassing the belief in such idea.¹³ A notion would be too broad of a category for CHM because it more than just an idea or even a theory. CHM has both its theoretical and practical stance in the sphere of international law. Second, still referring to the contentions of Baslar; a “doctrine” refers to a rule; this is somewhat similar to a principle, but definition, a doctrine merely refers to a single principle;¹⁴ whilst CHM consists of several rules. Third, it will be too specific, and difficult to generalize the term “regime” since it has been espoused to the Law of the Sea convention.¹⁵ Its specific application will be redundant to the thesis of CHM that is applicable to a few selected and exclusive areas. Finally, we would disagree to Baslar’s argument on designating CHM as a general principle. Baslar has taken both viewpoints of the literal Latin meaning and the philosophical approach; addressing CHM as something wider and more abstract.¹⁶ The CHM principle goes beyond a philosophical notion and has transformed and accepted to be a legal principle. The use of “principle” confining CHM into only specific areas, does not eliminate its legitimacy as a legal norm. The acceptance of states in the Law of the Sea Convention and the Outer Space treaties becomes the fundamental evidence that CHM works as a principle of international law which is fully in force as positive law.¹⁷ As opposed to Joyner, the “lack” of (uniform) definition for CHM does not prove the absence of such definition. It is important to note that the acceptance and state practice are owed to CHM in its entirety, and not merely towards its definition.¹⁸ Furthermore, as a legal principle, CHM entails a specific and detailed legal requirements and consequences¹⁹ for its compliance and disobedience.²⁰ Thus, much of previous research that has contended it to be a concept,²¹ and/or general principle, we shall stick to considering CHM as a legal principle for the sake of consistency and leniency of this research.

A rather intellectual-historical approach is needed to extract a more precise background of the origins of “CHM”. As Monica’s thesis has dedicated, she explained that

¹¹ GUNTRIP, *c. d.*

¹² WOLFRUM, R. *The Principle of the Common Heritage of Mankind*. *Max-Planck-Institut für ausländisches öffentliches Recht und Völkerrecht*. 1983, Vol. 43, p. 312; NOYES, J. E. *The CHM: past, present, and future*. *Denver Journal of International Law and Policy*. 2012, Vol. 40, No. 1, pp. 447–471; JOYNER, C. *Legal Implications of the Concept of Common Heritage of Mankind*. *The International and Comparative Law Quarterly*. 1986, Vol. 35, No. 1, pp. 190–199.

¹³ GARNER, B. – BRIAN, A. *Black’s Law Dictionary*. St. Paul, MN: Thomson Reuters, 2014.

¹⁴ *Ibid.*, p. 557.

¹⁵ Article 136, UNCLOS.

¹⁶ BASLAR, K. *The Concept of the Common Heritage of Mankind in International Law*. The Hague, Boston: Kluwer Law International, Martinus Nijhoff Publishers, 1998, p. 6.

¹⁷ BULAJIĆ, M. *Principles of International Development Law*. Dordrecht: Martinus Nijhoff, 1986, pp. 6–7.

¹⁸ General Assembly 2340 (XXII).

¹⁹ TRIGGS, G. *Antarctic Treaty Regime: A Workable Compromise? Or a “Purgatory of Ambiguity?”*. *Case Western Reserve Journal of International Law*. 1985, Vol. 17, No. 2, p. 2.

²⁰ Article 138–139, UNCLOS, Article VII Outer Space Treaty.

²¹ BASLAR, *c. d.*, pp. 615–628.

the proposal of common heritage is traced back to ancient Roman Law.²² According to Roman Law, air, water, sea, and seashores are under the law of nature and to be considered *res nullius* or *res communis*.²³ It was under the latter concept where Ambassador Arvid Pardo drew his manifesto for the international community which then caught the international community's attention at the subsequent general assembly meeting.

CHM has its anchors deep under the sea. Hitherto, the "the freedom of the high seas" principle governed the ocean by declaring that the territorial land constitutes the rights of a coastal state.²⁴ At one time, the Portuguese contended the seas as a part of their national jurisdiction until Grotius contested the doctrine of the open seas belong to *res communis*.²⁵ The freedom of the high seas was relevant during that time. However, as the development of reigns over territorial moana excels, the tendency to assert greater claims are shifted towards a "collective appropriation" stance manifested in "CHM" dictated by available resources in the seas.²⁶

3. MAPPING CYBERSPACE

The term "Cyberspace" was invented to describe "the emerging world", which conveys a novel environment and dimension, inverse of physical reality. From a quick glance, cyberspace may merely seem like a personal computer connected to the Internet. However, if a broader outlook is taken, elements of political, social, economic, cultural, and financial networks constitute their own portions in cyberspace.²⁷ Hence, cyberspace does not only consist of hardware, but a series of symbolic definitions that constitute a network of ideas.²⁸

Today, cyberspace is considered as a domain for humankind and technology. Cyberspace involves people worldwide, fusing cultures and languages from people of all ages and occupations supplying and demanding information. It includes a worldwide network of computers interconnected by means of telecommunication infrastructures enabling information to be processed and transmitted digitally.²⁹ Such an environment encompasses various components, including the system of "node" computers and web servers scattered throughout the world, and intermediaries such as system operators and service providers.³⁰ In this sense, cyberspace is a larger homogeneous space than what the Internet is. As Lessig describes it, cyberspace is built on top of the Internet and gives

²² ALLEN, *c. d.*

²³ SANDARS, T. *The Institutes of Justinian*. Westport, CT: Greenwood Press, 1992.

²⁴ SHAW, M. *International Law*. New York: Oxford University Press, 2008.

²⁵ O'CONNELL, D. *International Law of the Sea*. Oxford: Oxford University Press, 1983.

²⁶ UN General Assembly. 22nd session, 1st Committee, 1515th meeting [online]. 1 November 1967 [cit. 2023-08-12]. Available at: <https://digitallibrary.un.org/record/800578?ln=en>.

²⁷ WHITTAKER, J. *The Cyberspace Handbook*. London: Routledge, 2004.

²⁸ *Ibid.*

²⁹ FUENTES-CAMACHO, T. Introduction: UNESCO and the Law of Cyberspace. In: PADIRAC, B. de. *The International Dimensions of Cyberspace*. Ashgate, Dartmouth: UNESCO Publishing, 2000, pp. 1–7.

³⁰ ELIZABETH, L. The Possibilities for a Legal Framework for Cyberspace: including a New Zealand Perspective. In: PADIRAC, B. de. *The International Dimensions of Cyberspace*. Ashgate, Dartmouth: UNESCO Publishing, 2000, pp. 9–69.

a richer experience.³¹ It is rapidly expanding with various forms of digital interactions and communication.

The structure of cyberspace's geography consists of at least three areas: technical geography, spatial geography of users, and economic geography of production.³² The first deals with computing elements such as nodes of information and bandwidth.³³ The second relates to the user's position globally or within social and physical networks. While the last concentrates could ideally be referred to areas such as the Silicon Valley³⁴ or the manufacturing base of southeast Asia. Whittaker believes that the geographies of cyberspace are much more complex as it involves notions of identity and community; notions of geometry, space, and architectural forms; and the series of connected files and retrieval procedures that exists within.³⁵ To simplify our understanding, the literal existence of cyberspace is apparent in three ways. It could be tracked geographically on where the equipment is located. It could be traced through the traffic which demonstrates the use of technology such as the Internet. It could be mapped through information, such as email usage, chat conversations, or social data of users.³⁶ Thus, we can clearly see that cyberspace is inherently spatial.

4. CYBERSPACE AS A CHM: GOVERNING NORMATIVE LIMITATIONS OF THE INTERNET BY VIRTUE OF INTERNATIONAL LAW

The Internet is a different dimension – not a mere device or medium like telegraphs, telephones, or radio. As explained earlier, it encompasses a larger domain of human interaction operated by information and technology. Thus, it requires a new regulatory principal approach. However, much like our life, cyberspace requires a comprehensive regulation to prevent the loss of functionality and to maintain its efficiency and interoperability. Laying down a common legal principle governing the Internet would facilitate the protection of users' rights and formulate straightforward and uniform responsibilities of the actors and stakeholders of cyberspace.

General principles of law arise when no law, statute, or judicial precedent covers the matter at hand.³⁷ In such a situation, a general principle of law referred to sourcing from justice, equity, or considerations of public policy.³⁸ For that reason, a general principle recognized and eventually accepted by civilized nations is needed to govern new situations. In this case, it is needed to govern the Internet, which is involved in a multitude of new situations. As mentioned before, cyberspace and the Internet are far

³¹ LESSIG, L. *Code: and other laws of cyberspace*. New York: Basic Books, 2006.

³² CASTELLES, M. *The Internet Galaxy*. Oxford: Oxford University Press, 2004.

³³ *Ibid.*

³⁴ KENNEY, M. *Understanding Silicon Valley: the anatomy of an entrepreneurial region*. California: Stanford University Press, 2000.

³⁵ WHITTAKER, *c. d.*

³⁶ *Ibid.*

³⁷ SHAW, M. *International Law*. New York: Oxford University Press, 2008.

³⁸ *Ibid.*

beyond the domestic affairs of states. While there may not always be an immediate and obvious rule applicable to every international situation, “*every international situation is capable of being determined as a matter of law*”.³⁹ Uniquely enough, it is suggested that the capability of “ruling” the Internet would be inherently accommodated by a legal principle: the CHM.

Under International Law, a general principle of law is considered as a substantial complementary source.⁴⁰ Amongst the definition; a general principle of law is an Affirmation of natural law concept underlying the system of international law and constitute the method for testing the validity of the positive (man-made) rules.⁴¹ It is a sub-heading under treaty and customary law and incapable of adding anything new to international law unless it reflects the consent of states. As Tunkin stated, a general principle of law reiterates the fundamental precepts of international law; the law of peaceful co-existence.⁴² Despite its limited in scope, a general principle is a separate source of law.

The idea of proposing the CHM as a norm to govern global common spaces had its origins leaning towards a general principle of law.⁴³ The emergence of CHM as a legitimate principle, in the form of treaty law gained its acceptance from state parties to the UNCLOS. Despite the doubts, profoundly expressed by Baslar, of the CHM to have risk economic, security, and political interest of states, at the end of the day he still believed in the possibility of CHM to be a well-recognized legal principle. These proposals and less sanguine submission of the CHM was well over 20 years ago, when novel areas such as the Cyberspace was still in the womb of global development. Ever since it has given birth, the endeavor to govern and regulate particularities of the internet which challenges the conventional law steadily emerged. Albeit the terminological and conceptual discord of the CHM which comes mostly from a philosophical inspection, the introduction of the CHM was presented initially by Pardo as a principle,⁴⁴ as has it been consistently referred to as principle in the academical discourse covering the topics of CHM.⁴⁵

As opposed to Joyner, we believe that the CHM has been factually accepted as a principle of contemporary international law. First, the content of the CHM is distinct from any other and has been successfully integrated into the corpus of international law. Other than the fundamental example of CHM’s incorporation into a treaty in the UNCLOS,⁴⁶ the CHM has attained its legal status in the Moon Treaty⁴⁷ and the Outer

³⁹ OPPENHEIM, L. – JENNINGS, R. – WATTS, A. *Oppenheim’s International Law*. London: Routledge, 1998.

⁴⁰ Article 38, Statute of the International Court of Justice [hereinafter ‘ICJ Statute’] 33 UNTS 993.

⁴¹ LAUTERPACHT, H. *Private Law Sources and Analogies of International Law*. New York: The Lawbook Exchange, 2002; WALDOCK, H. *General Course on Public International Law*. In: *Collected Courses of the Hague Academy of International Law*. Vol. 106. Leiden, Boston: Brill, Nijhoff, 1962, p. 54.

⁴² TUNKING, G. *Theory of International Law*. Cambridge: Harvard University Press, 1974.

⁴³ WOLFRUM, R. The Principle of the Common Heritage of Mankind. *Max-Planck-Institut für ausländisches öffentliches Recht und Völkerrecht*. 1983, Vol. 43, p. 312; NOYES, J. E. The CHM: past, present, and future. *Denver Journal of International Law and Policy*. 2012, Vol. 40, No. 1, pp. 447–471; JOYNER, C. Legal Implications of the Concept of Common Heritage of Mankind. *The International and Comparative Law Quarterly*. 1986, Vol. 35, No. 1, pp. 190–199.

⁴⁴ Ambassador Pardo’s statement, General Assembly 1967, 1515th Meeting, 1967.

⁴⁵ WOLFRUM, *c. d.*

⁴⁶ Article 136, UNCLOS.

⁴⁷ Article 11, Moon treaty.

Space Treaty.^{48, 49} The CHM's widespread acceptance is manifested through the treaties, as well as state practice in establishing an authority for the technical governance and administration entrenched by the CHM.⁵⁰ Furthermore, the declarations and resolutions made by the General Assembly shall not be overlooked, even if it does not possess a legally binding character, it still belongs to the sources of international law, supplementing the fundamental binding sources.

Establishing CHM outside of its philosophical foundations is essential because the world's significant developments that require its application are beyond any speculation. In 1998, the author would respectfully understand why CHM should be regarded as a "political innovation"⁵¹ or a "policy directive",⁵² as contended by Baslar through his philosophical discourse.⁵³ This article disagrees by examining CHM rooted as an international legal norm that eventually transforms into an international law principle. A similar abstract to concrete evaluation was made by Kiss, whereby the transformation of the idea of CHM from "utopia" to "reality" depends on the consent of states to waive their rights of sovereignty and claims to territorial jurisdiction to contribute towards the common interest of humankind. Such consent is evident in the state's participation in international treaties governing the areas beyond national jurisdiction by CHM.

5. ACCOMMODATING CYBERSPACE WITH THE CHM PRINCIPLE

The regulation of cyberspace by its nature is international. The transnational elements and effects of the Internet prompts law makers to claim the right to sanction harmful behaviour and to remedy inflicted damage. As a remedy to compensate the overlapping claims of jurisdiction, and limitations of sovereignty, CHM acts as an umbrella for the framework of internet regulation. The agreed normative and moralistic values contained in CHM, directs the claims of jurisdiction into a more appropriate and inclusive manner, representing the interest of mankind. CHM serves as a basis of equity for law and policies established for the maintenance of cyberspace and the governance of the Internet.

The multicultural and global nature of cyberspace is a similar set of ethically based rules to the common heritage principle approaches for the sea, Antarctica, and outer

⁴⁸ Article 1, Outer Space Treaty.

⁴⁹ WHITE, M. V. The CHM: an assessment. *Case Western Reserve Journal of International Law*. Vol. 14, No. 3, pp. 509–542.

⁵⁰ International Seabed Authority, MoU between the Intergovernmental Oceanographic Commission of UNESCO and the ISA, 2003, MoU between the OSPAR and the ISA, 2010, MoU between the ISA and the International Maritime Organization (IMO), 2018.

⁵¹ GOROVE, S. The Concept of "Common Heritage of Mankind": a Political, Moral or Legal Innovation? *San Diego Law Review*. 1972, Vol. 9, No. 3, pp. 390–403.

⁵² GOLDIE, L. A General International Law Doctrine for Seabed Regimes. *International Lawyer*. 1973, Vol. 7, No. 4, pp. 796–819.

⁵³ BASLAR, *c. d.*, pp. 615–628.

space, which serves as a basis for present and future legal regulation.⁵⁴ This preposition will not deny the source of natural law embedded within the ethical standard of “civic virtue”.⁵⁵ However, once a set of ethical rules, may it be in the form of a principle, become recognized and acknowledged by state and achieve customary character, the question of “legally binding force” is answered by the recognition of states through courts as an element of good faith, fairness, and equity.⁵⁶ Therefore, the legal framework for cyberspace would be based on a set of recognized and enforceable principles.

Since 1996, the particularities of the Internet have been addressed as a “new” and global social space, outside of sovereign territory, within which everyone are able to supply and distribute whatever they believe without fear in contrast, viewed from a western civilization point of view. Cyberspace is regarded as a new territory to conquer as it is a new market for law enforcers.⁵⁷ When these two views are reconciled, cyberspace is seen as a reality of a novel world geographic territory, where it coexists with geography and transcends national boundaries.⁵⁸ Like many other territories that have been occupied by human beings, it requires morals, norms, and principles of law.⁵⁹ This goes to show the realism of cyberspace in the activities of mankind, that needs to be considered a territorial object which is subject to a specific governing principle.

The particularities of cyberspace as a novel domain are its ability as a medium to communicate a diverse range of views and activities. Individuals on the Internet have the liberty to move freely between environments and adopt cyber-profiles or personae that may not be genuine to their real identity. This feature will challenge the effort of state authorities to impose their own view as to which values, rights, and policies should prevail in a global cyberspace community.

As a principle belonging to international law, CHM accommodates a common understanding between states of how the use of cyberspace. The understanding is that it is important to be maintained for an open, secure, stable, accessible, and peaceful environment. CHM’s emphasis on the prohibition of the use of cyberspace to carry out hostile acts of aggression that pose international threats to peace and security. Such characteristics belong to the core values of the UN Charter and acts as a bases of cooperation between member states to cooperate in curbing the dissemination of information that incites terrorism, secession, or extremism or that undermine other countries’ political, economic, and social stability.⁶⁰

Future threats produced by technological developments and discoveries constitute a good demand for the supply or solution of the rule of law. Going back to the first narrative of the international nature of cyberspace, a common model for its governance has its analogies in public international law. That is by creating a uniform set of rules using

⁵⁴ The activities of individuals on cyberspace, both independently and represented by a state, displays the diversity and common interest for information on the Internet.

⁵⁵ JOHNSON, D. R. – POST, D. Law and borders: the rise of law in cyberspace. *First Monday*. 1996, Vol. 48, No. 5, pp.1367–1996.

⁵⁶ KULESZA, J. *International Internet Law*. New York: Routledge, 2012.

⁵⁷ SARDAR, Z. – RAVETZ, J. *Cyberfutures*. London: Pluto Press, 1996.

⁵⁸ PADIRAC, B. de. *The International Dimensions of Cyberspace*. London: Routledge, 2018.

⁵⁹ Ibid.

⁶⁰ KITTICHAISAREE, K. Public International Law of Cyberspace. *Law, Governance and Technology Series*. 2017, Vol. 32, p. 335.

international law sources and practices. With the critical information infrastructure that the Internet has, CHM acts as a footing between the freedom of information and the protection of it on the premise of complying to international law and relevant national laws and regulations.

6. CONSIDERATIONS FOR ADOPTING THE CHM PRINCIPLE TO CYBERSPACE

Cyberspace is more prone to the prospect of “dual use” technologies which can be used for good and bad purposes depending on the intention of users.⁶¹ Reflecting on the core principles provided by the government of the United States, cyberspace inherits the values of fundamental freedoms, privacy, and the free flow of information, but is still subject to the exceptions of public safety and protection of citizens from cybercrimes. This later exception calls for a universal agreement on the governance of cyberspace.

Based on the conceptual basis and the analogies of CHM applied to other territories and domains, the author proposes the following considerations for the necessity of the Internet to require CHM to be adopted in cyberspace; the critical internet resources, security and safety of the Internet, the developmental aspects and issues pertaining to the use of the Internet, and the Internet as a global public good.

A. CRITICAL INTERNET RESOURCES

As the WGIG forum has reported, the infrastructure and management of critical internet sources are classified as one of the main policy areas of Internet Governance.⁶² According to the WGIG, critical internet resources encompass, domain names, root servers, and IP addresses. This is a subset of functions which have been historically managed by the IANA (Internet Assigned Numbers Authority) which was then transferred into ICANN (Internet Corporation for Assigned Names and Numbers). Such resources belong to the set of electronic documents placed on the servers of a computers in the .html format, designed for the purpose of using and accessing information on the global computer network.⁶³ This is home to all the precious network-accessible information, the embodiment of human knowledge.

The nature and development of critical internet content does not rely on commercial incentives for growth. It merely depends on the desire of individuals to share and obtain information. This includes any type or personal, or sensitive information, belonging to individuals or governments. Additionally, the features of the Internet enable anyone to create and distribute their own material to others, anywhere in the world. This becomes a potential to increase the diversity of information and views that are expressed to users around the world. Presently, information is indispensable to human development. It is the currency of state evolution.

⁶¹ Ibid.

⁶² DRAKE, *c. d.*

⁶³ Declaration of Principles. World Wide Web Consortium, 2020.

B. SECURITY AND SAFETY OF THE INTERNET

The sporadic and notable accounts of cybercrime cases that emerged provoked the establishment of the Cybercrime Convention, which proves the substandard security approach toward the Internet's security. Beyond the crimes committed through and by the Internet, states' growing concerns have added more focus on the vulnerability of critical infrastructures and political espionage.⁶⁴ Cybersecurity and cyber warfare are vital areas of policymaking for states as they are viewed as the fifth domain of warfare.⁶⁵ This perception threatens the peaceful purposes of the Internet, building a mindset of militarizing cyberspace.

After the infamous case of Edward Snowden, the world is awakened to the concerns of their national cybersecurity being subject to espionage by other countries. The conclusion of the UN general assembly,⁶⁶ European Council Summit,⁶⁷ UN Resolution,⁶⁸ and UN Report validates the common understanding of states that norms derived from existing international law are relevant to Internet use.⁶⁹ The norms, rules, and in this case, the principle of CHM is responsible for governing states' action in relation to cyberspace. CHM, which supports and is attributed to the UN Charter, is also connected to international norms and principles from sovereignty, state jurisdiction over cyberspace infrastructure, and state responsibility for internationally wrongful acts attributable to states.⁷⁰

Increased cybersecurity would mean less room for cyber-attacks, cyber espionage, cybercrimes, and cyber-terrorism.⁷¹ Applying the CHM principle to cyberspace will act as a framework to which belongs a collection of tools, policies, security concepts, and safeguards, along with guidelines and risk management approaches, actions, training, and best practices,⁷² on a collective consent between states to ensure the peaceful utilization of the Internet. States' obligations are raised to a higher degree to ensure cooperation in efforts to combat cyber threats.

C. DEVELOPMENTAL ASPECTS AND ISSUES PERTAINING TO THE USE OF THE INTERNET

It is important to note that cyberspace technologies (the internet architecture, network protocols, and code) are not passive sources of the Internet. It is firmly

⁶⁴ BOEKE, S. – BROEDERS, D. The Demilitarisation of Cyber Conflict. *Survival: Global Politics and Strategy*. 2018, Vol. 60, No. 6, pp. 73–90.

⁶⁵ Ibid.

⁶⁶ See UN General Assembly. 68th session [online]. 17 September 2013 [cit. 2023-08-12]. Available at: <https://www.un.org/en/ga/68/>.

⁶⁷ European Council Summit. EUCO 217/13, 2013.

⁶⁸ See UN General Assembly. 68th session.

⁶⁹ KITTICHAISAREE, *c. d.*

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² About International Telecommunication Union (ITU). In: *Committed to connecting the world* [online]. 2020 [cit. 2023-08-12]. Available at: <https://www.itu.int/en/about/Pages/default.aspx>.

possible for code-writers and other intermediaries to exert influence over the norms of behaviour and to control through rulesets.⁷³

The ability to access and surf the World Wide Web by following hyperlinks from one site to another compels the user to be indifferent.⁷⁴ The independence of cyberspace from geographical constraints separating the physical distance between the physical and immaterial infrastructure of the Internet which allows messages to “time travel” from a layered centralized and decentralized networks becomes an abyss for such “additional unknowns”. This in effect becomes an “exit strategy” as how Post described it for individual network rule-makers. Ever since the existence of this fact, the legal barriers have long been and will continue to be established. In a concrete sense, such exit strategy – where individuals could evade detection and withdraw from jurisdictional control – needs to be covered. This can be done by closing the exit doors or eliminating the gateway. If the cyberspace environment is under the auspices of CHM, there will be no exit doors for misconducts to exit. Everywhere the individual tries to retreat, they will always be under the jurisdiction of a state to act upon the wrongdoing as it is their obligation on behalf of mankind.

D. THE INTERNET AS A GLOBAL PUBLIC GOOD

Inherently, the Internet was developed to operate internationally, regardless of the user’s status or nationality, beneficial to all mankind. The concept of global public goods defines the benefits of the Internet for everyone albeit that it operates in a world ruled by states.⁷⁵ The public sphere of the Internet refers to the operation of it as a system that makes all the applications and content possible which is just as vital as economic security, modern social life, culture, political discourse, and national security.⁷⁶

Accordingly, the diversity and uniformity of network rulesets requires both an imposition of governmental laws on individual networks, and a unified agreement to measure a unified rule in cyberspace. This is to hinder difficulties in attempting to monitor the behaviour of individual network users who are dispersed across the world.⁷⁷ In such a way, states are expected to control and govern their own rules for controlling the individual network, by making sure that their domestic law is promulgated consistently with the norms of international law, specifically with the prescribed values of the CHM principle. This creates an asymmetry of control between the principle of CHM to supervise a state who has the monopoly on the use of coercive sanctions to individuals, contracting parties, and organizations that are within their jurisdiction. Complimentarily, when states are incapable of enforcing their rules, due to the limitations of the transnational nature of the Internet, other member states who can act upon any act that it is deemed as a vi-

⁷³ CAMACHO, *c. d.*

⁷⁴ JOHNSON – POST, *c. d.*

⁷⁵ BROEDERS – DENNIS, *c. d.*

⁷⁶ NARDIS, L. *The Global War for Internet Governance*. New Haven: Yale University Press, 2014.

⁷⁷ CAMACHO, *c. d.*

olation under international law, domestic law, or causes some sort of direct or indirect harm to the state, may have a collective jurisdiction under the CHM principle.

As the actors in cyberspace are inherently human beings, much like in the real world; a law exists to control the behaviours between those actors. David Post has built an idea of law-making and social control on network communities by identifying “controllers” that can provide substantive rules governing an individual’s behaviour.⁷⁸ Here, we will put aside controls from the actor themselves, second parties, non-hierarchical organized social forces, and hierarchical organized non-governments, due to their substantive rules and sanctions that are not in the form of substantive rules and coercive functions.⁷⁹ A state in this case, as a subject of international law, having its powers in a structural and hierarchal governments, has the power to jointly accept, recognize, and adopt international rules for the communal benefit of mankind.

7. THE LEGAL CONSEQUENCES OF ADOPTING THE COMMON HERITAGE PRINCIPLE FOR THE INTERNET

As a relatively novel phenomenon, the international community still struggles to find an ideal international legal regime to govern cyberspace. Currently, the relevant existing rules of public international law are fragmented piece by piece with the relevant interest of regulating the Internet. CHM’s presence in this current thesis is proposed as a universal principle to be applied to cyberspace. There will be some consequences to the application of this proposal in relation to the legal position that has already existed for the Internet. Consequently, this last section will discuss the legal consequences of CHM’s application to cyberspace. Drawing from the timeline of this thesis, which is built on the pillars of CHM’s elements and the legal implications that are akin to it. Here we will see the four types of legal implications of the adoption of CHM for cyberspace.

A. THE USE OF CYBERSPACE WILL STRICTLY BE FOR PEACEFUL PURPOSES

With the CHM principle acting as a fundamental basis of internet governance, it will help mitigate the existing and emerging threats to cybersecurity. The role of member states as a representation of multiple stakeholders in cyberspace will centre on developing a normative base to shape the behaviour of different actors in peacetime and armed conflict where the Internet has the potential to be utilized for military purposes.⁸⁰

⁷⁸ JOHNSON – POST, *c. d.*

⁷⁹ ELLICKSON, R. *Order without Law: how neighbors settle disputes*. Cambridge: Harvard University Press, 1994.

⁸⁰ KAVANAGH, C. *United Nations, Cyberspace and International Peace and Security: Responding to Complexity in the 21st Century* [online]. Unidir Resources, 2017 [cit. 2023-08-14]. Available at: <https://unidir.org/sites/default/files/publication/pdfs//the-united-nations-cyberspace-and-international-peace-and-security-en-691.pdf>.

Additionally, states must play a more active role in governing Internet policy with cooperation and coordination to regulate the Internet's critical resources. This, in a way will alter the current "multi-stakeholder" model of the WSIS, which is based on a participatory and diverse form of governance. Adopting CHM for cyberspace will mean that the issues of international peace and security are inseparable from internet governance.

CHM will give states a clearer view of applying existing international legal frameworks and a greater consensus on how to apply them. States must work together to prevent malicious actors such as hackers and terrorists from having easy access to cause chaos on the Internet, which will undermine the safety of the Internet users and disrupt economic and commercial activity.⁸¹

In a more literal sense, cyberspace will impose a collective effort of peace operations. We refer to the UN peace operations, which will require states to utilize their technology and internet dominance within their designated jurisdiction to help with peace operations regarding data collection, communication, monitoring, and protection of civilians. Cyberspace will also become an opportunity for managing conflict and peacebuilding at local and regional levels. The management shall be conducted by participatory data collection and processing tools to empower communities to resist violence and recover after conflicts. The Internet should be utilized as an alternative avenue for discourse and community engagement in promoting peace through Internet content, social media, and even games to promote peace and foster nonviolent attitudes and behaviours.

B. CYBERSPACE WILL BE A NON-EXCLUSIVE AREA GOVERNED BY AN INTERNATIONAL AUTHORITY

From Joyner's perspective, this thesis would be conceived as an extremist approach to CHM due to its application to a common space area: cyberspace.⁸² Such application is drawn from a legal and philosophical basis from the ideology advocating the creation of a New International Economic Order (NIEO).⁸³ Within the NIEO concept, there are two legal implications. First, the international community acquires full legal ownership rights, with exclusive resource utilization rights over the area. Second, the international community also acquires a unique institutional mechanism that has jurisdiction over the shared space area while serving as the designated trustee for the international community would have to be created.

In Joyner's literature, there are two types of ownership: *res nullius* and *res communis*. Out of the two, the second hypothesis is the most relevant. Within this conception, cyberspace (as reiterated consistently) is not subject to the ownership of anyone and therefore is rendered available for all.⁸⁴ Cyberspace and its entire infrastructure are not eligible for states to claim sovereignty over. This implication is the manifestation

⁸¹ *The Impact of New Technologies on Peace, Security, and Development* [online]. Independent Commission on Multilateralism, 2016 [cit. 2023-08-14]. Available at: https://www.icm2016.org/IMG/pdf/new_tech_paper.pdf.

⁸² JOYNER, c. d.

⁸³ SAUVANT, K. – HASENPFLUG, H. *The New International Economic Order: Confrontation or cooperation between North and South*. London: Westview Press, 1977, p. 6.

⁸⁴ JOYNER, c. d.

of CHM's element of the non-exclusive use principle. The critical consideration of this principle is that it accepts access to cyberspace but rejects its ownership. Hence, cyberspace will not be made available for any sovereign title for legal acquisition or transfer.⁸⁵

For the latter, cyberspace has become not only a common space area, but in this context, has hosted the global "e-commerce" order. The emergence of a new electronic economy with extremely rapid growth facilitating industrial and business activities is a considerable portion of the pursuit in cyberspace. The creation of that institutional mechanism is already manifested within the form of the WGIG. The WGIG carries out the mandate of the UN to set up and manage the process and development of policies for the global Internet.⁸⁶ However, this is only to the extent that the core ideas and goals of organizing and controlling an "equal footing" cooperation with the multi-stakeholder policy creation of the Internet. Since the parties to the WGIG and ISA are inherently different, whereby the prior considers private sectors and civil societies also, and the latter consists only of member states of the UN and the General Assembly; some modifications must be made to the WGIG. The idea of establishing a new authority representing cyberspace governance will not be ideal if it is to imitate the ISA. As cyberspace has its novelties, the multiple-stakeholder approach to the parties is already suitable.

However, when the principle of CHM is adopted, the orientation and direction of policies will have to be under the norms of international law. This will create a more robust, legally binding attachment to the UN Charter norms manifested within the elements of CHM. Conclusively, the technical discussions for the establishment of such authority are outside the scope of this research. However, it must be underlined that member states have the role to steer private sectors and civil societies within their jurisdiction to follow the well-established rules of international law, adhering to the norms of the CHM principle applied to cyberspace. One of the mechanisms that this article proposes is the promotion of a cyberspace CHM-based principle through policy making.

C. THE EXPLORATION AND EXPLOITATION, AS WELL AS THE RESOURCES OF CYBERSPACE, BELONG TO ALL HUMANKIND

Another implication of CHM's adoption is that the benefits harvested from cyberspace will be designated to all humankind. This will not be limited to only states, private sectors, and civil societies, but every human being living on earth has a right to benefit from using the Internet. This will detach the interest, needs, and aspirations for cyberspace from states and governments. Nevertheless, those interest and needs will also become a right to those who are outside of any political units and peoples who are not incorporated into political entities such as states, e.g., non-self-governing territories and individuals with an absence of nationalities.

⁸⁵ Ibid.

⁸⁶ *Declaration of Principles: Building the Information Society: a global challenge in the new Millennium* [online]. United Nations, 2003 [cit. 2023-08-12]. Available at: <https://www.itu.int/net/wsis/docs/geneva/official/dop.html>.

Cyberspace infrastructure consisting of sensitive and fragile information must be used in an ethical manner, without interrupting others' safe and secure access to it, while simultaneously allowing everyone else to share and provide the space. This will mean that everyone will have the ability to access the Internet, whereby states will ensure this providence, and once it is guaranteed the conduct of activities on cyberspace will not be subject to proprietorship by anyone.

D. SUSTAINABLE DEVELOPMENT FOR FUTURE GENERATIONS

There will be a considerable burden to shift the inequality between developed and developing countries. This will result in improving access to the Internet in developing countries which will require increased investment, transfer of technology from the developed countries, and building the capacity of developing countries to research and develop new technologies.⁸⁷

The Internet contributes to the achievement of achieving the targets of sustainable development goals and creating an efficient, effective, and secure ecosystem taking advantage of connected devices for managing the significant global changes for the current and future generations.⁸⁸ As the Internet has existed in the past, present, and will in the future, its functions too will need to meet the needs of the present and future without compromising the ability of future generations to meet their own needs.⁸⁹

The epiphanies of creating an inclusive environment that ensures privacy and public-private cooperation on the Internet has been discussed for a while. It is impossible to sustain and preserve the Internet for future generations if there is no set of universally accepted governing principles. To achieve sustainability, a safe and open environment for the economy and culture to develop, efforts must go beyond the technical realm.

This last and final impact of cyberspace to be treated as a CHM will highly depend on the consequence and success of previous circumstances. If cyberspace is not strictly used for peaceful purposes, states are allowed to claim sovereignty. Currently, there are no international authorities that exercise the mandate of the inherent normative values contained within CHM. The resources are also not inclusively granted to all humankind. Thus, preserving cyberspace for future generations will be unlikely. The international community has an obligation to nurture cyberspace from being contaminated with harmful and unlawful acts, which will convey the use of the Internet for the future generations in an ideal and civilized manner.

⁸⁷ *The Impact of New Technologies on Peace, Security, and Development.*

⁸⁸ *Internet of Things Declaration to Achieve Sustainable Development Goals.* Geneva: Internet of Things, 2017.

⁸⁹ *Experts Group on Environmental Law.* World Commission on Environment and Development, 1987, part 1, Section 2, para 1.

8. CONCLUSION

As a fifth domain of human activities, cyberspace is subject to international law and should be governed by the relevant international framework. A few proposals have been made regarding cyberspace governance where a regime must encompass a formal legal authority in a particular issue area in the international system and the implicit and explicit principles, norms, rules, and decision-making procedures in which the actors in cyberspace will be governed. Despite the *de lege ferenda* supposition used in this research, the author believes that what has been proposed in this article is not a mere utopian concept coming out of a scholar's daydream. Considering cyberspace as a CHM has been proposed in an international forum by Malta's ambassador. There is also a steady academical progression in publicizing factual similarities between areas of CHM. These facts have shown that there is great potential for designating cyberspace as a common heritage for humankind.

This research has provided a historic-analogical basis by comparing the legal norms contained in common space areas where the CHM principle has been applied. Each regime of common heritage is built upon the foundation that an area where it extends the limits beyond national jurisdiction should be governed by CHM. The transnational, non-territorial nature of cyberspace does not acknowledge the concept of sovereignty, nor is it restricted by national borders. Regarding the sea, cyberspace shares a common characteristic of the 'additional unknowns' and the inherent resources. Minerals to information, both resources are indispensable commodities to human lives and shall not be appropriated by any state. In connection with Antarctica, cyberspace is off limits towards any activities that might hinder the exclusive use of peaceful purposes. Antarctica should not be turned into a military base supporting any military activities, and nor should cyberspace, where states should refrain from any acts instigating a cyber war or espionage. Lastly, both outer space and cyberspace share an obligation for states to balance the freedom of exploring and exploiting resources from the area while protecting it on the premise of complying with international law.

Four legal consequences arise if CHM is to be applied to cyberspace. First, the use of cyberspace will strictly be for useful purposes. Second, cyberspace will become a non-exclusive area where it should be governed by an international authority. Third, the benefits and resources retrieved from cyberspace will belong to all humankind, and not be limited to states and private sectors. Fourth, the orientation of the implications will be driven toward preserving the Internet for future generations.

Conclusively, the ideal model of cyberspace governance through the application of the CHM principle will potentially make cyberspace a peaceful domain in which humankind can share benefits equitably. This will depend on the cooperation and collaboration between states and the codes of conduct within the cyber technology industry, with the private sector and civil societies. The challenge in adopting conventional approaches and principles to new circumstances is due to the specific nature of cyberspace, the limitlessness of which cannot be easily adapted to the present, particularly the territorial models of dividing state competence. It would be naïve to over-simplify the limitless nature of the Internet by describing it solely through principles mainly

based on the criteria of territorial sovereignty. Nevertheless, from an international law standpoint, the author firmly believes that the CHM principle is an appropriate model for cyberspace governance.

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