

The legal framework of the Internet under the UN system

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Abstract: This paper addresses the ambiguous legal boundaries surrounding the Internet, a persistent concern for legal researchers. As a new frontier for legal researchers, issues related to the Internet or cyber matters within the legal context have persisted for decades, with some aspects consistently in a state of obscurity and fragmentation. Moreover, there is a phenomenon of overlooking the comprehensive development of a legal narrative, leaving this branch in a state of isolation. To enhance clarity, the paper narrows its focus to three key institutions that regulate the Internet under the UN system, this paper obtains its breakthrough points from the angle of organs, and then of basic concepts embraced by the organs. Upon reviewing the core elements at play in the Internet governance system, the multistakeholder model emerges as a key player in Internet governance within the UN system. In summary, employing the methodologies of textual, historical, and normative analysis allows us to explore the underlying questions and outline a foundational map of Internet regulation within the UN system.

Key words: internet governance, legal framework, United Nations (UN) system, multistakeholder model, cyber law.

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INTRODUCTION

The Internet has become an essential global entity in the digital era, significantly influencing our society, economy, and personal lives. Nevertheless, the rapid and widespread expansion of its influence has resulted in numerous legal obstacles, perplexing both researchers and practitioners. As such, this study explores the intricate and frequently unclear legal parameters that delineate the Internet, a realm that continues to be a developing frontier for legal scholars.

For many years, the legal community has struggled with a range of concerns related to the Internet and cyber affairs. These difficulties are distinguished by their enduring nature and propensity to be enveloped in ambiguity and disarray. Consequently, although the Internet has had a substantial influence on several elements of contemporary life, there is a discernible deficiency in the thorough establishment of a legal framework tailored to this particular field. This divide has resulted in the legal discussion over Internet regulation being relatively isolated and underdeveloped.

To address the complexity of this problem, this article specifically examines institutions within the United Nations (UN) system responsible for the debates and attempts to regulate the Internet. The study seeks to highlight key areas of innovation within these institutions that can enhance comprehension and consistency in understanding the legal framework controlling the Internet, thus, providing legal guidelines to the UN members in developing their own legal frameworks. Therefore, this research strategy contributes to mapping out the fundamental legal principles built with the UN System regarding Internet governance.

An in-depth examination of the fundamental components that make up the Internet governance system within the United Nations highlights the prominent significance of the multistakeholder model. This concept has become a fundamental aspect of Internet governance inside the UN framework, promoting the involvement of various stakeholders from diverse sectors in the decision-making process.

In order to navigate through the intricate layers, the study utilizes a blend of textual, historical, and normative analysis approaches. The tripartite approach allows for a comprehensive examination of the fundamental issues that shape Internet governance inside the United Nations system. The primary objective

is to establish a fundamental framework that may direct future investigation and decision-making in this progressively significant and ever-changing domain.

This study seeks to provide insight into the complex network of legal regulations, organizations, and principles that control the Internet, particularly within the framework of the United Nations system. By engaging in this action, it aims to actively participate in the ongoing discussion and assist in the creation of a more logical and efficient legal structure for the digital era.

REGULATION OF THE INTERNET WITHOUT CLEAR BORDERS

Even if the history of the Internet is that short, undoubtedly the Internet has penetrated substantially into the modern human world. According to the statistics publicized through the website by the International Telecommunication Union (ITU), in the past five years, the proportion of the population using the Internet worldwide has increased by 23%, reaching 67% in 2023 (ITU-D 2023)¹. The network that connects the whole world is not limited to the imagination of writers of science fiction any longer. Before considering the legal interpretation regarding the Internet, it is necessary to go back to its underlying idea of the establishment of open architecture networking, making wide resource sharing or, in other words, to connectivity to be realized.

However, just as more than 20 years ago scholars at that time would have been astonished by the rapid development of the Internet, as we are today. That is especially true with regard to the emergence of artificial intelligence applications since the 2010s, which justified the investigation of the Internet as an information exchange venue with the real world and the fact that “big data” generated by the Internet makes it possible to let us authorize intelligence more like human to AI (Liu et al. 2017). The strength of the Internet at present is not limited to the correlated technologies, a chain reaction brought by the technology revolution that is not strange to our civilization either. Numberless careers directly or indirectly involved with it are affected somehow and, of course, benefits or not from it. As such, forms and processes of producing change, accordingly, leading to the structures of society’s layers’ fluctuation.

That’s the time in which we turn to the phenomenon “industrial revolution”, seeking inspiration to deal with the ruling of cyber society by analogy (Shalhoub and Al Qasimi 2010). The advancement of new technologies is not a novel phenomenon. In the case of telecommunication technologies starting in the 18th century, the telegraph became an important way to speed up communication, followed by the telephone, the television, and the build-up of the telecommunications network (Stone 2015). As such, the regulation involved with information technologies is not an old one. With this premise, it seems to be more acceptable when we notice that Internet things are literally attractive, offering enriching layers for researching, for which scholars holding diverse backgrounds regarding legal grounds have the standing to propose their concerns and approaches towards them. That makes a shortcoming in this field magnify, the scholars distract their attention away from the fundamental section of this field, leading to the spot that at present, we cannot be sure there’s a new discipline classified as international Internet law or international cyber law.

To that extent, actors may find it hard to determine some fundamental glossaries in this field to organize the ideas and create categories. Just like the word “cyberspace”, an idea that was used first in science fiction literature, creating the imaginary world of alternative dimensions where specific phenomena might happen (Fields 2018). While the debate around the hermeneutical interpretation of the word itself has not stopped, since the combination of the words “cyber” and “space” has been of relatively obvious and the subconscious intent in creating the context of another world compared with the world before, that is, the virtual world. For instance, there is an argument that the term “cyberspace” itself indicates the spatial metaphor, probably causing unconscious impressions and, thus, making the researchers distracted. (Wagner, Kettemann and Vieth 2019) People would probably be impressed firstly with this word that there is a particular virtual geographical place created on the Internet technologies. On the other hand, Supporters using this word get easier access to cyber domain arguments. In addition, there are arguments for the separation of the cyber world from the industrial world due to their independent existence (Barlow 2019). The concepts “digital world” and “virtual world” share the same ontology with “cyberspace,” which are embedded within cross-disciplinary features that pose the same challenges to most legal researchers.

¹ See more: <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>.

When we dig deeper in this field, the problems present better. In the dimension of international law, there are literally too narrow points causing hot and meaningful discussions in this field. Browsing existing pieces regarding the Internet of Things or cyber of Things published by scholars in international law, there are generally several research directions. Directly related to the technological roots of the Internet, the angle of engineers works well in the field, by which discussions from code to the virtual world are enriching as Lessig (2009) points out that as the basic architecture of the cyber world, code could be seen as the law of the cyberspace. De Nardis (2014) chose the perspective closer to engineering to show his ideas regarding features and the reasons for the forming of features for Internet Governance in the global dimension. With this angle, there has been a prediction for the narrative of cyber law or we are telling here about the regulation of the Internet referring to the technologies' development as in Murray (2017). Furthermore, as the Internet gradually penetrates its function in aspects of social life, its affection in politics especially pointing at democracy, is broadly cared (Wilhelm 2000; Balkin 2004; Kornbluh et al. 2020). At the military dimension, the development of *Tallin Manuel* provides evidence of a never-ending enthusiasm of people towards cyber operations, and it deserves to add that *Tallin Manuel* reflects another essential issue around the applicability of general International law to the cyber field (Schmitt 2013; *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations* 2017; Liu 2016; Delerue 2020). Of course, the economic section brought by the Internet is the core reason for the charm of the Internet, it's appropriate to take it as the coronation for the Internet to interrelate it with the brand new industrial revolution (Fields 2018; Johannessen 2019; Mayer et al. 2021). While human rights in the digital world have been paid attention to, such as privacy rights, freedom of speech, access rights, and so on (Basho 2000; Balkin, 2004; Efroni 2011). Besides, currently, more attention has been paid to AI techniques (for the well-known progress in generative AI) and the development of law, which may be suitable to be seen as branches or kind of extension on advanced digital technology with its roots inseparable from Internet technologies as mentioned above (Čerka et al. 2015; Surden 2019).

Looking through the keywords of the literature mentioned, readers would find that a similar situation of disordering concepts' usage happens all the time. There are more gaps in the research field of this realm, which points to an uncertain glossary. Apart from the concept of "cyber law", we may find "digital law" and "Internet governance" exist in sparse works of scholars. Even when we turn to the angles of international institutions or domestic dimensions, there are more distinctions in the narrative.

In this paper, we argue that the law is not yet that mature, especially since we only look forward to showing its one aspect from the angle of international law. Moreover, there is confusion about the existence a certain discipline called international cyber law. To make it better for us and our readers to focus on the main points of this problem, this paper would just take the limited horizon of the UN System. For that, we mainly apply methods of textual analysis, normative analysis, and historical analysis, through which the developments of the Internet of things in legal narrative under the UN system could be found or it is in a more mature state of development. This paper expects to provide explanations and understanding consistent with the historical evolution. On that, we may obtain the perspectives for several questions: How and why would the UN define the Internet of things differently at the beginning of their caring and now? How does the revolution of the concept of Internet things then influence the legal interpretation related? What is the map of Internet ruling under the UN system? Is there a discipline functioning as a branch of law in this realm?

The following first section will begin with the leading institutions regulating the Internet within the UN system, through which we provide a brief history of governance of the Internet. Secondly, based on the brief history of institutional development, we propose the diversity of core concepts of the different organs, the content of which affects the functioning of organs relatively. Then, we focus on the standard mode of the existing institutions in the Internet governance field under the UN system, trying to find if it is operating well as an assumption. Finally, with the latest movement acted by the UN, we might provide ideas regarding Internet governance in the future in the context of the continuing digital era.

FROM THE WORLD SUMMIT ON THE INFORMATION SOCIETY TO INTERNET GOVERNANCE FORUM

To describe the process of Internet governance under the UN system, we shall go back to more than twenty years ago, even at that time Internet did not exclusively cover limited fields anymore, which brought many organs of the UN into its context irresistibly. To enhance focus, this paper mainly explores a specific aspect of Internet governance within the UN system. To make it clear, we select the three main institutions

therein.

The International Telecommunication Union (ITU) is the first choice for the UN to play a role in the Internet domain. Consisting of members including states, international and regional organizations, universities, and companies, ITU is committed to being devoted to promoting connectivity worldwide². Now ITU has announced that it is the special agency for Information and communication technologies (ICTs), adding the Internet part to its essential horizons. The logic of the division is suitable considering that the Internet is designed to serve for information exchange. Yet the multiple types of Members by reason of the technological relevance of its sector, pose challenges for ITU in advancing international law in the public aspect. For one thing, in the long-term history of ITU from the International Telegraph Union to the International Telecommunication Union, the focus of this agency has been on technology sharing and universalizing, on which the area for knowledge exchanging has continued its function well. For another thing, the situation of diplomacy becomes more than complicated in the technology domain, with consensus consistently acting as the mainstream of conferences (Balbi and Fickers 2020).

The multistakeholder model has been applied in Internet governance with the direct involvement of ITU. In the 1990s, ITU brought up the scheme of organizing the World Summit on the Information Society (WSIS), and early in the second phase of WSIS, the multistakeholder model showed its appeal. The 2005 conference was attended by almost twice as many participants as two years ago (Bygrave and Bing 2009). Of course, the strength of the broad issues for the summit helped with that as well. Through the outcomes of WSIS in 2003 and 2005, the Internet Governance Forum was set up as a broader platform for dialogue provided for multiple actors. The heritage of notions in the history of WSIS and the Internet Governance Forum (IGF) is precise. Concerning the multistakeholder governance model advocated by the two organs, surely supporters are arguing that the design and function logic of the Internet has characterized its regulatory methods. While, the opposite voice points out that this model trying to marginalize the strength of state actors is a lie intentionally to wipe out the states in the map of cyberspace (Mueller 2010).

FROM INFORMATION SOCIETY TO INTERNET GOVERNANCE

Information society is the first concept we shall deal with here. Since the 1970s, the connotation of the concept has really sparked debate around it (Webster 2006). Due to the rapid evolution of information technologies and their impact on the world, there has been a definite idea recognizing its relation with the industrial revolution or information era of human beings in the 1990s (Castells and Castells 1996). The consensus is that influential in affirming the influence of the technologies, the most critical dimensions of social life are separately redescribed. But reading through the cornerstone outcomes of WSIS, there is still no specific, well-explained definition of the “information society”.

In the Geneva Declaration of Principles 2003, WSIS (2005, 9) proposed the common vision of information society as:

“... declare our common desire and commitment to build a people-centred, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life, premised on the purposes and principles of the Charter of the United Nations and respecting fully and upholding the Universal Declaration of Human Rights”.

This paragraph of the Declaration merely provides a vague prospect and a brief model description of information society. This is not problematic as it is a collection of principles, which by nature are general and abstract³. With the insight of recognizing the reality and future of Internet technologies, the narrative indicates the assessment system behind it. The index contained focuses on functionality. It is natural for the conference to lean towards the option close to instrumentalism since it was initiated by the ITU. Considering the impact, WSIS shows its stand on the use of technology as tools to improve human well-being. The ideas of similarities could be found both in academia and NGOs (Dany 2012; Doria and Kleinwächter 2008).

² See more information about ITU in <https://www.itu.int/en/about/Pages/default.aspx>.

³ In essence, a principle is a fundamental concept or value that serves as the guiding force behind the functioning and evolution of a system. A 'rule' of this nature is not inherently enforceable, but it is seen as a standard or norm that has an impact on behavior and decision-making processes. For a deep investigation about the principles in International Law (Ottavio 2007)

But WSIS's caution in defining did not stop here. In the Geneva Plan of Action 2003, the Plan admitted that the "information society" is an evolving concept with different stages of development worldwide, and the changing conditions, especially in technologies, are going to shape the future of the concept (WSIS 2005).

By the way, we are not here to deny the benefits of the multistakeholder principle advocated by WSIS in 2003, because the decision to take the Internet as a global and public facility undoubtedly makes at least one thing more possible, it is open to innovation widely. That could also be seen as one reason for supporters of the global public domain theory (Mueller 2020)⁴.

Compared to the macro and mixed definition, the agenda of WSIS released in 2005 showed the strategy with details in two aspects:

1. What main directions WSIS does contribute to promoting;
2. Which organ of the UN would be responsible for the directions?

The Annex of this agenda attached the list of divisions, dividing the tasks to ITU, UNESCO, UNDP, WTO, WHO, and other departments of the UN. In this way, the road of the speeding conduction of an ideal information society began to extend into the real world.

Ten years later, in the outcome document reviewing under the 2003 Geneva and 2005 Tunis mandates, WSIS reclaimed its objective of improving people's lives and bridging the data divide (WSIS 2014). Still, in this report, the challenges and recommended directions were proposed again, aligning consistently with the agenda determined in 2005. WSIS continues to progress according to the textual records during this period.

It is worth mentioning that the outcomes of WSIS in 2003 asked to set up a working group on Internet governance, the working group (WGIG) then proceeded with its work before the Tunis summit in 2005 and provided a report as the outcome. The report provides the definition of "Internet Governance" in accordance with WSIS principles:

Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet (Working Group on Internet Governance 2005, 4).

The definition consists of stances related to objectives, subjects, and methods of action. WSIS and WGIG propose a clear voice to require multi-actors' participation and all-aspect measures with the purpose of optimal utilization of Internet technologies. They admit and emphasize the open and decentralized nature of the Internet, without the desire to lose them. Moreover, this report does not provide further explanation of the concept of "information society." In 2005, the Tunis summit took action to respond to the report, asking to set up the Internet Governance Forum (IGF) (WSIS 2005).

Before formally entering the IGF, let's take a moment to examine "Internet governance". This concept might give a similar first impression to anyone with even a basic understanding of the topic, as it encompasses a wide range of elements. But again, this paper does not aim to criticize the style of defining of UN system, since it's of possibility and availability for them to avoid more awful faults, losing some issues of one realm. Even if the diction is that vague, currently we may find there is confusion about including cloud-related computing and AI technologies.

In the context of "Internet governance", the prefix 'Internet' pertains to technology. So, what does "governance" mean? At the very beginning, there was debate about whether the network could be governed, the answer undoubtedly is determined as yes in the following years. When we are talking about governance, we always find we are hanging in the universe of social science to grab whatever we want, picking whatever we can make use of and putting them into our blankets of measures. Governance nowadays is a concept indicating the capacity to regulate and implement policies or plans in public social life. It is of feature covering multiple subjects but not traditionally only relying on the government linking directly to the state actors in an international dimension (Katsamunskaja 2016). As such, IGF its ambition is seemingly even written briefly but firmly in its name.

And now, what is "Internet governance"? Is there an earlier meaningful use of this phrase? The answer

⁴ There is also a stream of literature that considers the Internet as an International public good (IPG). An IPG is composed of goods that offer universally accessible advantages and can be utilized by anyone on a global scale without diminishing the potential for others to consume them. The products mentioned encompass a diverse array of activities, including environmental conservation, security measures, healthcare services, poverty alleviation efforts, research, and development, and in the case for our paper, the Internet (Ferroni 2002).

might be no. Internet governance enhances narrow history, which might be shorter than information society, the first definition confirmed is found in the WSIS's outcome documents in 2005 (Hofmann et al. 2017). That decides if we want to explain more about the concept. The formal version proposed in WGIG's report is the first-hand material, which brings us to the former three elements presented in the definition: subjects, objectives, and methods of action. The thoughts attributed core element herein is that subjects exist reasonably since the methods of governance are another issue discussed all the time, the scope of which could be defined with certain conditions, the objectives are everyday things serving for human beings finally if we want to do the recurrence. The typical character in the narrow space that WGIG chose to empower this realm almost only lives in the scope of subjects, in which they brought state and non-state actors, and the most striking one, the participants from civil society. The intention got its show time in the following years, as IGF 2008 gave the slogan "Internet for All", which then in 2009 was written as "Internet Governance: Creating Opportunities for All".

Then we could go to the first record of IGF, released with the content of proceedings of the forum in 2006 and 2007. In this record, IGF described its role as an experiment in global governance, aiming not to make decisions but to air different views and dialogues (Doria and Kleinwächter 2008). We can at least catch two core points of this forum from the ground of its establishment and its objectives, one is pointing to the inclusive character, all kinds of subjects are welcome to join in the discussions hosted by IGF; the other one is non-binding feature, its primary declaration of functions announces its intention to avoid tough stand in policy-making (WSIS 2005)⁵. IGF has no authority to supervise Internet affairs and in replacing the duty of any existing actors.

Even if keeping the status of no binding decision-making power, with the lightweighted and decentralized structure, IGF has gone through a two-time review by General Assembly and updated its mandate to 2025. The report of the Expert Group Meeting on the Internet Governance Forum released in 2022 appreciated a series of contributions aroused or assisted by IGF, which they described with defining "IGF ecology system" (Expert Group Meeting on the Internet Governance Forum 2022). Both makes sense in proving the success of IGF in a way.

MULTISTAKEHOLDER MODEL AS THE HEART OF INTERNET GOVERNANCE

The multistakeholder model in Internet governance shaped in the UN system has been in operation for around twenty years, which has mutually shaped Internet governance in a global dimension. The multistakeholder arrangements are continuously showing their strength in the Rules of Internet for the heritage and development of notions. And for another aspect, the multistakeholder model is spiritually consistent with the "common" idea of the UN. More and more, the UN is trying to create common speeches, common goals, and a common agenda of course. The common future notion indicates that the future relates to everyone, on which it is not weird the decision-making trend is to recalling actions of all in the human society. However, there is factual screening as threshold in Internet field for its nature related to technique unit, meaning relevance or profession.

For the definition of multistakeholderism, investigated with the content proposed by the two institutions, the foundational element of it in Internet Governance roughly proves to be the open and inclusive notion of allowing all kinds of subjects involved with typical things to enter the round table for consultation and determination. Concretely, the multistakeholder model in Internet Governance makes it possible for:

⁵ Non-binding agreements have a substantial impact on international law. Non-binding agreements are becoming more prevalent in the field of international relations as they offer a versatile option in contrast to legally obligatory treaties. These agreements are advantageous for creating connections and broad areas of collaboration. Although lacking legal enforceability, they can still influence the international treaty system through the process of interpretation and the evolution of state conduct and customary international law. The enforcement of non-binding agreements differs depending on the legal system, with common-law jurisdictions being more inclined to enforce them compared to civil-law jurisdictions. Non-binding international law can have a significant impact on domestic legal systems, providing guidance to policymakers and influencing legal decisions. It is especially beneficial in circumstances where the enforceability and relevance of international law are uncertain. International law also has a role in expanding arbitration agreements to include non-signatories in contract-based arbitrations that involve states or state agencies (Efrat 2016; Loja 2022).

“representatives of public interest advocacy groups, business associations, and other interested parties can participate in intergovernmental policy deliberations alongside governments. It might be described as the pluralization of international institutions. Most discussions of networked governance and of global public policy networks recognize the presence of different stakeholder groups in governance networks” (Mueller 2010, 7–8).

While in fact, multistakeholderism is not an issue created for the Internet field, the global business realm is broadly faced with the choice of establishing more open and inclusive governance model, which is likely to promote public governance (Fransen and Kolk 2007). It seems like the corporations from the civil society gradually get their foundation to argue for their benefits and goals in current international order, the civil society obtains advantages through connectivity and knowledge sharing, supporting the actors in it to do more than what they could in the former history. There is order interweaving with disorder.

The multistakeholder model is not operating without people’s suspicion. Basically, there’s doubt if the supporters of multistakeholder arrangements have hidden the function of governments intentionally and emphasized the other ones instead, but the marginalizing action means nothing in a deeper dimension (Eeten and Mueller 2013). Sharper critics plainly argue that the multistakeholder model bridges the stakeholders to effective participation through fiction (Hofmann 2016).

What makes people curious commonly is still the vague consequences brought by the multistakeholder model, since it’s opposite to the traditional governmental approach in management, which emphasizes more in a result-oriented way. Investigated with the end of the multistakeholder model in Internet governance, IGF has not been empowered to form any decision or documents of higher force. Then, how can we confirm the relations between the development of this field and with efforts of IGF? How can IGF demonstrate its effectiveness? While UN may approach positive attitudes towards the surgically pointless work with the opinion that communication helps with decreasing conflicts, leading to a better tomorrow (Bygrave and Bing 2009; APC 2006). In the report of the UN Executive Office of the Secretary-General (EOSG) called *Our Common Agenda* released in 2021, “multistakeholder” existed nine times in diverse global issues. In the report *A Global Digital Compact* proposed by EOSG in 2023, a single Annex I of 3 pages lists the intergovernmental and multistakeholder digital cooperation bodies and forums with multistakeholders, 2 pages of which only write the essential catalog and name of the organs, and there are other ones not listed in it.

CONCLUSION

Therefore, the rule of the Internet under the UN system could be summarized around two core points, one is about the realistic angle of taking tools as tools, this addresses the issue of our position when we are faced with the challenges brought by the advanced and changing modern reality; the other one is about cooperation, which defines the primary paths for us to go on with the risky but owning more chances of connectivity world when the barriers of knowledge are destroyed, there’s reason for idealists to imagine and strive for a commonly fair bridge at least for dialogues.

On that, our initial problems regarding the system of rule of the Internet in the international dimension could be answered partially. The very essential principles confirmed by the institutions concerning the regulation of the Internet in the context of the UN system determine that there are not yet forceful and powerful rules independently established in this realm, which also has something to do with the discussion around the applicability of general international law in it.

Also, on the core principles, the UN has become in the process of building its Utopian Internet governance, looking forward to mobilizing all the potential actors to facilitate the use and development of Internet things. From the documents released recently regarding the future arrangements or strategies, the same road proceeds as usual.

Finally, it is not strange to find that knowledge barriers between law and technology still could stop us from going further in combination. Though the code law discussion has existed they are primarily not searching for the crossroad where the inner rules of technologies and outer rules for them make peace with each other. The speed of revolution in the technique field brings relative difficulties to legal scholars standing on the other side of the mirror. Nonetheless, in the narrow system of the UN, there are tracks of Internet ruling as a discipline appropriately, contributed by the three institutions we have demonstrated herein, with principles of development and plans of action. This conclusion holds true only when we acknowledge the role of the UN in international law. Another definite reality is that the UN cannot stop its step now to declare

it has totally ended all the investigation of the Internet things for the latter one's still addicted to exploring the borders of computing and other fields. No doubt we could find the UN's caution in keeping an eye on the new branches of modern society, the trek in this realm would not stop in the short term predictably.

REFERENCES

1. APC. 2006. "Openness: In the Activist's Eye | Association for Progressive Communications." n.d. Latest accessed on December 1, 2023. <https://www.apc.org/en/news/governance/world/openness-activist-s-eye>.
2. Balbi, G., and A. Fickers, eds. 2020. *History of the International Telecommunication Union (ITU): Transnational Techno-Diplomacy from the Telegraph to the Internet*. *Innovation and Diplomacy in Modern Europe, volume 1*. Berlin; Boston: De Gruyter Oldenbourg.
3. Balkin, J. M. n.d. "Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society." *New York University Law Review* 79.
4. Barlow, J. 2019. "A Declaration of the Independence of Cyberspace." *Duke Law & Technology Review* 18 (1): 5–7.
5. Basho, K. 2000. "The Licensing of Our Personal Information: Is It a Solution to Internet Privacy?" *California Law Review* 88 (5): 1507–45.
6. Bygrave, L.A., and J. Bing, eds. 2009. *Internet Governance: Infrastructure and Institutions*. Oxford; New York: Oxford University Press.
7. Castells, M., and M. Castells. 1996. *The Rise of the Network Society*. Information Age, v. 1. Malden, Mass: Blackwell Publishers.
8. Čerka, P., J. Grigienė, and G. Sirbikytė. 2015. "Liability for Damages Caused by Artificial Intelligence." *Computer Law & Security Review* 31 (3): 376–89.
9. Dany, C. 2012. *Global Governance and NGO Participation*. Routledge.
10. Delerue, F. 2020. *Cyber Operations and International Law*. 1st ed. Cambridge University Press.
11. DeNardis, L. 2014. *The Global War for Internet Governance*. New Haven: Yale University Press.
12. Doria, A., and W. Kleinwächter, eds. 2008. *Internet Governance Forum (IGF) The First Two Years*. Geneva: IGF Office.
13. Eeten, M., and M. Mueller. 2013. "Where Is the Governance in Internet Governance." *New Media & Society* 15 (August): 720–36.
14. Efrat, A. 2016. "Legal Traditions and Nonbinding Commitments: Evidence From the United Nations' Model Commercial Legislation." *International Studies Quarterly* 60 (4): 624–35. <https://doi.org/10.1093/isq/sqw012>.
15. Efroni, Z. 2011. *Access-Right: The Future of Digital Copyright Law*. Oxford; New York: Oxford University Press.
16. Ferroni, M. 2002. "The Role of International Public Goods." In *Making Development Work*. Routledge.
17. Fields, Z. ed. 2018. *Handbook of Research on Information and Cyber Security in the Fourth Industrial Revolution: Advances in Information Security, Privacy, and Ethics*. IGI Global.
18. Fransen, L.W., and A. Kolk. 2007. "Global Rule-Setting for Business: A Critical Analysis of Multi-Stakeholder Standards." *Organization* 14 (5): 667–84.
19. Hofmann, J. 2016. "Multi-Stakeholderism in Internet Governance: Putting a Fiction into Practice." *Journal of Cyber Policy* 1 (1): 29–49.
20. Hofmann, J., C. Katzenbach, and K. Gollatz. 2017. "Between Coordination and Regulation: Finding the Governance in Internet Governance." *New Media & Society* 19 (9): 1406–23.
21. Johannessen, J. 2019. *The Workplace of the Future: The Fourth Industrial Revolution, the Precariat and the Death of Hierarchies*. Routledge Studies in the Economics of Innovation. Abingdon, Oxon; New York, NY: Routledge, Taylor & Francis Group.
22. Shalhoub, K.Z., and S.L. Al Qasimi. 2010. *Cyber Law and Cyber Security in Developing and Emerging Economies*. Edward Elgar Publishing.
23. Kornbluh, K., E.P. Goodman, and E. Weiner. 2020. "Safeguarding Digital Democracy: Digital Innovation and Democracy Initiative Roadmap." *German Marshall Fund of the United States*.
24. Lessig, L. 2009. *Code: And Other Laws of Cyberspace*. ReadHowYouWant.com.
25. Liu, F., Y. Shi, and P. Li. 2017. "Analysis of the Relation between Artificial Intelligence and the Internet from the Perspective of Brain Science." *Procedia Computer Science* 122: 377–83.
26. Loja, M. *International Agreements between Non-State Actors as a Source of International Law*. Studies in International Law. Oxford: Hart Publishing, 2022. Accessed December 2, 2023. <http://dx.doi.org/10.5040/9781509951130>.
27. Mayer, C.-H., E. Vanderheiden, and P.T.P. Wong, eds. 2021. *Shame 4.0: Investigating an Emotion in Digital Worlds and the Fourth Industrial Revolution*. Cham: Springer International Publishing.
28. Mueller, M.L. 2010. *Networks and States: The Global Politics of Internet Governance*. Information Revolution and Global Politics. Cambridge, Mass.: MIT Press.

29. Mueller, M.L. 2020. "Against Sovereignty in Cyberspace." *International Studies Review* 22 (4): 779–801.
30. Murray, J. H. 2017. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. Updated edition. Cambridge London: The MIT Press.
31. Quirico, O. 2007. "A Formal Prescriptive Approach to General Principles of (International) Law." *SSRN Scholarly Paper*. Rochester, NY. <https://doi.org/10.2139/ssrn.1023861>.
32. "Report of the Working Group on Internet Governance." 2005. *Working Group on Internet Governance*. <http://www.wgig.org/docs/WGIGREPORT.pdf>.
33. Schmitt, M.N. 2013. *Tallinn Manual on the International Law Applicable to Cyber Warfare*. Cambridge New York: Cambridge University Press.
34. "Statistics_Individuals Using the Internet." n.d. *ITU*. Accessed November 25, 2023. <https://www.itu.int:443/en/ITU-D/Statistics/Pages/stat/default.aspx>.
35. Surden, H. 2019. "Artificial Intelligence and Law: An Overview." *SSRN Scholarly Paper*. Rochester, NY. <https://papers.ssrn.com/abstract=3411869>.
36. *Tallinn Manual 2.0 on the International Law Applicable to Cyber Operations*. 2017. 2nd ed. Cambridge: Cambridge University Press.
37. Wagner, B., M.C. Kettmann, and K. Vieth, eds. 2019. *Research Handbook on Human Rights and Digital Technology: Global Politics, Law and International Relations*. Edward Elgar Publishing.
38. Webster, F. 2006. *Theories of the Information Society*. 3rd ed. International Library of Sociology. London New York: Routledge.
39. Wilhelm, Anthony G. 2000. *Democracy in the Digital Age: Challenges to Political Life in Cyberspace*. New York: Routledge.