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Why (Not) Talk About Human Rights? Politics in the Global Digital Compact

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Abstract

This paper examines the politics behind global shifts in human rights-based language regarding the Internet. It uses the case of the Global Digital Compact to test the ability of various International Relations theories to account for these shifts. The Global Digital Compact is an international digital cooperation and Internet governance framework facilitated by the United Nations and endorsed by 93 countries, as of 2024. I analyze 174 input documents used to inform the development of the compact. These documents were authored by civil society, academic, private sector, government, and technical community actors from the Global South and North. I integrate qualitative content analysis, network analysis, and topic modeling to measure differences in the frequency and relationships among rights presented in the documents. Historically, civil and political rights, for example, the right to free speech, have been promoted as the most relevant to the Internet by the Internet technical community, which largely originated in U.S. institutions. Contrary to this historical focus, I unexpectedly found that many actors, including technical community actors, focus more on economic, social, and cultural rights than on civil and political rights. However, they do so implicitly, avoiding the term “human rights.” This implicit support expressed by technical community actors may help lay the foundation for policies supporting economic, social, and cultural rights online. These findings also highlight the importance of considering global perspectives in future research on Internet governance.

Keywords: Internet Governance, Human Rights, Global Digital Compact, Qualitative Content Analysis, Natural Language Processing, Digital Divide, International Relations

1. Introduction

This paper examines the politics behind digital regulation in the case of the Global Digital Compact (GDC). The GDC is an international digital cooperation and Internet governance framework endorsed by 93 countries, as of 2024. In negotiating the GDC, a wide variety of participants came together to address the most pressing issues relating to the Internet. Human rights are central to many of these issues. Human rights online, and the appropriate roles of various actors in shaping them, are contested and political. The impact of Internet architecture on human rights is similarly contentious and has been central to recent debates in the field of Internet governance. This paper examines the positions of various actors in negotiating human rights on the Internet in the case of the GDC using theories from the field of International Relations (IR). In doing so, it bridges the fields of IR and Internet governance to understand international political factors shaping how the Internet is governed.

While considering the positions of all types of actors involved in developing the GDC, this paper places particular focus on technical community actors as they develop and maintain Internet architecture, which, as some Internet governance scholars argue (Cath and Floridi, 2017), could give them influence over how human rights are enacted online. Contrary to the historical focus on civil and political rights, I unexpectedly found that many actors, including the technical community, focus more on economic, social, and cultural rights than on civil and political rights. However, they do so implicitly, avoiding the term “human rights.” This implicit support could help lay the foundation for policies that promote economic, social, and cultural rights on the Internet, such as efforts to overcome the digital divide in access to the benefits of technology (Lybeck et al, 2024). These findings also highlight the importance of considering perspectives from a variety of stakeholders in the Global South and North in future research on international Internet governance. They are based on a mixed-methods analysis of the GDC consultation process, described in section 4.

The GDC was facilitated by the United Nations. The UN General Assembly identified improving digital cooperation as a key priority during their 75th session in 2020 (United Nations General Assembly, 2020). In the resolution adopted at the session they state:

Digital technologies have profoundly transformed society. They offer unprecedented opportunities and new challenges. When improperly or maliciously used, they can fuel divisions within and between countries, increase insecurity, undermine human rights and exacerbate inequality. Shaping a shared vision on digital cooperation and a digital future that show the full potential for beneficial technology usage, and addressing digital trust and security, must continue to be a priority as our world is now more than ever relying on digital tools for connectivity and socioeconomic prosperity. Digital technologies have a potential to accelerate the realization of the 2030 Agenda. We must ensure safe and affordable digital access for all. The United Nations can provide a platform for all stakeholders to participate in such deliberations. (United Nations General Assembly, 2020, p. 4)

Here, the 2030 Agenda refers to the UN's 2030 Agenda for Sustainable Development, which focuses on peace, freedom, and eradicating poverty. The UN General Assembly requested that the Secretary-General provide recommendations on advancing the agenda outlined in the resolution (United Nations General Assembly, 2020). This resulted in the report "Our Common Agenda", which introduced the Global Digital Compact as a high-level track at the upcoming September 2024 Summit of the Future. According to the report, the GDC "would outline shared principles for an open, free and secure digital future for all" (United Nations, 2021, p. 63).

From June 2022 to April 2023, the United Nations Office for Digital and Emerging Technologies gathered over 400 informal consultations in the form of online submissions (United Nations b, n.d.). While the compact was negotiated by UN member states, these consultations helped to inform its content. Guidance on how to engage with the GDC emphasizes that anyone or any organization/entity can contribute to the GDC (Global Digital Compact, 2023b). Participants were encouraged to submit inputs on seven areas: "Connect all people to the internet, including all schools", "Avoid internet fragmentation", "Protect data", "Apply human rights online", "Introduce accountability criteria for discrimination and misleading content", "Promote regulation of artificial intelligence", and "Digital commons as a global public good" (Global Digital Compact, 2023b). They also had the opportunity to suggest other areas not included (Global Digital Compact, 2023b). While it is possible that association with the 2030 Agenda influenced submissions to focus more on economic, social, and cultural rights, the diversity and broad phrasing of the GDC issue areas, as well as the option to submit input on other areas not mentioned, provided actors with significant room to articulate their priorities. Many of the areas specified by the GDC could also be interpreted as relevant to both civil and political and economic, social, and cultural rights. Inputs from some actors were collected through an online survey, which also provided the option for respondents to upload supporting documentation for their responses. Some respondents did so, contributing to the document dataset used in this paper, as described in section 4.1. Other respondents provided input by only submitting documents, which were also included in the dataset.

By making the GDC a high-level track at the Summit of the Future, an event pertaining to many areas of international governance, it is also possible that the UN reached a broader audience of stakeholders than those typically represented in traditional Internet governance forums, such as the Internet Engineering Task Force (IETF) or the Internet Corporation for Assigned Names and Numbers (ICANN). Unlike prior international agreements relating to the Internet (United Nations a, n.d.), the GDC is also not topically limited to specific geographies or issues. Contributors included Global South and North countries, key players in the telecommunications industry, and members of civil society, providing diverse perspectives (Robertson and Maccarone, 2023) sometimes excluded from Internet governance (Moran and Bui, 2019). By contributing to the GDC, these actors made space for themselves in the practice of Internet governance, effectively expanding the range of actors and issues deemed relevant to the Internet. Bringing the issue of digital cooperation into the key priorities for the UN and

including a broader range of stakeholders is a departure from prior more exclusive processes of Internet governance with formal or informal gatekeeping practices.

At the Summit of the Future held by the UN in September 2024, the GDC was adopted by world leaders as part of the Pact for the Future. This made it “the first comprehensive global framework for digital cooperation” (United Nations c, n.d., p. 2). The Summit of the Future was followed by the Internet Governance Forum (IGF) 2025 in Norway and the World Summit on the Information Society (WSIS)+20 High-Level Event 2025, both of which included discussions of GDC implementation (Internet Governance Forum Norway, 2025). At the IGF event, participants discussed how a framework developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) for evaluating digital ecosystems might be brought into alignment with the GDC (Internet Governance Forum Norway, 2025). Discussions at the WSIS High-Level Event focused on how the GDC “reaffirms WSIS principles” and may be implemented through the institutional foundation of the WSIS (United Nations Department of Economic and Social Affairs & Division for Public Institutions and Digital Government, 2025). WSIS participants also “stressed the need to avoid redundancy and streamline digital governance through existing mechanisms like IGF, WSIS, and UNGIS” (United Nations Department of Economic and Social Affairs & Division for Public Institutions and Digital Government, 2025). As of this writing, the implementation of the GDC is still developing and its impact on existing Internet governance processes remains to be seen. However, based on developments at the WSIS and IGF, it seems more likely that the GDC will play a role in harmonizing and furthering existing Internet governance processes, rather than creating a parallel process or institution.

The consultation process that resulted in the GDC offers a valuable opportunity to explore human rights discourse as it includes a wide variety of actors, some of whom may be excluded from other Internet governance spaces, and provides them a platform for articulating their priorities for the Internet in their own words. Examining the signals various actors are sending, as well as what they are not saying, can provide insight into their ultimate objectives and the role of politics. Given the high placement of the GDC in UN priorities, and its integration with established Internet governance processes, this compact has the potential to shape Internet governance going forward.

This research advances both the IR literature and the Internet governance literature by bringing them into dialogue. Internet governance scholars have debated the function of technical infrastructure in shaping human rights online, and the appropriate roles for technical community actors. IR scholars have examined issues of state power, international governance, norms, and informal power structures. I explore the applicability of IR theory to a development in the practice of Internet governance, providing insight into the role of politics in developing global digital regulation, in terms of what is said, what is not said, and how topics are related. Despite the importance of technical community actors in Internet governance, an increasingly influential domain in global politics, they are relatively understudied in traditional IR literature. The Internet governance literature does not appear to have devoted significant consideration to the contextualization of how technical community actors shape infrastructure within socially

constructed international norms and intergovernmental political processes. By examining the ability of IR paradigms to explain technical community discourse in relation to the GDC, this paper will help address these gaps and contribute to the debate surrounding the role of infrastructure in human rights on the Internet.

The following sections present related Internet governance and IR literature, the mixed-methods analysis, and the analysis results and their implications. Section 2 describes related literature on Internet governance, focusing on the role of infrastructure and the consideration of human rights in technical organizations. Section 3 summarizes the realist, liberalist, constructivist, feminist, and critical branches of IR theory in terms of how they might apply to processes of Internet governance and account for technical community actors. Section 4 presents the mixed-methods approach used to analyze submissions to the GDC, which integrates topic modeling, network analysis, and qualitative content analysis. Section 5 provides the results of these analyses, illustrating the topics various actors prioritized and how they presented relationships among topics. Section 6 discusses the implications of these results for the ability of various IR theories to explain the case of the GDC. Section 7 concludes with a discussion of the limitations of this research, as well as its practical implications, and presents directions for future research.

2. Internet Governance: Infrastructure and Human Rights

According to the 2005 United Nations Working Group on Internet Governance, “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.”¹ While many studies of Internet governance have focused on large institutions such as ICANN (Milan and ten Oever, 2017) and the Internet Governance Forum (IGF), van Eeten and Mueller (2013, p. 730) argue that Internet governance should also encompass the “the emergent order that arises from the interactions among thousands of ISPs [Internet service providers] and their users”. Epstein et al (2016, p. 5) describe this order as “continuously emerging and dissolving”. The dynamics of Internet governance structure the Internet and its uses in ways that may impact human rights.

While there is no single authoritative definition of the Internet, its primary attributes are a networked structure that facilitates communication among computers. In the United Nations Educational, Scientific and Cultural Organization (UNESCO) Internet Governance Glossary, the Internet is defined as “[t]he worldwide public network of computer networks that provides

¹For the purpose of grounding this research in related literature, I use the term Internet governance instead of digital governance as it is more clearly defined in this context and designates a wealth of relevant scholarly work. The term ‘digital governance’ refers more broadly to the governance of digital technologies and is sometimes used interchangeably with Internet governance in UN documents (see Schoemaker, 2023, p. 4). I do use the term digital governance in the topic model labels, as shown in section 5.1., and consider digital governance as it relates to feminism in section 3.4.

access to a number of communication services including the World Wide Web (WWW) and carries e-mail, news, entertainment and data files” (United Nations Educational, Scientific and Cultural Organization, 2023). According to a 1996 Internet Users' Glossary published as an Internet Engineering Task Force (IETF) memo, “...The Internet is the largest internet in the world. Is a three level hierarchy composed of backbone networks (e.g. Ultranet), mid-level networks (e.g., NEARnet) and stub networks. The Internet is a multiprotocol internet. See also: backbone, mid-level network, stub network, transit network, Internet Protocol” (Malkin, 1996). Intel (n.d.) defines the Internet as “a network of computer networks” and states that “the internet is a backbone of high-speed data communication lines through which any connected computer can trade information with any other connected computer.” The term online refers to “being connected to a computer network” or the Internet (Hammond, 2017). Online also connotes a ‘space’ where activities can take place that impact human rights.

Some Internet governance scholars explore the “embedded politics” (DeNardis, 2014, p. 2) of Internet architecture and argue that architecture is central to issues of human rights (Zalnieriute and Milan, 2019), disputing its neutrality (Zalnieriute, 2017). DeNardis (2012) attributes this turn to infrastructure in Internet governance to the loss of control over information communication by media content producers and states, accompanied by the inability of legal and economic mechanisms to reestablish control, due to technological development and globalization. Scholars emphasizing the importance of infrastructure hold that these arrangements reflect power relations (DeNardis, 2012, p. 721) and shape user rights (Cath and Floridi, 2017, p. 449; Musiani, 2013). These rights include not only privacy and freedom of expression but also rights such as non-discrimination (Zalnieriute, 2019).

On the contrary, Mueller and Badiei (2018) question the proposed relationships between Internet architecture, particularly standards, and rights. While they acknowledge that political, economic, social, and institutional factors shape standards and protocols, which in turn influence social environments, they argue that looking “at code, standards, and designs as an intentional and exogenous source of leverage on human rights” is mistaken (Mueller and Badiei, 2018, p. 18). While architecture can mediate action, the lack of centralized control makes it difficult to enforce rules (Mihr, 2016). Furthermore, even if institutions publicly express support for human rights when prompted (Zalnieriute and Schneider, 2014; Zalnieriute, 2020, p. 5), they may fail to enact actual support for human rights (Zalnieriute, 2020, p. 39).

Prior work shows that technical community organizations are not necessarily unified actors and can have internal conflict over the relationship between human rights norms and technical standards. Using an anthropological approach, Cath (2021) argues that the cultural assumptions about technology (focusing on the emphasis on connectivity, permissionless innovation, interoperability, and openness) and the role of the Internet Engineering Task Force (IETF) decreased the uptake of human rights norms in that organization, and in some cases impeded attempts to integrate human rights norms into standards. Her work also reveals the conflicts within the IETF between human rights norm entrepreneurs and some engineers over the relationship between human rights norms and technical standards. ten Oever (2019) examines the

integration of human rights into the Internet Corporation for Assigned Names and Numbers' (ICANN) bylaws. He argues that:

[C]ivil society succeeded in inscribing human rights in the legally binding bylaw of the Internet Corporation for Assigned Names and Numbers (ICANN) because human rights functioned as a boundary object (Star & Griesemer, 1989), that is to say an arrangement which allows people to achieve some form of coordination without necessarily requiring consensus (ten Oever, 2019, p. 39).

These examples show that the integration of human rights norms into technical infrastructure is contested even within organizations. These processes of contestation at the organizational level could lead to differences in how standards setting organizations engage with international processes of Internet governance and the translations from norms to technical infrastructure that they propose.

When technical community organizations do engage with human rights issues, not all rights are treated as equally relevant. The Human Rights Protocol Considerations Research Group in the IETF states in their charter that the group "...is chartered to research whether standards and protocols can enable, strengthen or threaten human rights, as defined in the Universal Declaration of Human Rights (UDHR) and the International Covenant on Civil and Political Rights (ICCPR), specifically, but not limited to the right to freedom of expression and the right to freedom of assembly" (Human Rights Protocol Considerations Research Group, n.d.). While some recent publications by this group do reference the *International Covenant on Economic, Social and Cultural Rights* (ICESCR) (ten Oever and Cath, 2017), and claim not to privilege certain rights (Grover and ten Oever, 2024), the prioritization of freedoms and of the ICCPR in their charter indicate that technical community members likely see civil and political rights and freedoms as the most relevant to the Internet. Technical community submissions to the 2023 call for inputs on "The relationship between human rights and technical standard-setting processes for new and emerging digital technologies (2023)" published by the United Nations Human Rights Office of the High Commissioner (Information Technology Industry Council, 2023; Internet Architecture Board, 2023), and the Guidelines for Human Rights Protocol and Architecture Considerations Internet draft published by the IETF (Grover and ten Oever, 2024), indicate that standards-setting organizations in the technical community will likely present their work as apolitical and that they will primarily present Internet technologies as an enabler for individuals to exercise their human rights. This prior engagement indicates that technical community members will likely focus on the ability of the Internet to support human rights, particularly civil and political rights and freedoms.

3. International Relations Theory: Application to Internet Governance

This research seeks to further IR theory by testing its ability to explain new developments in Internet governance, and the role of technical community actors. Different IR paradigms set out

various assumptions about who the primary actors in the international system are and what factors shape their behavior. I test how established paradigms in IR theory can explain the negotiation process surrounding the GDC, particularly the discourse and expressed policy preferences of different types of actors. This section outlines realist, liberalist, constructivist, and critical and feminist IR paradigms. Instead of addressing every branching theory associated with these paradigms, I focus on how their core assumptions and themes pertain to Internet governance.

3.1. Realism

Realism focuses on states as the primary actors and mainly analyzes issues of power and security. This view largely aligns with the sovereigntist approach to Internet governance, which centers the authority of states to promote their national interests on the Internet (Palladino, 2021). A realist perspective might argue that the participation of states in Internet governance is a way to project power (Jho and Kim, 2022). States may also weaponize interdependence by leveraging their position in a global network, such as the Internet, to exercise power (Farrell and Newman, 2019). However, given its state-centric assumptions about the international system, realism's ability to account for the many varied actors involved in governing the Internet is limited.

3.2. Liberalism

Liberalism expands both the set of actors and the topics considered relevant to international relations, creating more space for the analysis of heterogeneous Internet governance. In 2008, Mathiason (2008, Abstract section) argued that “[u]nlike most areas where there are global institutions, and the role of governments is predominant, the Internet is a field where the private sector and civil society each have a role as important – or sometimes more important – than governments.” Under a liberal paradigm, the roles of non-state actors such as corporations and civil society are considered alongside states in issues such as “complex interdependence, globalization, international institutions and linkages between domestic and foreign policy” (Eriksson and Newlove-Eriksson, 2021, p. 8). In terms of Internet governance, this theoretical perspective could help contextualize the neoliberal approach, theories of networked governance, and institutional design.

The neoliberal approach to Internet governance prioritizes private self-regulation in an attempt to promote technological development (Palladino, 2021). This aligns with liberalism's consideration of corporations in international politics (Devetak and True, 2022, p. 51) and typically (but not universally) optimistic perspective on technology (Eriksson and Newlove-Eriksson, 2021, p. 8). Online, human rights are largely privatized due to the powerful roles of private entities on the Internet (Zalnieriute and Milan, 2019). DeNardis and Hackl (2015) argue that Internet governance research should expand beyond governmental and international organizations to also include private companies, as these private entities are increasingly responsible for human rights on the Internet.

The concept of networked complex interdependence advanced in liberal IR work (Eriksson and Newlove-Eriksson, 2021, p. 10) is relevant to the structure of Internet governance. Mueller (2010, p. 1) notes that “there is a strong and persistent tension between state sovereignty, which is territorially bounded, and the nonterritorial space for social interaction created by networked computers”. He argues that “the problem of Internet governance has produced and will continue to produce institutional innovations in the global regulation of information and communications” (Mueller, 2010, p. 2). He presents networked governance as a potential way to reconcile a globally connected Internet and national institutions. Citing Sørensen and Torfing (2006), Mueller (2010, p. 6) describes governance networks as “relatively stable articulations of interdependent but operationally autonomous actors”.

Liberal studies of institutions are also relevant to Internet governance. Abbott and Faude (2022) build on the theory of regime complexes to develop the theory of hybrid institutional complexes (HICs). In contrast to regime complexes, which focus on interstate institutions that are formalized, HICs integrate a greater diversity of institutions, including “heterogeneous interstate, infra-state, public–private and private transnational institutions, formal and informal” (Abbott and Faude, 2022, p. 263). According to Abbott and Faude (2022), the hybrid institutional complex for cyberspace includes:

...UN bodies and other FIGOs [formal intergovernmental organizations] that deal with core issues such as telecommunications and intellectual property, as well as emerging issues in areas including human rights, the “information society” and development. It also includes IIGOs [informal inter-governmental organizations] such as the G7/8, G20 and 3G, plus TGNs [trans-governmental networks] addressing data protection and privacy, intelligence sharing and law enforcement. Private organizations such as the Institute of Electrical and Electronics Engineers (IEEE) adopt technical standards for internet and communications technologies. Most importantly, core cyberspace policy standards are promulgated by a diverse set of private, public–private and multi-stakeholder institutions, including the Internet Corporation for Assigned Names and Numbers (ICANN), the Internet Engineering Task Force, and the World Wide Web Consortium (W3C) (Abbott and Faude, 2022, p. 267-268).

This hybrid institutional complex provides the context for understanding the technical community in the context of IR theory regarding institutions. Abbott and Faude (2022, p. 270), citing Flonk et al (2020), also note that the cyberspace HIC contains conflict, particularly between institutions promoting multi-stakeholder governance of an open Internet and those favoring state regulation. However, as Flonk et al (2020) argue, this does not necessarily mean that it is fragmented.

3.3. Constructivism

Constructivism emphasizes actor identity, culture, and perceptions of ‘appropriateness’ (e.g. social norms) in analyzing interests and behavior (Eriksson and Newlove-Eriksson, 2021). Norms can be defined as “shared and accepted standards of behaviour in society” (Holmes, 2024) and as “social creatures that grow out of specific contexts via social processes and interactions among particular groups of actors” (Finnemore and Hollis, 2016, p. 427). A constructivist perspective might focus on the community and norm development that occurs in Internet governance bodies and enables cooperation (Finnemore and Sikkink, 1998, p. 888). The constructivist perspective largely aligns with the concept of digital constitutionalism in Internet governance. According to Palladino (2021, p. 3),

[F]or digital constitutionalism to be a workable and effective governance approach, it cannot be confined to the legal system nor to aspirational civil society initiatives, but it should act at the interplay between the design of digital technologies and the production processes of social norms, and it should involve policy-makers, developers, and users.

The involvement of developers in this interplay between design and social norms implies that they could act as norm entrepreneurs, with a role in shaping Internet governance, along with a variety of other actors (Radu et al, 2021) including states (Mueller et al, 2013). Finnemore and Hollis (2016, p. 429) emphasize processes of norm development, arguing that “how cybernorms are constructed will shape the content and character of the norms that emerge”.

Transnational advocacy networks play an important role in shaping norms and making them more applicable to the digital space (Eriksson and Giacomello, 2006, p. 236). Keck and Sikkink (1998) examine the role of transnational advocacy networks in framing issues, promoting new “ideas, norms, and discourses” (Keck and Sikkink, 1998, p. 2), and encouraging the implementation of norms. This perspective highlights the role of civil society in developing norms for Internet governance (Tjahja et al, 2021) and in translating international human rights law to be more applicable to online platform governance (Celeste et al., 2023). Celeste et al. (2023) showed this in the instance of civil society organizations publishing Internet Bills of Rights that helped make broad state-focused international human rights law more granular and applicable to online platforms.

Differences in socially constructed international norms can lead to different approaches to Internet governance. Niels ten Oever (2021) describes the difference between the state-led multilateral regime of Internet governance and the regime of private self-regulation of the Internet, discussed in sections 3.1 and 3.2 in relation to realist and liberalist paradigms, as based on differences in normative values: the former prioritizes interconnection and interoperability, whereas the latter prioritizes economic benefit, state sovereignty, and “limiting the spread of harmful and illegal content” (ten Oever, 2021, p. 56). According to Price (2017, Abstract section), the Internet is often idealistically “presented as an instrument for the free flow of information, an instrument in the global battle for democracy and a driving force in the politics of globalization”. However, from a constructivist perspective, these outcomes depend on how

actors politicize the Internet (Eriksson and Newlove-Eriksson, 2021) and how norms shape its governance.

3.4. Critical and Feminist Theories

Critical and feminist theories bring in individuals and a focus on informal structures of power in private and personal politics that shape international relations from the bottom up (Holmes, et al 2019). Sawyer et al (2023, p. 1) identify how women's movements have contributed to developing "more inclusive and flexible forms of governance" and define governance as "processes of government from the formal to the informal, from laws, institutional norms and policy framing to networks and relationships through which authority is both exercised and held to account." This aligns with conceptions of Internet governance as "an emergent order" (van Eeten and Mueller, 2013, p. 730). Rosa (2023, p. 2326) provides an example of Indigenous peoples "shaping internet governance from below" by building local communal networks that enable them to connect to the Internet, despite the absence of adequate service by large Internet service providers, reflecting feminist conceptualizations of governance.

Other aspects of feminist and critical IR theories are their focus on rights, consideration of gender in international affairs, and emphasis on justice. Moghadam (2023) shows how transnational feminist networks have influenced policy making by governments and international institutions. This feminist activism has advanced global norms promoting women's rights (Goetz, 2020). According to Aggestam et al (2024), feminist foreign policy at the state-level emphasizes "a strong commitment [to] women's and girls' equal enjoyment of human rights". Gender equality in enjoying human rights is also critical on the Internet. Digital media, including emerging AI technologies (Crawford, 2024), can reinforce existing gender inequalities (Ross and Padovani, 2016). Crawford (2024) takes a bottom-up approach to studying digital governance with a focus on feminism. She finds that "[i]n the context of increasing threats and perceived threats in the digital space – of violence, harassment and surveillance – feminists seek to organise specifically around the need for better digital skills and also employ strategies to keep themselves 'safe' while organising online" (Crawford, 2024, p. 107). She emphasizes the agency of activists in resisting the digital divide. This work reflects both the bottom up approach and focus on gender found in IR literature on feminism.

Critical theories more generally address how rights need to be advanced not only in terms of gender, but also in terms of race and class. Patricia Hill Collins (2002, p. 228) develops the concept of the matrix of domination to describe the "overall social organization within which intersecting oppressions originate, develop, and are contained." The concept of intersectionality has been applied by critical IR theories (Sjoberg and Thies, 2023). One branch of this work is postcolonialism. Citing Velez (2017), Chávez and Contreras (2021, p. 18) describe postcolonial studies as:

a critique of modernity and its implications in the cultural conformation of the conception of the world and its configuration, because colonialism is based on a logic of power and subordination of “some” people over “others”, leading to the construction of the “other” from the vision of those who hold privileged positions based on knowledge.

Zheng and Walsham (2021, p. 5) argue that digital technology “is intertwined and implicated in producing and reproducing social orders and stratifications.” Through their study of the Internet Corporation for Assigned Names and Numbers (ICANN), Jongen and Scholte (2022) show that structural inequalities also permeate Internet governance. Carr (2015) argues that despite the power sharing ideals of the multi-stakeholder approach to Internet governance, this approach can reinforce incumbent power structures. This work ties together technical issues and issues of broader social justice. Dencik et al (2016) define data justice as “referring to the implications that data-driven processes at the core of surveillance capitalism have for the pursuit of substantive social and economic justice claims”. Milan and Treré (2020) show how data gathering practices during the COVID-19 pandemic served to render some marginalized populations invisible, worsening preexisting injustices. Eubanks (2018) shows how digital technologies are used to further repress already marginalized groups. This work highlights the personal impacts of digital technologies on peoples’ lived experiences.

3.5. Technical Community Actors

While technical community actors have been discussed as members of a hybrid institutional complex (Abbott and Faude, 2022) and of epistemic communities shaping policy (Palladino, 2021), the traditional IR theories of liberalism and realism do not seem well equipped to analyse their contentious, diverse, and diffuse nature and function. For the purpose of this research, I consider the technical community to include non-profit technical coordination bodies and technical standards setting bodies. This broad definition captures not only the traditional institutions, such as ICANN, but also technical institutions that may be striving for more influence over Internet technology by participating in the GDC in a technical capacity, such as the ITU. These actors could be conceptualized as structurally similar to advocacy networks, as described in constructivist IR literature, but populated by individuals who also work for corporations, universities, or non-governmental organizations. However, they have different motivations than either advocacy networks or their participants’ employers. Historically, men have also been overrepresented in the technical community, while those of other genders have been marginalized (Cath, 2023). This injustice suggests that feminist IR theories, with their focus on the gender variable and informal power structures, could also be helpful in understanding the technical community. This paper explores which branch of theory best explains technical community discourse in relation to the GDC.

4. Methodology

I integrate qualitative content analysis, network analysis, and topic modeling to measure differences in the frequency and relationships among rights in actor discourse. IR theories were tested by systematically analyzing how human rights-based language differed across actor types. I test four hypotheses:

H1: Actor identity impacts their use of human rights-based language.

H2: Technical community actors use more human rights-based language about freedom than security.

H3: Technical community actors say interoperability supports human rights.

H4: Technical community actors say interoperability supports justice.

Testing H1 provides insight into how the politics of digital regulation unfold. Testing H2, H3, and H4 reveals technical community actor policy priorities. If H2 is supported, then Internet technical architecture may be developed to better support rights related to freedom, potentially at the expense of rights pertaining to security. If H3 and H4 are correct, technical community actors may attempt to avoid directly addressing human rights and justice, instead treating them as an eventual byproduct of increased interoperability. The terms freedom, security, and justice are used as they relate to people (not as they relate to states or computer systems, for example), aligning with the focus of this research on human rights. The term interoperability refers to interoperability among information and communication technologies. It is defined as pertaining to direct mentions of interoperability as well as general digital exchange, communication, connectivity, or other connections among entities using information and communications technology. This definition is intentionally broad as it is meant to capture references to all forms of technical interoperability as it may be described by varying actors.

To operationalize human-rights based language for the qualitative content analysis (QCA), I draw on the *International Covenant on Civil and Political Rights* (ICCPR) and *International Covenant on Economic, Social and Cultural Rights* (ICESCR). These international covenants provide a comprehensive view of human rights as well as specific language describing each human right. I developed my QCA codebook on the basis of the subarticles from these covenants and treated each subarticle as a code. I then iteratively grouped the codes into emergent themes by applying them to a diverse subset of documents, and added additional context-specific codes, such as interoperability. This process is described in detail in section 4.2.

Actor identity categories were first structured based on the GDC entity / organization types (United Nations b, n.d.). I then refined these types to include more specific subcategories that reflected actor attributes. As described in section 4.1, actors were sorted into one or more categories on the basis of their self-description either in the document they submitted or on their website or social media profile. While this approach is vulnerable to actors seeking to

misrepresent themselves, it helps to avoid potentially biased definitions of which actors “belong” in certain communities.

As discussed in section 1, actors submitted online consultation documents. These documents provide the rich textual data I use to test each hypothesis. Many of them cover the GDC focus areas described in section 1, although some branch out to touch on other areas of concern. These documents are treated as strategic statements that may reflect and contribute to norm development. I do not treat them as factual records of each actor’s past behavior or as enacting norms. This dataset is described in more detail in section 4.1.

To test H1, I applied topic modeling to 174 of these online submissions to identify the most prominent topics and their relative frequency for each actor type. To test H2, H3, and H4, I analyzed the subset of documents authored by technical community actors using qualitative content analysis and network analysis to uncover implicit references to human rights and how rights are related to other concepts, such as interoperability. Integrating qualitative content analysis with natural language processing methods, such as topic modeling, is particularly useful for studying primary source documentation of policy processes (Levinson, 2021), as it enables nuanced analysis of large textual datasets. This paper is among the first to apply natural language processing methods to studying the discursive and political processes that resulted in the GDC. Section 4.1 discusses the dataset and actor categorization, section 4.2 discusses the qualitative content analysis, and section 4.3 discusses the topic model. Results are presented in section 5.

4.1. Dataset

The units of analysis are the consultations submitted to the UN Office of the Secretary-General's Envoy on Technology as part of the process for developing the GDC. The UN Office of the Secretary-General's Envoy on Technology collected consultations from academia and research organizations; civil society and NGOs; governments; individuals; regional, international, and multilateral organizations; the private sector; the technical community; and others. Between June 2022 and April 2023, they received over 400 consultations in the form of online submissions. Of these submissions, 177 were in documents, 174 of which had text which could be automatically extracted and was written in English. Other consultations were in the format of survey responses, or not publicly available (United Nations b, n.d.). In this paper, I analyze the submissions available in the format of documents due to technical difficulties extracting online survey responses. Data is available in the supplementary materials.

These documents are strategic statements potentially reflecting and building normative values; they are not a factual account of whether their authors enacted such norms. While some authors submitted a document and a survey response, others submitted only a document. Although not considered here, it appears that better resourced actors may have been more likely to submit a document than actors with less resources. Since some documents were submitted alongside surveys, they may not represent the actor’s full viewpoint. While document and survey submissions were not systematically compared, it seems likely that document submissions

focused on high priority areas for actors, as this format does not have a length restriction allowing for more in-depth treatment compared to the survey response, which limited respondents to 2,500 characters per area (Global Digital Compact, 2023b).

I categorized the author of each document into one or more author categories. The entity / organization types listed on the GDC submission UN website provide the framework for author categorization (United Nations b, n.d.), while I rely on self-description for a more detailed understanding of author attributes. Table A1 lists the GDC entity / organization types as well as the more detailed categories I developed based on author self-description. Self-descriptions were gathered either from the author's submission to the GDC or from their organizational website or social media profile. The entity / organization types are not defined on the GDC website (United Nations b, n.d.). I also do not develop specific definitions for each actor type, with certain criteria for inclusion and exclusion. I instead rely on an inductive approach of sorting different authors into one or more categories, as well as adding new categories to capture potentially relevant attributes, such as whether a company is small or large or whether a government leads a developed or developing state. Since the dataset is relatively small, I performed this process manually. The dataset for actor categorization is available in the supplemental materials. Document authors can be categorized under multiple categories. For example, the United States is categorized under 'Government' and 'Developed economy'. In these instances, the document appears in both categories during further analysis. Country submissions were categorized as 'Developed economy' or 'Developing economy' based on their categorization in the UN Trade and Development Data Hub (UN Trade and Development, n.d.). Company submissions were categorized further into big and little companies. Big companies include Amazon, Cloudflare, Google, Intel Corporation, Kaspersky, Meta, Microsoft, and the LEGO Group. The only little company in the dataset is VMind Technologies, Inc. which describes itself as a "Technology company in stealth mode" and had two to ten employees at the time of this writing, according to their LinkedIn page (VMind AI, n.d.). For several well known actors it was not necessary to find online sources of their self description (e.g. Amazon). Some actors included descriptions of themselves in the GDC submissions, making finding additional online self descriptions unnecessary. As discussed in section 4, a limitation of this approach is that actors may misrepresent themselves, however, a strength is that it avoids potentially exclusionary definitions.

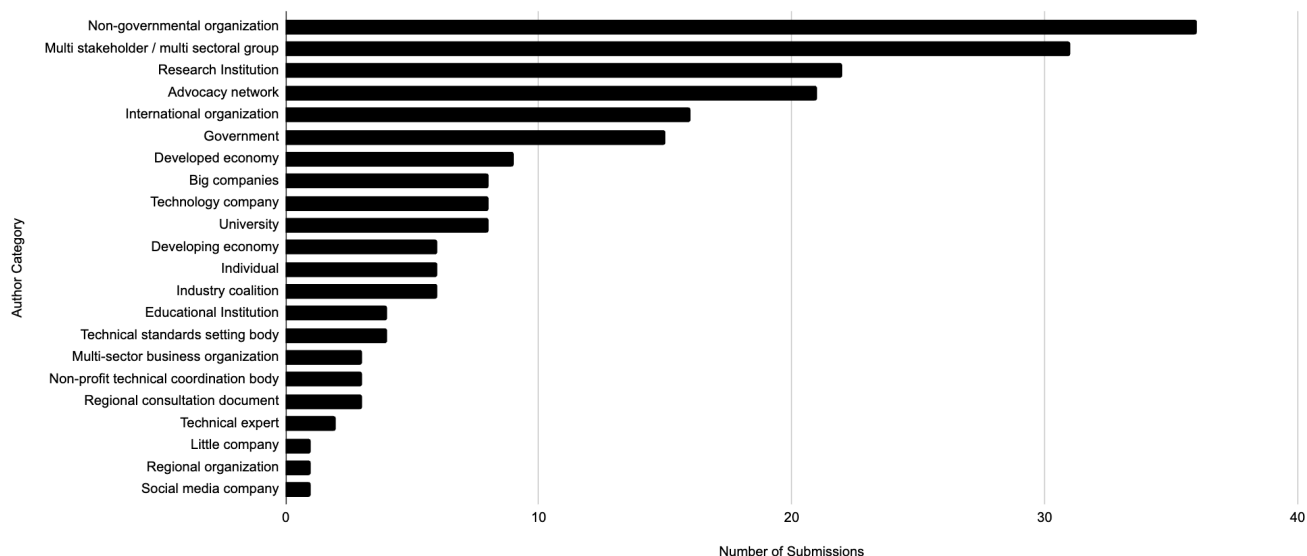
In some cases, explicit self-description may not align with other understandings of an actor. For example, the Internet Society was founded by individuals who played a significant role in the technical development of the Internet (Internet Society a, n.d.). Therefore, this organization might be considered a technical community member. However, on their website they state "We are a global charitable organization empowering people to keep the Internet a force for good..." (Internet Society b, n.d.). Based on this self description they are categorized under 'non-governmental organizations'. This approach helps to ensure that actors are considered on their own terms, using their own words.

For this purpose of this research, the actors categorized as belonging to the technical community include non-profit technical coordination bodies (Council of European National Top-Level Domain Registries, Internet Corporation for Assigned Names and Numbers, Japan Network Information Center, and Asia Pacific Network Information Centre) and technical standards setting bodies (Cloud Security Alliance Greater China Region, International Electrotechnical Commission, International Organization for Standardization, and International Telecommunication Union). Even using this very broad conceptualization of the technical community, these eight authors are the only technical community actors who submitted document inputs to the GDC. They submitted a total of seven documents, as the Japan Network Information Center and Asia Pacific Network Information Centre co-authored their submission. While a few others submitted survey responses, survey responses are not considered in this research due to the aforementioned technical difficulties in extracting them. The limitations of this small dataset are discussed in section 7.1. These technical community actor submissions may not represent the viewpoint of the full Internet technical community. Notably absent are the views of the IETF, despite its engagement through the Internet Architecture Board in prior U.N.-facilitated Internet governance processes (Internet Architecture Board, 2023). The smaller actors forming the ‘emergent order’ of Internet governance (van Eeten and Mueller, 2013) are also missing. Furthermore, as discussed in section 2, technical community actors are not necessarily unitary, and one faction within an organization may submit an input that does not necessarily represent the consensus viewpoint of the entire organization. Despite these limitations, given the openness of the GDC consultation process, I assume that these submissions do represent the viewpoints of technical community actors who chose to inform and influence this development in Internet governance. As such, their preferences and priorities can be considered legitimate inputs to the normative processes underlying Internet governance.

Figure 1 displays the number of documents submitted by authors in each category.

Figure 1

Number of Document Submissions by Author Category



Note. This figure displays the number of document submissions by each author category.

The author categories with the highest numbers of documents are non-governmental organization ($n = 36$), multi stakeholder / multi sectoral group ($n = 31$), research institution ($n = 22$), and advocacy network ($n = 21$). This illustrates the predominance of civil society and academic or research organizations in this dataset. The author categories with the least representation in the dataset are little company, regional organization, and social media company, each with only one document. Since documents can appear under multiple author categories, some documents are repeated in this figure and in subsequent analysis. In the following analysis, excerpts from each document are computationally assigned a primary topic and, in the case of technical community documents, manually annotated using the QCA codes. These excerpt level results are then aggregated to the document level, and documents are aggregated into various author categories, to provide insight into how actor characteristics impact GDC submission language.

4.2. Qualitative Content Analysis and Codebook Development

To begin analyzing human rights-based language, I manually annotated a diverse sample of documents and refined the qualitative content analysis categories to better represent the emergent themes. This codebook was then used to perform QCA on technical community documents, testing H2, H3, and H4. The frequency of thematic categories is used to test H2. If H2 is supported, then categories pertaining to freedom will occur more frequently than categories pertaining to security. Co-occurrence of thematic categories is used to test H3 and H4. If H3 is supported, categories pertaining to interoperability will co-occur with categories pertaining to human rights. If H4 is supported, categories pertaining to interoperability will co-occur with categories pertaining to justice. I also manually examine excerpts with co-occurring categories to

determine whether interoperability is presented as supportive. Section 5.2 presents the results of this analysis.

Document excerpts, mainly at the sentence level, are manually annotated to denote the presence or absence of specific QCA codes. For initial codebook development, I annotated eight GDC consultation submission documents on the subarticles in the ICCPR and ICESCR as well as on thematic codes, such as interoperability, environment, and general references to human rights. The documents annotated were submitted by Wikimedia, Microsoft, Alliance for Universal Digital Rights, United States, University of Bath, ICANN, G77 and China, and El-Salvador. They were selected to represent a range of actor types, geographies, sizes, forms of government, and levels of development. Manually annotating these eight documents yielded 1,251 annotated references across all of the original codes.

For each excerpt, I determined whether it was relevant to one or more of the subarticles from the ICCPR or the ICESCR and whether it was relevant to one or more of the thematic codes. Throughout this process, I also developed application notes, available in the codebook in Appendix B, to ensure the codes were applied consistently. Codes were then aggregated on the basis of excerpt-level co-occurrence and thematic similarity into the emergent categories cultural and scientific development and participation and education, freedom and privacy, freedom of expression and political participation, general human rights, international cooperation, interoperability, justice, and security. By forming these emergent categories largely through aggregating specific rights from the ICCPR and ICESCR, I maintain alignment with established understandings of human rights. To capture more general references to human rights or concepts such as freedom, I also included codes for these more general references that do not pertain to a specific right. For example, the category freedom and privacy is aggregated from the subarticles ICCPR 17.1, ICCPR 18.1, and ICCPR 19.1, as well as the code freedom general (general references to freedom that do not pertain to a specific right). Similarly, the category justice is aggregated from the subarticles ICCPR 20.2, ICCPR 26, ICCPR 3, and a code for general references to justice. A full list of categories and their constituent codes is available in the codebook in Appendix B.

Performing manual coding allowed me to take into account context and variations in word use in identifying the presence of specific concepts. For example, the excerpt “cz, is one of four organisations that run the Safer Internet Centre of the Czech Republic , an education and prevention centre to make the internet safer for children and young people, as well as their guardians” from the submission by the Council of European National Top-Level Domain Registries (CENTR) was coded as relevant to ICCPR 9.1, “Everyone has the right to liberty and security of person...”, and to ICCPR 24.1, “Every child shall have...the right to such measures of protection as are required by his status as a minor, on the part of his family, society and the State.” Both ICCPR 9.1 and ICCPR 24.1 are aggregated into the category security. Therefore, this excerpt falls under the category security. In contrast, the excerpt “ISO is active in many areas, including those directly relevant to the Global Digital Compact, such as IT security” from the submission by the International Organization for Standardization (ISO) does not fall under

the category security, despite containing the word “security”, because it does not have to do with the security of people.

To aid in code aggregation and category formation, I created a co-occurrence network to see which codes co-occurred in excerpts and grouped the codes into thematic categories largely based on co-occurrence. The co-occurrence network is displayed in figure 2.

most frequently co-occurs with Justice, International Assistance (ICESCR 2.1), and Scientific and Cultural Benefit (ICESCR 15.1). These relationships illustrate the interdependence among rights. Other relationships depict the overlap between rights. For example, Freedom of Expression (ICCPR 19.2) is associated with Suffrage and Political Participation (ICCPR 25) and Freedom of Association (ICCPR 22.1). Based on this network, I revised the allocation of some of the codes to thematic categories, and removed codes and categories with very few excerpts annotated with them (less than 25 out of 672 total annotated excerpts).

Code application guidelines were slightly revised when the codebook was later applied to technical community documents, though categories, codes, and their descriptions remained the same. These revisions were done to capture aspects of the technical community documents not accounted for in the original codebook development. While applying the codebook to the initial set of eight documents was necessary for development, due to the application revisions, these annotations cannot be directly compared to the annotations for the technical community documents. The full codebook is available in Appendix B.

4.3. Topic Model

Topic modeling is an unsupervised machine learning approach that extracts thematic topics from a corpus based on word co-occurrence. I applied Latent Dirichlet Allocation (LDA) topic modeling, a well established form of topic modeling (Egger and Yu, 2022), to my corpus of excerpts from GDC consultations. These automatically extracted topics largely align with the themes in my QCA codebook. Topic prevalence for each document is used to test H1. I applied LDA topic modeling (Egger and Yu, 2022) to my full corpus of computationally extracted English-language excerpts from GDC consultation submission documents (n = 30,867). The results are presented in section 5.1.

Topic modeling automatically clusters words into topics based on which words co-occur. Each topic has a set of words most strongly associated with that topic. These words are interpreted by the researcher to understand the meaning of a topic. The researcher then assigns a label to the topic to reflect its meaning. In some cases, these words may reflect disparate concepts, as is the case in the topics “Freedom of Expression or AI”, “Global Digital Governance or AI”, and “Gender, Security, or Justice Online”. Despite referring to different concepts, the words in these topics are still automatically grouped under a single topic because they frequently co-occur. While the words associated with each topic are identified automatically, interpreting the words and labeling the topic is a manual and subjective decision made by the researcher. For example, the words women, gender, security, online, and violence frequently co-occur in the excerpts. Based on this co-occurrence, they are automatically clustered into a single topic. By interpreting these, and other words associated with the topic, I labeled this topic “Gender, Security, or Justice Online”. When words associated with a topic appear in an excerpt, it is automatically identified as related to that particular topic. For example, the excerpt “This would mean integrating safety by design and safeguards into existing and new technologies to prevent

technology facilitated gender-based violence against women and girls (TF GBV)” from the document jointly submitted by UN Women on behalf of the Action Coalition on Gender Based Violence, Equality Now, and the Alliance for Universal Digital Rights (AUDRi) is automatically classified as related to the topic “Gender, Security, or Justice Online”.

Each of the 30,867 excerpts was classified under a primary topic. Excerpts and topic assignments are available in the supplementary materials. Python code for extracting the excerpts and developing the topic model is also available in the supplementary materials. Detailed topic model results are available in Appendix C. Excerpts were extracted from PDFs under the assumption that sentences would be separated by a period. After each period, a separate excerpt was extracted. This process led to some sentence fragmentation and non-sentence excerpts, but was still largely effective in extracting sentence-level excerpts. Excerpts were then filtered for English language using a Google spreadsheets language detection function. For the topic model, I started with eight topics, based on the codebook categories, then revised the number of topics up to 11 to encourage more disaggregation in the themes the topics represented. These 11 topics and their top words are listed in table C1. Table 1 shows the overlap between the QCA codebook categories and the automatically identified model topics.

Table 1*QCA Codebook Categories and Model Topics*

Codebook Category	Model Topic
Cultural and scientific development and participation and education	Technology Development or Education
	Youth or Future Development
	Internet as a Global Commons
Freedom and privacy	Protecting Human Rights Online
Freedom of expression and political participation	Freedom of Expression or AI
	Protecting Human Rights Online
General Human Rights	Protecting Human Rights Online
International cooperation	Global Digital Governance or AI
	Global Digital Compact
	Multistakeholder Model
	International Internet Governance
	Internet as a Global Commons
Interoperability	Internet Interoperability
Justice	Protecting Human Rights Online
	Gender, Security, or Justice Online
Security	Protecting Human Rights Online
	Gender, Security, or Justice Online

Note. This table displays the association between the codebook categories and the model topics. Topics are listed to the right of the categories they are associated with. If a topic is associated with multiple categories, it appears next to each associated category.

While the automatically extracted topics do not precisely align with the categories, they are generally related to them.

To use this topic model in my analysis, I automatically assigned each excerpt a primary topic based on the words that excerpt contained. Python code for this assignment is available in the supplementary materials. While there was too much noise at the excerpt level for topic predictions to be reliable, I found that they were generally reliable when aggregated at the document level. I evaluated the reliability of the topic model assignment at the document level by comparing the automatically assigned topics with the manually annotated categories in the eight documents used in codebook development, as detailed in Appendix C. These results show that at the document level, the top three most frequent topics and categories are generally related for most documents. There are, however, several exceptions to the overlap between topics and categories. These total 10 instances where either a topic was not represented in the categories or a category was not represented in the topics. Out of a total of 50 top topics and categories, this is a 20% error rate. However, even when the topics did not align with the categories they still generally reflect each documents' content. These results indicate that while topic assignments at the excerpt level should not be used for further analysis, topic assignments aggregated to the document level can be used in further analysis.

5. Results

These methods reveal the unexpected prominence of economic, social, and cultural rights and enable a systematic comparison of human rights-based language across actors. I found that topic frequency differs among actor types, indicating that actor identity does impact human-rights based language. The topic model showed that technology development and education were prominent topics across the full document corpus. The QCA of technical community documents showed that economic, social, and cultural rights were mentioned far more often than civil and political rights. However, the use of the term “human rights” was rare. A co-occurrence network of QCA codes showed that rights pertaining to culture, science, and education are frequently mentioned in the same excerpt as interoperability and international cooperation, indicating a relationship among these concepts. I discuss the topic modeling results in section 5.1, the qualitative content analysis in section 5.2, and the network analysis results in section 5.2.1, and how these provide evidence for or against each hypothesis.

5.1. Topic Modeling Results

Topic modeling was used to evaluate the relationship between actor identity and language (H1). As described in section 4.1, documents were categorized based on the self-described characteristics of their authors into the categories listed in Appendix A and displayed in the figures below. Each excerpt was then automatically assigned a primary topic, and the total number of excerpts for each topic was aggregated at the document level. Documents were then aggregated into author categories, representing various actor types. The number of excerpts

assigned to each topic for each author category is available in Appendix C. Figure 3 graphs the percent of excerpts pertaining to each topic for each category.

Figure 3*Topic Percent by Author Category*

Note. This figure displays the percentage of total excerpts pertaining to each topic out of all the excerpts extracted from documents submitted by each author category. Topics are indicated by color.

The topic modeling results show that actor identity does impact human rights based language, providing support for H1. Different author categories (representing various types of actors) allocate differing amounts of space in their documents to each topic, as can be seen in figure 3.

The impact of actor identity on language seems to largely align with each actor's general mission. Non-governmental organizations authored the most excerpts pertaining to protecting human rights online ($n = 824$), while educational institutions (non-school or university) devoted the highest percentage of their excerpts to protecting human rights online (27.33%) out of all other author categories.² Technical experts authored the least excerpts pertaining to this topic ($n = 8$) and regional consultation documents allocated the least of their excerpts to it (5.51%) out of other author categories. The topic modeling results also illustrate that actors who do not explicitly discuss human rights as one of their top topics tend to discuss related topics. For example, many actors who do not frequently discuss protecting human rights do talk about technology development or education and/or freedom of expression or AI. Education and freedom of expression are both human rights. These actors also tend to have a more narrow mission (e.g. university, technical standards setting body) than the actors who explicitly discuss human rights more generally (e.g. governments). Despite their traditional aversion to bringing politics or values into technology, the topic modeling results show that actors in the technical community did discuss protecting human rights online.

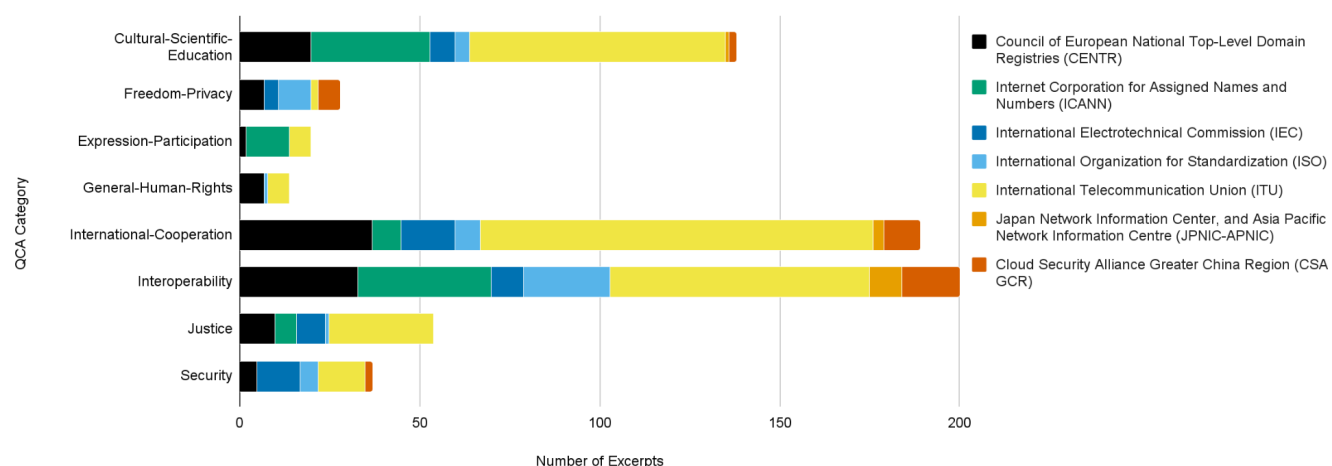
5.2. Qualitative Content Analysis Results

In order to evaluate technical community actor policy priorities and discourse in more detail, I conducted a qualitative content analysis of their document submissions. This provided insight into H2. I manually annotated excerpts from documents submitted by members of the technical community ($n = 748$). As described in section 4.1, these included documents from non-profit technical coordination bodies (Council of European National Top-Level Domain Registries, Internet Corporation for Assigned Names and Numbers, Japan Network Information Center, and Asia Pacific Network Information Centre) and technical standards setting bodies (Cloud Security Alliance Greater China Region, International Electrotechnical Commission, International Organization for Standardization, and International Telecommunication Union). These excerpts are qualitatively analyzed using the codebook discussed in section 4.2 and available in Appendix B. Each excerpt was annotated with relevant codes. These were then aggregated into a binary score of whether the parent thematic category was present in the excerpt. Figure 4 displays the frequency of each category.

Figure 4

²While the claim that educational institutions (non-school or university) devoted the highest percentage of their excerpts to protecting human rights online seems counterintuitive, it is supported by the data. Out of the 783 excerpts extracted from documents submitted by authors in this category, 214 were assigned the topic protecting human rights online (27.3%).

Category Frequency in Technical Community Documents



Note. This figure displays the number of excerpts each QCA category appears in for all technical community documents. Document author is indicated by color.

The most frequent categories are Interoperability, International-Cooperation, and Cultural-Scientific-Education. The least frequent are General-Human-Rights, Expression-Participation, and Freedom-Privacy.

These results contradict H2. They show that the Security category was more frequent (37 excerpts) than the Freedom-Privacy (28 excerpts) and the Expression-Participation (20 excerpts) categories. However, General-Human-Rights (14 excerpts) was the least frequent category overall. This indicates that much of the language pertaining to specific human rights is implicit: while it does refer to rights in the ICCPR and ICESCR, it rarely uses the term “human rights”.

Unexpectedly, the human rights category Cultural-Scientific-Education was one of the most frequent. It was also far more frequent than the Freedom-Privacy or Expression-Participation categories. All of these categories were much more frequent than the general references to the term human rights. Based on prior discourse regarding human rights in technical communities, I would have expected the categories relating to privacy (Internet Architecture Board, 2023; Information Technology Industry Council, 2023) and expression (Human Rights Protocol Considerations Research Group, n.d.) to be the most prominent.

5.2.1. Qualitative Content Analysis Category Co-occurrence

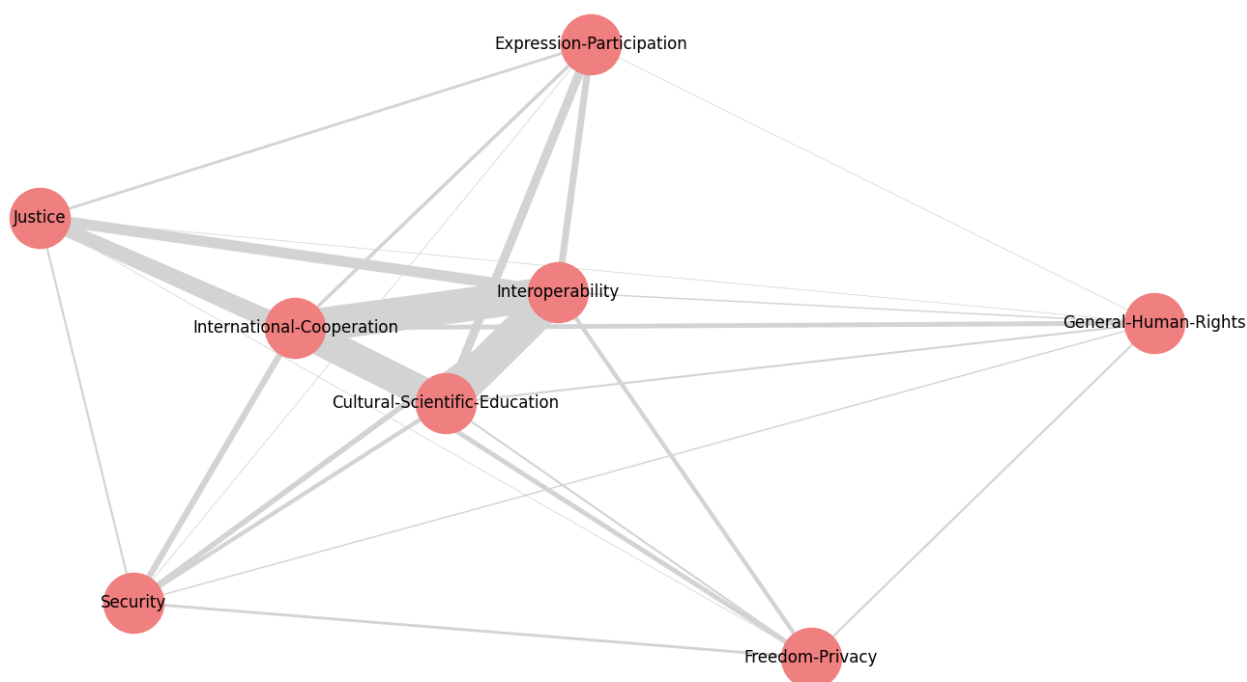
To evaluate how interoperability is presented in relation to human rights and justice, H3 and H4, I developed a co-occurrence network of categories based on which categories co-occurred within excerpts. For example, if a single excerpt was relevant to both the International-Cooperation and

Interoperability categories, these categories would be connected in the network. Python code for network development is available in the supplementary materials.

Figure 5 displays the category co-occurrence network.

Figure 5

Technical Community QCA Category Co-occurrence Network



Note. This figure displays a co-occurrence network of QCA codes appearing in the technical community documents: each node in this network represents one code. Nodes are connected by lines (edges) if they co-occur in at least one excerpt. Nodes co-occurring in many excerpts are connected by thicker lines. Nodes are positioned using the Fruchterman-Reingold force-directed algorithm from the NetworkX Python package.

In this network, edge weight is determined by the number of excerpts in which categories co-occurred. A high edge weight, represented as a thicker connecting line, indicates that categories frequently co-occurred. Nodes with higher edge weights connecting them are displayed closer together in the network. Interoperability, International-Cooperation, and Cultural-Scientific-Education are the most highly connected. Justice is the most highly connected with these three categories. Justice only rarely co-occurs with General-Human-Rights and Freedom-Privacy.

For a more detailed understanding of how these concepts are related, excerpts where Interoperability co-occurred with Cultural-Scientific-Education or Justice were reviewed manually. Manually reviewing excerpts where Interoperability co-occurs with

Cultural-Scientific-Education reveals that interoperability is frequently presented as enabling rights related to culture, science, or education, or that these rights are necessary to realize the full benefit of interoperability. For example, in the sentence “Connectivity is essential for enabling the full potential of digital technologies and for ensuring that the benefits of digital transformation are realized by all”, from the ITU’s submission, interoperability is presented as enabling ICESCR 15.1 “The States Parties to the present Covenant recognize the right of everyone: (a) To take part in cultural life; (b) To enjoy the benefits of scientific progress and its applications...” In the sentence “Being equipped with skills: Citizens should be provided with the necessary digital skills to make use of connectivity for their social and economic well-being”, from the ITU’s submission, ICESCR 6.2: “The steps to be taken by a State Party to the present Covenant to achieve the full realization of this right shall include technical and vocational guidance and training programmes, policies and techniques to achieve steady economic, social and cultural development and full and productive employment...” is presented as being necessary for the realization of the benefits of interoperability. Manually reviewing excerpts where interoperability co-occurs with justice reveals that interoperability is also presented as enabling justice. For example, in the sentence “Expanding Internet connectivity is a critical step toward closing the digital divide”, from ICANN’s submission, interoperability is presented as a way forward in addressing injustice in access to digital technologies.

These results do not provide support for H3 and provide some support for H4. If these hypotheses had been supported, then the Interoperability and General-Human-Rights categories would frequently co-occur as would the Interoperability and Justice categories. Contrary to H3, Interoperability and General-Human-Rights rarely co-occur. Interoperability and Justice sometimes co-occur, providing moderate support for H4. Interoperability co-occurs the most frequently with International-Cooperation and Cultural-Scientific-Education, highlighting the interdependence among these categories.

6. Discussion

This paper examined the politics behind global digital regulation in the case of the GDC. To evaluate the argument that politics matters for explaining variation in policy positions and can be seen in human rights-based language in actor contributions to the GDC, I examined four hypotheses, as described in section 4. I found that H1 is supported by the results of the topic model, which show variation in language across actor types. Contrary to H2, the qualitative content analysis showed that technical community members more frequently discussed security than freedom. The category co-occurrence network also contradicts H3, revealing that the Interoperability and General-Human-Rights categories rarely co-occur. The network partially supports H4, showing that Interoperability and Justice sometimes co-occur. Unexpectedly, Interoperability co-occurs the most frequently with the categories International-Cooperation and Cultural-Scientific-Education.

The two most notable results emerging from the analysis of technical community documents are their focus on rights from the ICESCR and their lack of discussion surrounding gender equity on the Internet. The documents discuss human rights related to culture, science, and education and more frequently than rights related to privacy and expression. This aligns with prior work by Milan and ten Oever (2017) showing how advocates in ICANN sought to broaden the concept of human rights to include social, cultural, and economic rights. It also provides evidence of a potential global shift in human rights-based language regarding the Internet.

6.1. Which IR paradigms best explain technical community discourse in relation to the GDC?

In addition to providing empirical insight into potential normative developments in Internet governance, this research seeks to further IR theory by testing its ability to explain technical community actor discourse in relation to the GDC. Based on the analysis conducted here, constructivist and feminist IR paradigms hold the most explanatory power, while realism and liberalism are less relevant. Realism's focus on power relations between states is ill equipped to account for the prominence of voices from the Global South in the final text of the GDC, given that these states are typically less powerful than Global North states. It is also not well suited to analyzing actors other than states, such as the technical community. Liberalism seems best equipped to account for privatization of rights on the Internet, networked governance, and institutional developments in Internet governance. Although some company employees participate in technical community organizations, these organizations are distinct from private actors. The GDC more broadly is unlikely to result in the establishment of a new institution; it is more likely to shape the work of current institutions, as discussed in section 1. Constructivism is well equipped to explore the normative shifts present in technical community discourse. Similarly, feminism helps to explain why technical community actors neglect issues of gender in human rights online.

6.1.1. The Ability of Constructivism to Explain Technical Community Discourse

The results highlight the importance of norm development in Internet governance (Finnemore and Sikkink, 1998; Mueller et al., 2013), in line with theoretical expectations from a constructivist viewpoint. The U.S. has historically prioritized civil and political rights over economic, social, and cultural rights (Busby, 2024); as has the Internet technical community (Human Rights Protocol Considerations Research Group, n.d.). However, in the context of the GDC, both the U.S. and technical community actors are placing more emphasis on economic, social, cultural rights. The constructivist theories pertaining to norm emergence (Finnemore and Hollis, 2016, p. 427), the role of norms in enabling cooperation (ten Oever, 2023), and actor identity (Eriksson and Newlove-Eriksson, 2021) help account for these developments.

The early Internet technical community primarily emerged in the United States. Historically, the U.S. has emphasized civil and political rights as the primary human rights. It has

ratified the ICCPR. However, it has not ratified the ICESCR (Busby, 2024). Finnemore and Hollis (2016) argue that norms emerge from specific social contexts. The national U.S. norms surrounding the conceptualization of human rights may have influenced the emergent Internet technical community to prioritize civil and political rights as the fundamental human rights relevant to the Internet (Human Rights Protocol Considerations Research Group, n.d.) by shaping the social context in which norms regarding Internet governance first emerged. The focus of the Internet technical community on civil and political rights may have then persisted even as it grew into a global community.

These norms may be shifting as the Internet becomes entrenched in economies, societies, and cultures. Both the U.S. submission and the technical community submissions to the GDC depart from the historical prioritization of civil and political rights over economic, social, and cultural rights. The US submission to the GDC references rights associated with articles in the ICESCR more often than rights associated with the ICCPR. Technical community submissions also more frequently discuss cultural, scientific, and educational rights as articulated in the ICESCR than civil and political rights. This normative shift could be attributed to actors' pragmatic avoidance of political contention and desire to enable cooperation. While rights such as freedom of information (ICCPR 19.2) may be internationally disputed, closing the digital divide, which is associated with economic, social, and cultural rights, may be less so. ten Oever (2023) points to the importance of norms in enabling cooperation, which could help explain this normative shift.

Despite their frequent mentions of rights associated with the ICESCR, technical community actors rarely used the explicit framing of "human rights". While the category Cultural-Scientific-Education appeared in 138 excerpts, the category General-Human-Rights appeared in only 14, and the two categories did not frequently co-occur. The constructivist literature on social identity and appropriate behavior (Eriksson and Newlove-Eriksson, 2021) could help explain this hesitance to discuss human rights explicitly. If technical community actors do not perceive engaging in issues of human rights as appropriate to their technology-centered identity, they may be less likely to do so directly. By avoiding a "human rights" framing, technical community actors also may have side-stepped international political contention around what rights count as human rights.

6.1.2. The Ability of Feminism to Explain Technical Community Discourse

The analysis of technical community documents also shows how structural injustices and omissions identified by feminist and critical scholars (Collins, 2002; Jongen and Scholte, 2022; Sjoberg and Thies, 2023) persist in technical community engagement with the GDC. Technical community actors rarely discussed gender equity online. Only six excerpts out of 748 were relevant to ICCPR 3, "The States Parties to the present Covenant undertake to ensure the equal right of men and women to the enjoyment of all civil and political rights set forth in the present Covenant." These results are also reflected in the topic model. In contrast to other actor types, a

relatively small proportion of technical community excerpts were relevant to the topic Gender, Security, or Justice online.

This could be explained by the historical exclusion of women from the Internet technical community (Cath, 2023) and the academic field of Internet governance (Rosa et al, 2024), supporting the relevance of a feminist perspective in explaining policy priorities. Despite some attempts to support women in Internet governance (Richardson and Wilson, 2024; Internet Engineering Task Force, n.d.; Internet Governance Forum, n.d.), they are still largely marginalized. According to Frei (2021, p. 639), “one of the causes and also one of the dimensions of inequality in cyberspace is that Internet policy makers are often male and white” (see also Faith, 2022). In organizations where Internet infrastructure is decided upon this lack of diversity is even more pronounced (Radu et al, 2024).

Lack of women’s representation in Internet governance can lead to outcomes that reinforce gendered power dynamics (Faith, 2022). Globally, women are more often excluded from digital technologies (Richardson and Wilson, 2024). Even when women are able to access technology, this technology is often not designed for safety and there is limited access to “recourse from platforms or legal bodies” for crimes committed against them (Faith, 2022, p. 330). Despite these issues, Frei (2021, p. 648) finds that “there is no consistent or comprehensive approach to addressing the problem of networked inequality” based on an analysis of key Internet governance documents. Considering these feminist perspectives, it is unsurprising that technical community submissions would rarely discuss issues pertaining to gender.

7. Conclusion: Theory and Calculation

This research explored the politics behind global digital regulation as revealed in human rights-based language in consultation submissions to the Global Digital Compact (GDC). Historically, discussions surrounding the Internet and human rights in the early, primarily U.S.-based, Internet technical community focused on civil and political rights, such as privacy and freedom of expression. Analysis of the GDC reveals that this may be shifting. Technical community submissions to the GDC most frequently discuss rights from the *International Covenant on Economic, Social and Cultural Rights* (ICESCR). However, they do not frame these as “human rights”. This focus on ICESCR rights, and framing, or lack thereof, could be due to a desire to avoid political conflict over what counts as human rights and enable cooperation on issues such as closing the digital divide.

The relevance of economic, social, and cultural rights is also reflected in the final text of the GDC. It states that:

This Compact is anchored in international law, including international human rights law. All human rights, including civil, political, economic, social and cultural rights, and fundamental freedoms, must be respected, protected and promoted online and offline... (United Nations, 2024, p. 38).

The compact's five explicit objectives are "Close all digital divides and accelerate progress across the Sustainable Development Goals", "Expand inclusion in and benefits from the digital economy for all", "Foster an inclusive, open, safe and secure digital space that respects, protects and promotes human rights", "Advance responsible, equitable and interoperable data governance approaches", and "Enhance international governance of artificial intelligence for the benefit of humanity" (United Nations, 2024, p. 37). It also reflects the connections between interoperability and rights from the ICESCR, particularly ICESCR 15.1, found in the technical community submissions. For example, it states that "We recognize that the Internet is a critical global facility for inclusive and equitable digital transformation. To fully benefit all, it must be open, global, interoperable, stable and secure" (United Nations, 2024, p. 43).

One of the practical implications of the GDC is its potential to shape policy regarding digital divides. While the GDC tends to emphasize disparities between countries, prior work has shown that digital divides can persist within countries (Serrecchia, 2024; Setthasuravich et al, 2024) as well, and promoted 'context-sensitive' policies (Zola, 2025). The GDC has the potential to help coordinate local policies by building shared norms and strengthening interoperability, leading to a more globalized and inclusive Internet. As discussed in section 1, it seems more likely that the GDC will play a role in harmonizing and furthering existing Internet governance processes, rather than creating another process or institution. This aligns with Radu et al's (2024, p. 2) observation of "power shifts and direct instances of contestation 'from within' the existing Internet governance mechanisms". The research findings presented here indicate that the technical community may contribute to these norms in international processes. If these developments take place, they could help promote social and data justice, as discussed in section 3.4. However, as of this writing, it is too early to determine whether the GDC will truly increase the extent to which economic, social, and cultural rights are realized online or whether technical community actors will enact the norms they discuss.

7.1. Limitations

This research has several limitations. First, it only examines what actors say. What they do in practice is outside the scope of this study. While discourse is important for understanding politics, analyzing associated action would provide further insight into whether actors meant what they said. Second, it only examines one international process: developing the GDC. It is possible that actors present themselves and their ideas differently in the varied fora associated with Internet governance. These potential differences across fora limit the generalizability of this study. Third, the potential generalizability of these findings is further limited by the incomplete participation of technical community actors in the GDC, and therefore, the restricted set of actor submissions analyzed here. Lastly, while this research draws from a feminist IR paradigm to help explain discourse, it does not analyze gender as a variable. The variables analyzed here are actor type and rights-based language attributes. While some of these attributes do pertain to gender, in

referring to rights to gender equality, for example, gender itself was not treated as a variable. This is a promising direction for future research, as discussed in section 7.2.

Given that not all Internet technical community actors participated in the GDC process, the generalizability of these findings, especially relating to the technical community, are limited. It is possible that the results, particularly regarding the relationships between interoperability, human rights, and justice analyzed in H3 and H4, would differ with a broader dataset. Furthermore, while the GDC itself does appear to represent a shift in human rights-based language, the shift in technical community discourse could be limited to those actors who participated: the actors who participated in the GDC are not the exact same set of Internet technical community actors that emerged in the US. Therefore, discourse may have shifted because the speakers are different. Relying on actors' self-definitions to categorize them may have resulted in the inclusion of more actors focused on economic, social, and cultural rights in the technical community category who might be excluded from a more restricted definition of the Internet technical community. Nonetheless, by participating in the GDC and identifying as technical community actors, these actors are the ones who represented a technical perspective in a major Internet governance development, marking a development in technical community discourse.

It is possible that opposition to the GDC process could have discouraged broader technical community participation. While not explicitly analyzed in this research, a general theme in the technical community submissions is a concern that the functioning of the Internet might be harmed. For example, the ICANN submission states:

While the technical underpinning of the Internet works well, some policy actions to address how the Internet is used (applications and services) may have unintended consequences that could lead to Internet fragmentation (Internet Corporation for Assigned Names and Numbers, n.d., p. 4).

Separately from the GDC submission, at least one ICANN member, joined by leaders of the Asia Pacific Network Information Centre (APNIC) and the American Registry for Internet Numbers (ARIN), has expressed concern that the GDC process could be minimizing the role of the technical community (Costerton et al, 2023). While it seems unlikely that the technical community actors who submitted inputs to the GDC oppose the GDC process itself, given their participation, it is possible that concern over harms to Internet infrastructure led other technical community actors to avoid engaging with the GDC. This could help explain why there were relatively few technical community submissions. However, further work would be necessary to provide empirical evidence of why some technical community actors chose not to participate.

7.2. Future Work

Future work could examine how the GDC is instrumentalized, how discourse differs in various international processes and governance venues as well as across a broader set of Internet

technical community actors, and the role of gender in Internet governance and human rights discourse. As a novel international compact, the GDC may be used as a tool to help pressure actors to take action furthering the ideals they supported in the compact and its negotiation process. Future research could examine references to the GDC used to justify arguments in favor of or against particular policies. Future work could also compare actor discourse across multiple contexts and for a broader subset of actors. For example, in global organizations such as the IETF and ITU as well as in Global South and North regional organizations and expert groups. This would provide insight into the extent to which audience or international process shapes actor discourse, helping to map out the political structures of Internet governance, and examine whether the findings pertaining to how interoperability is presented in relation to human rights and justice remain relevant given a more comprehensive dataset. This work could be supplemented by interviews or participant observation in various fora.

The results regarding the relevance of a feminist theoretical framework encourage future work engaging in a more substantive analysis of gender. While this work revealed themes and patterns in statements, which can be explained by various theoretical paradigms, the data gathering and analysis does not include a specific gender variable. Future work could look more closely at the gender variable in international processes of Internet governance. This line of work could contribute to the emerging field of critical Internet governance and ongoing analyses of gender dynamics on the Internet. Critical Internet governance proposes more engagement with “critical perspectives that decenter western interpretations, center the people and invisible actors, and expand the variables of analysis to include gender, race, ethnicity, disability, the global South, and non-humans in their core” in Internet governance research (Maxigas et al, 2025, p. 3). This turn in the literature points to the relevance of analyzing gender in relation to Internet technologies (Javed, 2024; Parry, et al, 2019; Spiel, 2021; Estrada, 2021). In contrast to infrastructure that reproduces existing power and gender hierarchies, the development of feminist infrastructure could “involve rethinking binaries, making labor visible, embracing pluralism, acknowledging affective and rhetorical effects, and redistributing power” (Brown and Mandell, 2025, p. 92). Understanding the role of gender in international Internet governance processes could contribute to this literature.

The Global Digital Compact seems best equipped to support a more equitable digital environment where the benefits of Internet technology are widely shared, and users are safer than at present. While it does mention civil and political rights, as well as freedom, its primary objectives seem to be more closely related to social, economic, and cultural rights. Therefore, this compact could be codifying a shift or expansion in what are seen as human rights that are relevant on the Internet, potentially reflecting a more global vision of human rights in place of a U.S. and Western-centric vision of human rights as primarily civil and political rights. The GDC is an example of diverse actors and states finding common ground (narrow as it may be) in support of a safer and more equitable Internet. Whether the GDC will ultimately accomplish its objectives remains to be seen. However, even limited success can lay the groundwork for future advances in human rights.

Use of Artificial Intelligence

During the preparation of this work the author used ChatGPT by OpenAI and Gemini by Google in order to assist in Python code development and used Claude AI by Anthropic to evaluate the accessibility of the writing in sections 1, 2, and 3 and improve readability. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

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