

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

Abstract

Engineering the Internet to support human rights is critical. Historically, civil and political rights, for example, the right to free speech, have been promoted as central to this effort by the U.S. and the Internet technical community, which largely originated in U.S. institutions. 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 negotiation 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. 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 expressed by the technical community helps lay the foundation for policies that support 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 facilitated by the United Nations and endorsed by 93 countries, as of 2024. In the process of negotiating the GDC, a wide variety of participants came together to form an agreement on the Internet that addresses its most pressing issues. Unlike the recent UN Cybercrime Convention (United Nations a, n.d.), the GDC is not topically limited to specific areas or issues. Topics addressed range from regulating artificial intelligence to closing the digital divide (Moran and Bui, 2019). Participants in the negotiations included Global South and North countries, key players in the telecommunications industry, and members of civil society, providing diverse perspectives (Robertson and Maccarone, 2023). Many of the countries and organizations capable of shaping the future of the Internet were involved in developing the GDC. The negotiation process surrounding the GDC provides an opportunity to examine the signals various actors are sending, as well as what they are not saying, which can provide insight into their ultimate objectives and the role of politics. Contrary to the historical focus on civil and political rights promoted by the U.S., I unexpectedly found that many actors focus more on economic, social, and cultural rights than on civil and political rights. However, they often do so implicitly, avoiding the term “human rights.” This implicit support helps lay the foundation for policies that promote economic, social, and cultural rights online, such as efforts to overcome the digital divide in technology access. 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.

This research is grounded in International Relations (IR) theory and seeks to further IR theory by testing its ability to explain new developments in Internet governance, and the role of technical community actors. IR theory sets out various assumptions about who the primary actors in the international system are and what factors shape their behavior. I test how well established branches of IR theory can explain the negotiation process surrounding the GDC, particularly the discourse and expressed policy preferences of different types of actors.

The branches of IR theory considered in this paper are realism, liberalism, constructivism, and critical and feminist theories. Under a realist perspective, states are the primary actors and their behavior is driven by considerations of power. Liberalism highlights the role of civil society and other actors, besides states, in norm development. Norms refer to “shared and accepted standards of behaviour in society” (Holmes, 2024, p. 3). Constructivism considers how norms are contested and holds that states may influence norms. Critical and feminist theories focus less on formal institutions of power, and more on the emergent order in governance. They also emphasize human rights and justice. As has been shown in other areas (Ezell, 2024), discourse related to justice or human rights does not always result in outcomes that support these ideals, and might propagate systemic injustices. Therefore, it is necessary to understand the role of politics in what actors are saying. I find that constructivism and feminism are best able to explain actor discourse in relation to the GDC.

These findings are based on a mixed-methods analysis of the Global Digital Compact negotiation process. 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 true, 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.

As part of negotiating the GDC, actors submitted online consultation documents. These documents provide rich textual data I use to test each hypothesis. 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 negotiation process that resulted in the GDC.

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. To operationalize human-rights based language for the qualitative content analysis (QCA), I began with the sub-articles from the *International Covenant on Civil and Political Rights* and *International Covenant on Economic, Social and Cultural Rights* and treated each sub-article as a code. I then iteratively revised codes to capture emergent themes by applying them to a diverse subset of documents. 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 very rare in these documents. 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.

These findings shed light on which IR theories hold the most explanatory power in the case of the GDC. The influence of the U.S. on normative development in the technical community (prioritizing civil and political rights) may have influenced the presentation of these rights as associated with the concepts of interoperability and international cooperation, instead of being explicitly framed as human rights. This could be explained by a constructivist viewpoint, which accounts for state influence on normative development. The QCA and topic model also showed that the technical community documents rarely discussed gender equity online. Historically, women have been excluded from the Internet technical community (Cath, 2023) and marginalized in the field of Internet governance (Rosa et al, 2024). The continuation of this bias into the negotiation of an international governance framework can be effectively accounted for by a feminist perspective focusing on gender and informal exclusionary power structures.

The application of IR theory to the process of negotiating the GDC provides 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. Understanding the political and normative foundations of technical policies and decisions can provide insight into what types of content-related policies can be built on top of them. The case of technical community actors and human rights is particularly important as these actors develop and operate the technical foundation of the Internet, and it is on that foundation that other policies addressing human rights are built. For example, a government may pass legislation to help protect online privacy, but if the protocols transmitting information across the Internet are insecure and leak information about what they are transmitting to potential eavesdroppers, privacy legislation will be less effective in practice. Similarly, civil society networks may advocate to stop the online abuse of women and girls, but if Internet technologies afford complete anonymity, holding perpetrators accountable for criminal behavior will be much more difficult. Given the Internet’s layered technical and social structure, it is important to understand the role of politics in developing the technical foundation of the Internet, as this foundation shapes the exercise of human rights online.

2. Theory

This paper draws on International Relations theory to understand the role of politics in shaping policy positions in the Global Digital Compact (GDC). Traditional realist, liberalist, constructivist, and critical and feminist theories each contain assumptions related to who the primary actors in International Relations are and what factors shape their behavior. This paper tests which of these theories best accounts for behavior in the case of the GDC. In particular, it explores which branch of IR theory can effectively explain the political behavior of members of the technical community, as revealed by their use of human rights-based language.

Realism tends to focus on states as the primary actors and attributes their behaviors to considerations of power. A realist perspective might argue that the participation of states in Internet governance is a way to project power (Jho and Kim, 2022). One example of this is China's proposal for a 'New IP' that might make it easier for authoritarian countries to control what occurs over the Internet. Another structural example could be the weaponization of interdependence, wherein states leverage their position in a global network, such as the Internet, to exercise power (Farrell and Newman, 2019). In the context of the GDC, a realist theoretical lens would lead one to expect that states would mainly focus on interoperability. In particular, they might focus on having their preferred technical standards adopted or having technologies developed in their country used globally.

Liberalism expands the relevant actors in international relations to include non-state actors such as corporations, advocacy networks, and civil society. According to a liberal IR perspective, one might expect non-state actors involved in transnational advocacy networks to play a role in shaping norms and making them more applicable to the digital space (Eriksson and Giacomello, 2006, p. 236). Norms can be defined as "shared and accepted standards of behaviour in society" (Holmes, 2024). 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 might highlight 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.

Constructivism accounts for the social construction of norms which shape actor behavior. 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). Mueller et al. (2013, p. 86) develop the concept of networked governance, which they define as "a semipermanent, voluntary negotiation system that allows interdependent actors to opt for collaboration or unilateral action in the absence of an overarching authority." They show that this form of governance is the norm for how the Internet largely operates (Mueller et al., 2013, p. 87). While states do not exercise hierarchical authority in this network structure, Mueller et al. (2013) argue that they may try to join these networks and influence norms. Niels ten Oever (2021) describes the difference between the regime of private self-regulation of the Internet and the state-led multilateral regime of Internet governance 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). Radu et al (2021) show how diverse actors promote and contest norms in Internet governance.

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." van Eeten and Mueller (2013, p. 720) argue that the study of Internet governance is often too narrowly conceptualized and overly focused on formal institutions at the expense of considering activities such as "Internet service provider interconnection, security incident response or content filtering" that more directly impact how the Internet evolves and is used. According to van Eeten and Mueller (2013) the focus on formal institutions leads to an overestimate of the prominence of state actors. They instead propose a broader perspective on Internet governance that incorporates "the emergent order that arises from the interactions among thousands of ISPs [Internet Service Providers] and their users" along with formal international institutions and a wide variety of other forms of governance (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. This literature reflects 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". 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. Under critical and feminist theoretical

frameworks, civil society and individuals might be expected to engage in discourse on justice and human rights.

Technical community actors do not seem to be well accounted for by traditional IR theories. They could be conceptualized as structurally similar to advocacy networks 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, 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.

Prior work shows that technical community organizations are not necessarily unitary 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. They present the argument 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 at the organizational and international levels. 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. 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. Furthermore, the Human Rights Protocol Considerations Research Group in the Internet Engineering Task Force states in their charter that “The Human Rights Protocol Considerations Research 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. 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.

4. Methodology

This paper examines the applicability of IR theory to the case of the GDC. It tests 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.

To operationalize these hypotheses, actor identity is categorized based on self-description, and human rights-based language is measured using definitions of specific rights from the ICCPR, ICESCR, and emergent themes from a sample of documents. This specific operationalization of human-rights based language is also supplemented by a topic model, which identifies emergent themes in documents. To test these hypotheses, I integrate qualitative content analysis (QCA), topic modeling, and network analysis. These methods enable me to systematically examine human rights-based language in actor consultations. My QCA codebook is based on the *International Covenant on Civil and Political Rights* (ICCPR) and the *International Covenant on Economic, Social and Cultural Rights* (ICESCR) and is expanded through application to a set of GDC consultation documents to include other relevant themes, such as interoperability. Codes represent covenant sub-articles or relevant concepts (e.g. interoperability).

Using covenant sub-articles as the starting point for QCA codes provides a comprehensive view of human rights, which is necessary for fully assessing human rights based language. These codes are then aggregated into thematic categories. Document excerpts, mainly at the sentence level, are manually annotated to denote the presence or absence of specific QCA codes. Topic modeling is an unsupervised machine learning approach that extracts a given number of thematic topics from a corpus based on word co-occurrence. I applied Latent Dirichlet Allocation (LDA) topic modeling, a widely used and 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. QCA of technical community documents are used to test 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.

4.1. Dataset

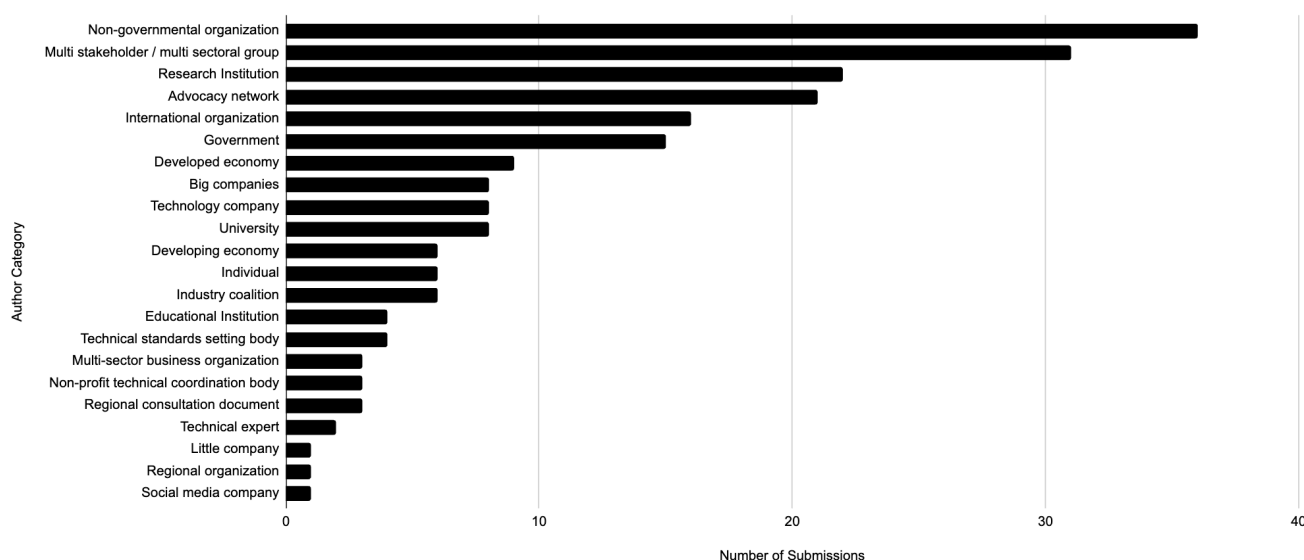
The units of analysis in this paper are the consultations submitted to the UN Office of the Secretary-General's Envoy on Technology as part of the process for developing the Global Digital Compact. The UN Office of the Secretary-General's Envoy on Technology collected consultations from academia and 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 PDF format, 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 PDF format due to technical difficulties extracting online survey responses. Data is available in the supplementary materials.

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.). I then created more specific categories under each type to reflect relevant attributes of the document author. Table A1 shows the organization of author categories under the GDC entity / organization types (United Nations b, n. d.). 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.). 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.

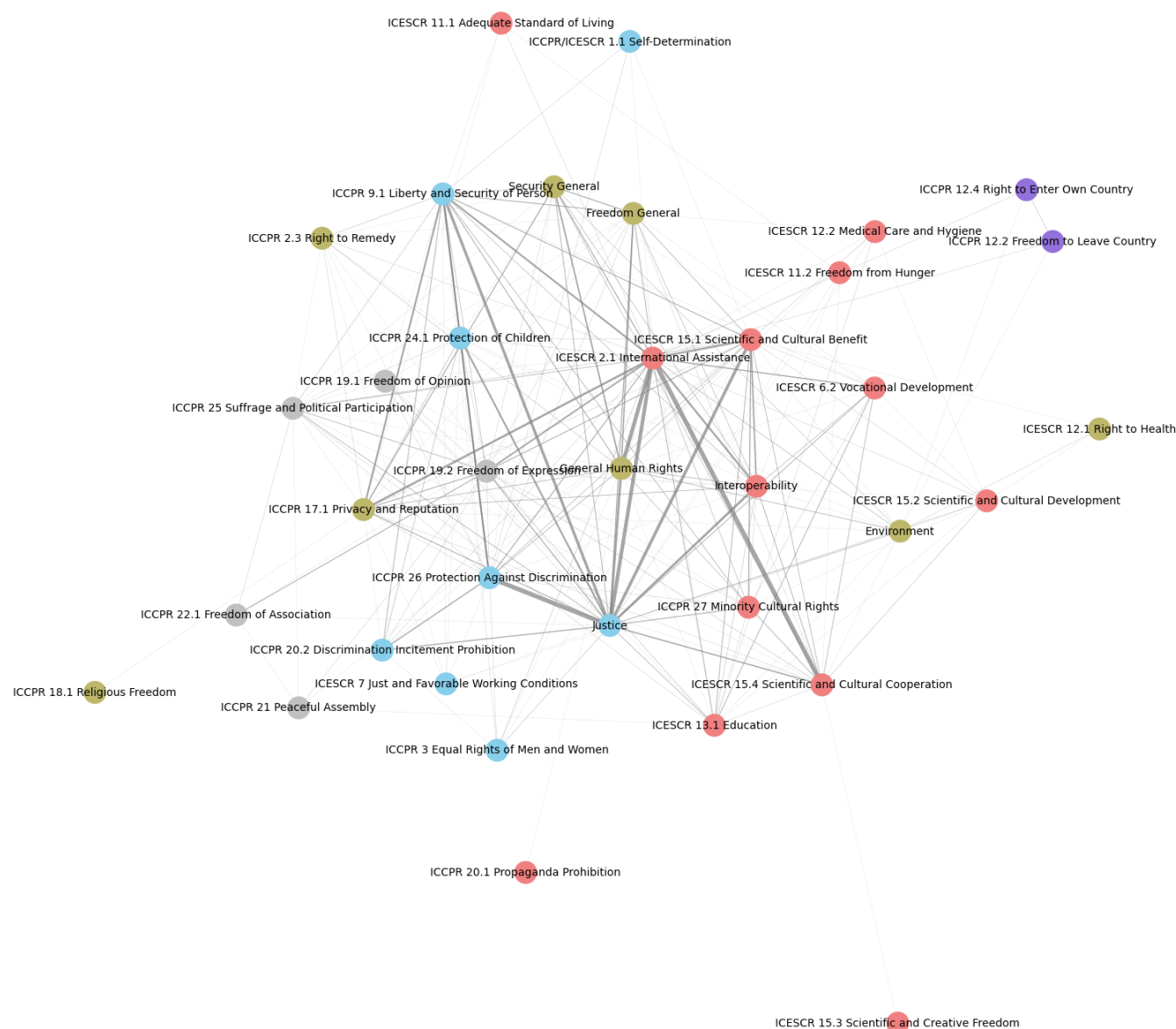
The author categories with the highest numbers of documents are non-governmental organization ($n = 36$), multi stakeholder / multi sectoral group ($n = 31$), research institution ($n = 22$), and advocacy network ($n = 21$). This illustrates the predominance of civil society and academic or research 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

To begin the systematic exploration of 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. I annotated eight GDC consultation submission documents on the

sub-articles in the *International Covenant on Civil and Political Rights* (ICCPR) and *International Covenant on Economic, Social and Cultural Rights* (ICESCR) as well as on thematic codes, such as interoperability, environment, and general 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.

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.

Figure 2*Code Co-occurrence Network*

Note. This figure displays a co-occurrence network of QCA codes: 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 colored by community as detected by the Louvain algorithm (Blondel et al., 2008) and positioned using the ForceAtlas2 layout algorithm from the NetworkX Python package.

The network reflects the relationships between codes as presented in the documents. The Justice code is central to this network. It frequently co-occurs with Protection Against Discrimination (ICCPR 26), International Assistance (ICESCR 2.1), and General Human Rights. Interoperability

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). The thematic categories in this codebook are 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.

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 table B1.

4.3. Topic Model

I applied Latent Dirichlet Allocation topic modeling (Egger and Yu, 2022) to my full corpus of computationally extracted English-language excerpts from GDC consultation submission documents ($n = 30,867$). Topic modeling automatically clusters words into topics based on which words co-occur together. 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. For example, the words women, gender, security, online, and violence frequently co-occur in the excerpts. Based on this co-occurrence, they are 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 were 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
	Internet Interoperability
	Protecting Human Rights Online
Justice	Gender, Security, or Justice Online
	Protecting Human Rights Online
Security	Gender, Security, or Justice Online
	Protecting Human Rights 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 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

The results presented in this section provide insight into the extent to which politics matters for explaining variation in policy positions, as revealed through human rights language in actor contributions to the GDC. It discusses the topic modeling, qualitative content analysis, and network analysis results, and how these provide evidence for or against each hypothesis.

5.1. Topic Modeling Results

To understand the relationship between actor identity and language, topic modeling was used to evaluate the first hypotheses:

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

Documents were categorized based on the characteristics of their authors into the categories listed in appendix A and displayed in the figures below. Each excerpt was then 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, and 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. 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 topics related to human rights. 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*

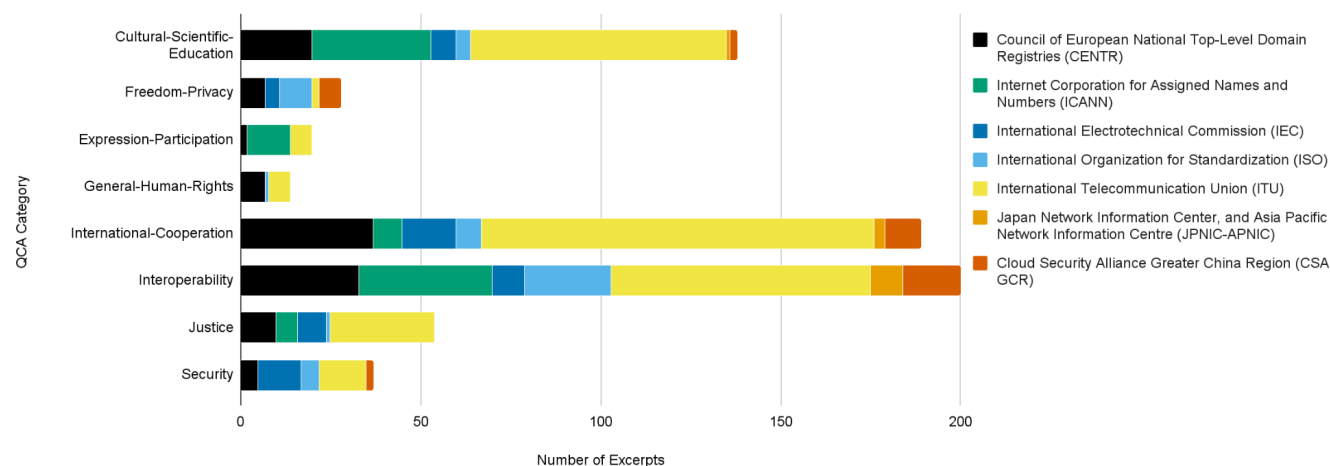
In order to evaluate technical community actor policy priorities and discourse in more detail, I conducted a qualitative content analysis of their document submissions. This provided insight into my second hypothesis:

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

I manually annotated excerpts from documents submitted by members of the technical community ($n = 748$). 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. 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

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. 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 does not often use 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. These results represent a departure from the rights that typically “count” as human rights in relation to Internet technologies.

5.2.1. Qualitative Content Analysis Category Co-occurrence

To further evaluate how interoperability is presented in relation to human rights, I test the third and fourth hypotheses:

H3: Technical community actors say interoperability supports human rights.

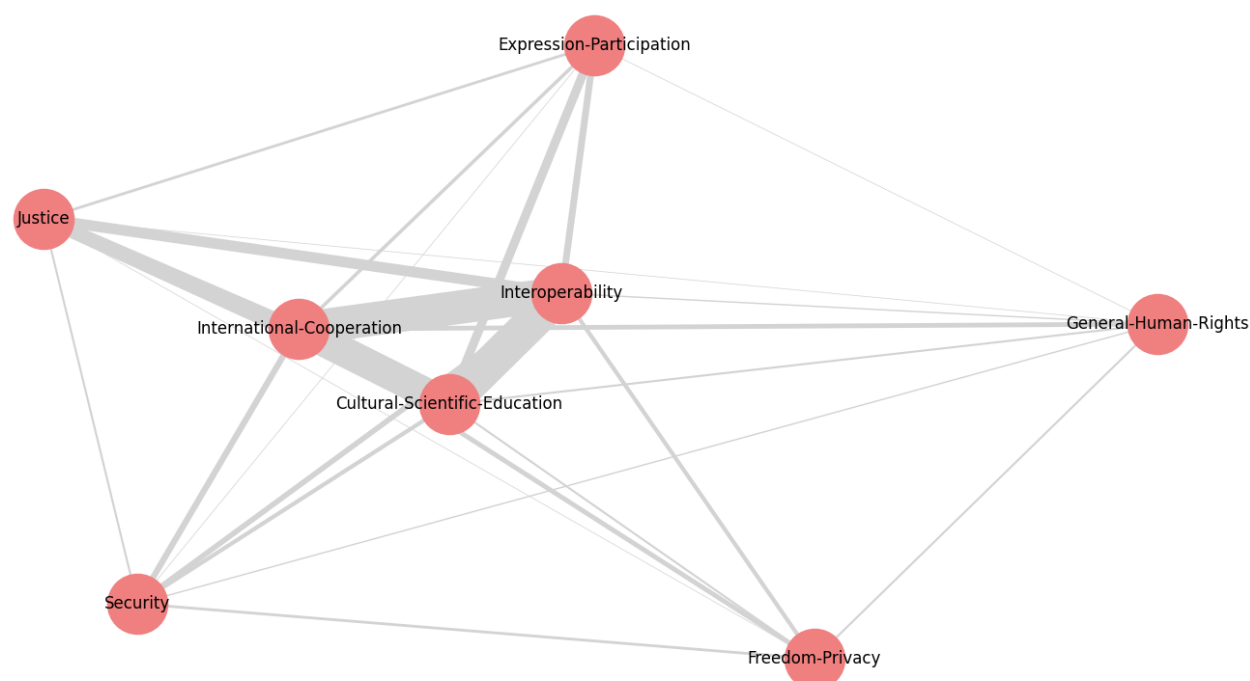
H4: Technical community actors say interoperability supports justice.

To test these hypotheses, I developed a co-occurrence network of categories on the basis of 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 also displayed closer together in the network layout. 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 the exercise of rights related to culture, science, or education or 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 under conditions safeguarding fundamental political and economic freedoms to the individual” is presented as being necessary for the benefit of interoperability to be realized. 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. In order 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:

- 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.

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.

Throughout the documents, there is a surprising amount of emphasis placed on human rights related to culture, science, and education and not on 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 a potential global shift in human rights-based language regarding the Internet

6.1. Which branch of IR theory best explains technical community discourse in relation to the GDC?

Based on our analysis, constructivist and feminist IR theories hold the most explanatory power in accounting for technical community discourse in relation to the GDC. Our results highlight the importance of national-level norms and how they influence norm development in Internet governance (Finnemore and Sikkink, 1998; Mueller et al., 2013), in line with theoretical expectations from a constructivist viewpoint. They also show 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.

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 *International Covenant on Civil and Political Rights* (ICCPR). However, it has not ratified the *International Covenant on Economic, Social, and Cultural Rights* (ICESCR). These national level norms surrounding the conceptualization of human rights may have influenced the emergent Internet technical community to prioritize civil and political rights as fundamental human rights relevant to the Internet (Human Rights Protocol Considerations Research Group, n.d.). The focus of the Internet technical community on civil and political rights may have then persisted even as it grew into a global community. Contrary to this predominant, potentially U.S.-based, norm of civil and political rights as the primary human rights, technical community

submissions to the Global Digital Compact frequently discuss cultural, scientific, and educational rights as articulated in the ICESCR. And do so more frequently than civil and political rights. However, they do not frame them as “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.

Not framing rights related to culture, science, and education as human rights may allow technical community actors to avoid some of the political contention surrounding human rights. For example, ‘closing the digital divide’ aligns with 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...” However, this is not framed as a “human right” potentially due to the historical US dominance of the Internet technical community and potentially due to avoiding contention around human rights. As the importance of the Internet increases, these culture, science, and education rights are likely to be even more impacted by technical developments, such as remote learning.

These results point to the importance of norms in shaping actor language, supporting a constructivist viewpoint. U.S.-based norms around what “counts” as human rights may have led technical community actors to not frame rights related to culture, science, and education as “human rights”. By avoiding this framing, technical community actors may be able to side-step international political contention around what rights count as human rights, enabling them to pursue goals such as closing the digital divide with more international support and less contention than if they specifically framed them as human rights.

Technical community actors did not frequently discuss 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 their marginalization in the academic field of Internet governance (Rosa et al, 2024), supporting the relevance of a feminist perspective in explaining policy priorities.

7. Conclusion: Theory and Calculation

This paper explored the politics behind global digital regulation as revealed in human rights-based language in consultation submissions to the Global Digital Compact. 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 Global Digital Compact reveals that this may be shifting. Technical community submissions to the GDC emphasize rights from the *International Covenant on Economic, Social and Cultural Rights* (ICESCR). However, they do not frame these as “human

rights”. This framing, or lack thereof, could be due to the shaping influence of the U.S. on the early Internet technical community and a desire to avoid political conflict over what counts as human rights. Despite not framing these rights as human rights, they are the most frequently discussed rights in the technical community submissions.

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. Our cooperation will harness digital technologies to advance all human rights, including the rights of the child, the rights of persons with disabilities and the right to development (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 Global Digital Compact is its potential to shape policy regarding digital divides. While the Global Digital Compact 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 emphasized the need for ‘context-sensitive’ policies (Zola, 2025). The Global Digital Compact has the potential to help coordinate local policies by building shared norms and strengthening interoperability, leading to a more globalized and inclusive Internet.

This research has two primary limitations. The first is that 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. The second is that it only examines one international process: negotiating the Global Digital Compact. It is possible that actors present themselves and their ideas differently in the many various fora associated with Internet governance. These potential differences across fora limit the generalizability of this study.

Further work could examine how the GDC is instrumentalized and how discourse differs in various international processes. 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. This would provide insight into the extent to which audience or international process shapes actor discourse, helping to map out the political structures of broader Internet governance.

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 they are 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 online, 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. Against the backdrop of ongoing democratic backsliding, deterioration of human rights norms, and disregard of the rules based international order, the GDC is an encouraging 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 digital rights.

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