
First Among Equals? The Role of the State in Facilitating Internet Access and Protecting the Freedom of Expression Online in the Global South

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INTRODUCTION

The Internet's positive impact on economic growth and social development in advanced economies has been fueled by the availability of requisite physical and technical infrastructure, and opportunities for individuals to participate relatively freely in the creation, dissemination, and consumption of content online. Many countries in the Global South lag behind in terms of both access to infrastructure and content, with significant implications for economic growth and socio-economic, civil, and political rights.

Recent political developments, including revelations about NSA surveillance and the use of Internet blocking and filtering technologies, by both oppressive and democratic regimes, have given rise to calls for imposing strict limits on government involvement in matters related to the management and functioning of the Internet. While it is indeed important to preserve the decentralized governing structure of the Internet—which is currently owned and operated primarily by the private sector in the Global North, minimizing the risk of political capture and spurring innovation¹—it is necessary to recognize the critical role of states in bridging the “digital divide” (i.e. the gap between those who have access to computers and the Internet, and those who don’t)² and protecting the freedom of expression online in the Global South.

In this chapter, we assert that access to the Internet and the freedom of expression online are vital for greater security and justice in the Global South. While facilitating Internet access and securing the freedom of expression online depend upon the concerted efforts of both state and non-state actors, we posit that the state is important with regard to the facilitation of access and preponderant with regard to the protection of the freedom of expression online in the Global South.

For the purpose of clarity, we address the issues of access and freedom online separately in this chapter—they are, however, intimately connected, and can only

enhance security and justice when operating in tandem. The first part of this chapter provides a discussion of what is meant by the term “Internet access” and whether it should be a legal right, demonstrates why it is important for security and justice in the Global South, and seeks to delineate the appropriate scope of state activity with regard to facilitating access to the Internet. The second part of the chapter concerns the freedom of expression online and the discussion is structured similarly.

THE ROLE OF THE STATE IN FACILITATING ACCESS TO THE INTERNET IN THE GLOBAL SOUTH

Why is Access to the Internet Important for Security and Justice in the Global South?

In this chapter, we subscribe to the broad conceptualization of security advanced in the 1994 Human Development Report—that of human security, which takes as its point of departure the security of the individual rather than the nation state.³ This concept encompasses the dimensions of economic, food, health, political, environmental, personal and community security.⁴ We contend that access to the Internet is a force multiplier for achieving progress on all of these dimensions, and as such, is essential for greater human security in the Global South.

Perhaps the most significant impact of the Internet with regard to human security has been its effect on economic growth. There has been a strong correlation between Internet penetration and economic growth in developed economies—a simulation conducted by McKinsey Global Institute in 2011 found that an increase in Internet maturity similar to that experienced in developed countries during the past fifteen years resulted in a real GDP per capita increase of USD 500 on average during that same period.⁵ The fact that it took the industrial revolution fifty years to achieve the same result⁶ underscores the pivotal role of the Internet in the global economy. Importantly, 75 percent of the Internet’s economic impact arises from *traditional industries* (i.e. companies that would exist without the Internet)—an important indicator of how the Internet has revolutionized the way we do business in the twenty-first century.⁷ There is evidence to suggest that access to the Internet similarly stimulates economic growth in developing countries—an oft-cited 2009 study by the World Bank found that “the growth benefit that broadband provides for developing countries was of similar magnitude as that for developed economies—about a 1.38 percentage point increase for each 10 percent increase in penetration.”⁸ A report by Deloitte projects that in developing economies, the increase in economic activity resulting from increased Internet penetration could generate USD 2.2 trillion in additional GDP, trigger off a 72 percent increase in GDP growth rate, and create over 140 million new jobs.⁹

Apart from contributing to economic growth, access to broadband Internet—particularly mobile broadband—can provide transformative solutions to a range of developmental challenges in the Global South, which have a concrete and direct impact on human security. For example, access to broadband can promote

financial security on an individual and community level by providing vital market information, increasing the speed of trade, and reducing travel expenses, as well as enabling access to credit and banking services for those who may otherwise remain outside the formal economy and related financial services.¹⁰ Access to broadband and ICTs can also enhance the provision of *education and information services* through, for example, online courses and learning materials, online teacher training, and testing and certification services.¹¹ Similarly, broadband and ICTs can play a vital role in the *health sector*, where mobile health (m-Health) initiatives help connect rural populations to health care workers, disseminate information critical to preventing deaths from preventable or treatable illnesses, and facilitate medical interventions, as well as aid diagnostic and follow-up services.¹² Access to broadband also allows individuals and communities to engage more closely with *political processes and public institutions*, for example through e-governance and m-governance initiatives that help citizens to access information about public services and even participate in monitoring elections.¹³

In addition to promoting greater human security, access to broadband also has important implications for justice, understood here to mean “fairness, and achieving a basic level of liberty and opportunity for advancement for all, while reducing social and economic inequalities to benefit, in particular, the least advantaged.”¹⁴ The majority of people in the Global South, particularly those belonging to vulnerable groups, do not enjoy the full benefit of the Internet’s catalytic effect on development. In the developing world, only 31 percent of the population is online, compared with 77 percent in the developed world.¹⁵ The gender gap is also more pronounced in the developing world, where 16 percent fewer women than men use the Internet, compared with only 2 percent fewer in the developed world.¹⁶ As demonstrated by the examples above, access to broadband Internet and ICTs can play an important role in bridging this “digital divide,” particularly by providing vulnerable groups—such as women and the rural poor—with alternatives to the formal institutions and political processes they cannot access.

What is Meant by “Access to the Internet” and Should It Be a Legal Right?

In his 2011 report to the United Nations Human Rights Council, Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression, Frank La Rue, proposes a twofold definition of Internet access as (1) access to physical/technical infrastructure; and (2) access to (online) content.¹⁷ While it could be argued that La Rue conflates the issues of access and content regulation in this definition, it is nonetheless useful as it highlights that access to the physical and technical infrastructure upon which the Internet runs has limited value if online content cannot be produced, distributed or consumed in a reasonably free manner. Since this chapter will address the freedom of expression and related rights in the next section, however, we define Internet access more narrowly for the purposes of this section to mean “access to the Internet via wired or wireless connectivity, provided by a telecom operator or Internet Service Provider (ISP).”

Few people, if any, would contest that the Internet is increasingly an essential tool of modern life. There is disagreement, however, about whether or not access to the Internet should therefore be considered a “right.” In 2000, the parliament of Estonia passed legislation declaring access to the Internet a human right.¹⁸ Other countries have gone further, and specified degrees of access to which their citizens are entitled. For example, in 2010, the government of Finland became the first in the world to make access to broadband Internet a legal right, guaranteeing every citizen the right to minimum connectivity of 1Mbps;¹⁹ while Spain guaranteed its citizens the same speed at a reasonable price beginning in 2011.²⁰ Importantly, no developing country has formally recognized a right to Internet access.

In the above instances, access to the Internet is understood as a *positive* right to a minimum standard of connectivity as set by legislation. However, access can also be conceptualized as a *negative* right, for example, the right not to be disconnected from the Internet. This right is illustrated by the 2009 decision of France’s Constitutional Council to strike down the controversial Hadopi law—an anti-piracy law, which sought to disconnect users from the Internet after “three strikes”—ruling that freedom of access to online communications services is a legal right.²¹

Not everyone agrees that access to the Internet should be recognized as a right, however. A prominent critic of the “access is a right” school of thought is Vint Cerf, Vice President and Chief Internet Evangelist of Google. According to Cerf, “technology is an enabler of rights, not a right itself.”²² He asserts that human rights concern critical outcomes or social goods that are not confined to a particular technology or time.²³ Cerf concedes that while it is more reasonable to claim that Internet access should be a civil right rather than a human right—that is, conferred by law and not inherent to the state of being human—access to the Internet remains a tool to further well-being, rather than an end in itself.²⁴

Characterizing access to the Internet as a right (i.e. a legal entitlement) has serious implications for state actors. Recognizing a right typically entails an obligation on the part of the state to provide conditions in which citizens can (1) claim that right and (2) seek redress if that right is denied or abused. For many states in the Global South, the provision of universal access to the Internet, including via regulation of the market, is a difficult undertaking, albeit one which is likely to become less onerous with technological progress and enlightened policymaking. Therefore, we propose that in the context of the Global South, the focus of states at present should be on ensuring the greatest degree of access possible (which may fall short of universal access) while making strong commitments, through legislation if necessary, against actions that deny full access to the Internet, such as blocking and filtering, and censorship.

Why Should the State Facilitate Access to the Internet in the Global South and How?

Enhancing access to the Internet in the Global South requires the participation of many stakeholders, including states, the private sector, and civil society. However,

the state (with the exception of the special case of the European Union) is the only actor with regulatory power, and an explicit mandate and obligation to act in the interests of both national and human security, as well as to ensure enabling conditions for the realization of the rights recognized in the Universal Declaration of Human Rights (UDHR) and customary international law, and codified in treaties such as the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR). The prerogative and responsibility for promoting security and justice therefore lies, first and foremost, with the state.

Recommendations made by international organizations,²⁵ the private sector, and civil society groups with regard to facilitating access to the Internet in the Global South reflect this reality by highlighting the role states must play in the development and implementation of sound policies, the creation of appropriate regulatory frameworks, investment in infrastructure, and the provision of the right incentives for other actors (e.g. the private sector) to invest in ICT infrastructure, products, and services. In the remainder of this section, we elaborate on several measures states can take to better facilitate Internet access in the Global South: investing in fibre optic backbones (i.e. high-speed data transmission lines) through public-private partnerships, and implementing best practices; modernizing telecom regulation and spectrum policies; protecting network neutrality; facilitating the internationalization of software; and ensuring the availability of affordable hardware. It is important to note that this section aims to provide a sense of what options are available to states seeking to enhance access to the Internet in the Global South. The extent to which a given measure will succeed in doing so depends on factors unique to each country, such as the availability of the necessary financial and human resources, as well as rates of socio-economic development and literacy.

Fibre Optic Backbones

International and national Internet connectivity is usually facilitated by undersea and overland fibre optic cables that are installed, operated, and maintained by consortia of state and non-state actors. Even international cable-laying consortia must contend with national regulations and policies, such as environmental regulations; permits and authorizations for laying fibre and establishing landing stations; and right-of-way policies. States, therefore, play a key role in facilitating access to the Internet via undersea and overland fibre optic cables.

It is estimated that most international and intercontinental telecommunication and data traffic is carried through submarine cables.²⁶ Unlike in the Global North, where government participation is the exception,²⁷ governments in the Global South must facilitate cable-laying projects proactively, particularly when the private sector does not have a clear business case to act on its own initiative. The most famous example of international and government intervention and support to establish undersea fibre-based connectivity is the EASSy Cable (Eastern Africa Submarine Cable System)—a 10,000 km cable along the East African coast, stretching from Sudan to South Africa, with nine coastal landing points and connections to at least ten landlocked countries. In this instance, fourteen African

telecommunications operators, including some owned by states, came together to form a consortium and raised funds from multiple national, regional, international, and multilateral institutions.

Based on the EASSy Cable case-study and the ROGUCCI Report²⁸ the following recommendations can be made with regard to facilitating access in the Global South via undersea fibre optic cables: (1) states should help undersea cable consortia to raise funds from financiers, and implement policies and procedures for the timely approval, installation and repair of undersea cables; and (2) states should work with the private sector to establish best practices for inter-agency coordination with regard to undersea communications cables to ensure consistent policies and practices.

Investment from governments in the Global South is critical even in the case of terrestrial cables.²⁹ The Broadband Strategies Toolkit published by the World Bank contains several recommendations which are relevant for facilitating access via overland cables, including establishing open-access wholesale networks (whereby multiple Telecommunications Service Providers (TSPs) and Internet Service Providers can share common cable infrastructure); encouraging private sector investment; promoting, improving, and expanding public-private partnerships; and subsidizing local, regional, or national ventures.³⁰

Telecom Regulation and Spectrum Policies

The liberalization of the telecommunications sector and the evidence-based, consultative regulation of private sector actors has played an important role in increasing the penetration of wired and wireless voice services across the world since the 1990s.³¹ Proper regulation is essential for increasing access to the Internet. Ideally, regulators should be autonomous and independent so that regulation can happen without undue interference from the state. In some jurisdictions, such as India, there is a tripartite separation of powers to ensure the balance of regulatory power and prevent capture by industry: a policy development body, usually associated with the executive; a policy implementation body, which is the telecom regulator; and a special court or adjudicative mechanism where the decisions of the regulator can be appealed, such as the Telecom Disputes Settlement and Appellate Tribunal (TDSAT) in India and the Telecom Appeals Tribunal in Kenya.

A key difference between Internet adoption in the Global North and South is the leapfrogging to wireless technologies skipping wired alternatives. Consequently, smart allocation of the most important resource in this regard—electromagnetic spectrum—is particularly important. Since the 1990s, the privatization of spectrum has been considered the best way to advance wireless telephony and access to the Internet, based on the notion that well-defined property rights were the best way to prevent a “tragedy of the commons.” Today, thanks to the massive success of Wifi, and technical advancements such as cognitive radio, other models of spectrum allocations, such as shared spectrum, unlicensed spectrum, and light licensed spectrum are gaining acceptance. The key to states getting spectrum policy right is to avoid thinking of spectrum as a national asset, to be sold to the

highest bidder to generate revenues. Rather, spectrum should be thought of as public property, and a means to ubiquitous, affordable, and high-quality Internet connectivity. The most radical example of this new model is from Mexico, which has amended its constitution to take advantage of the spectrum released as part of the “digital dividend” (spectrum released when a nation shifts from analog television to the more efficient digital television technology). This spectrum has been used to build a shared last-mile 4G LTE infrastructure that will be used by all telecom operators based on the principles of open access.³² This approach to spectrum runs counter to the conventional wisdom of auctioning spectrum to the highest bidder and assuming that the market will deliver optimal results. Shared spectrum has several advantages over exclusive spectrum allocation because it reduces the cost of spectrum for TSPs (and consequently consumers), and allows for more efficient utilization of spectrum, as unutilized spectrum is made available to TSPs that require more spectrum.

Universal Service Obligation Funds (USOFs) have been promoted as another means for generating resources to expand access to remote geographic regions that have been failed by the market. However, it was estimated in 2010 that USD 8 billion remained underutilized in USOFs worldwide,³³ which should have gone into enhancing Internet penetration. Even the World Bank, which championed USOFs in the 1990s, had reversed its position by 2011.³⁴ This has led to telecom policy experts such as Rohan Samarajiva dubbing USOFs “a tax on the poor,”—since the bulk of TSP revenues come from the bottom of the pyramid and calling for the dismantling of such funds.³⁵ The primary challenge appears to be that USOFs often only allow existing ISPs and TSPs to apply for funding—these players are usually busy competing for existing markets and are not motivated to extend the geographic scope of their service by the financial incentive provided.

Therefore, to better facilitate access to the Internet in the Global South, states could undertake the following measures:

- establish and protect the independence and autonomy of telecom regulators against state or market capture;
- ensure that telecom policies are developed in an open and participatory manner; enforce telecom policies more consistently; and
- update telecom policies to promote a diversity of spectrum allocation practices, such as exclusive property rights, shared spectrum, and light-licensed/unlicensed spectrum.

Where USOFs have been established and are underutilized, policies should be amended so that the funds can be used to deploy shared backhaul infrastructure such as dark or lit fiber backbones using TSPs or any other interested party such as community and civil society organizations. Where USOFs are poorly utilized³⁶ and mismanaged they must be dismantled.

Network Neutrality

The complex notion of network neutrality can be oversimplified to the equal treatment of all bits on the dumb pipes of the Internet, meaning that an operator’s network is simply used to transfer bits between end-user devices in a

non-discriminatory manner. This is no longer strictly true, since data traffic management in response to congestion as well as the actions of bad actors such as cybercriminals and spammers has resulted in ISPs and TSPs building highly intelligent networks that can discriminate between bits. As Vishal Misra puts it, net neutrality exists when we can define the internet as “a platform where ISPs provide no competitive advantage to specific apps or services, either through pricing or Q[uality] o[f] S[ervice].”³⁷

There is no universally accepted definition of network neutrality. At least a dozen definitions³⁸ have been produced by a variety of academics, civil society actors, and governments with varying emphases on free speech, competition, consumer choice, and technical specifications. Network neutrality is also contoured rather differently based on significant differences in terms of internet adoption rates, competitiveness of the telecom/ISP market, and the dominance of wired or wireless technologies. The debate over network neutrality in developed countries such as the United States has been primarily concerned with wired networks, and emphasizes the protection of the freedom of expression and competition. Where penetration rates are low and facilitated primarily through wireless networks, stakeholders are confronted with the dilemma of whether to make trade-offs with regard to the freedom of expression and competition, in order to increase access.

In the early days, the following practices by ISPs were considered violations of network neutrality: the provision of specialized services (such as Internet TV); any assurances of quality of service; accelerating or throttling certain destinations/protocols; limitations on domestic connections (such as reselling bandwidth or home networking or connecting additional devices); running content distribution networks,³⁹ and asymmetric connections wherein faster downloads are possible and uploads are slower. More recently, the network neutrality debate has concerned ISP practices such as zero rating (the provision of free data to certain destinations to mobile subscribers without a data plan); extra charges for certain destinations or protocols; asking Over-The-Top (OTT) providers to pay for traffic; and not enforcing bandwidth caps for certain destinations/protocols. TSPs and ISPs in markets with limited internet adoption argue that practices such as zero-rating provide limited access to those who would otherwise have no access, and help establish a “data habit,” with users slowly migrating to accessing the whole Internet.

Government responses have included statutory sector-specific regulations such as common carrier rules whereby the Internet is treated like a utility; or a regime of exceptions that legitimizing specialized services (such as guaranteed quality of service for services like telemedicine); using regulation such competition law or consumer law to mitigate the harms caused by network neutrality violations; and co-regulation (where the government also enforces industry norms that are developed through self-regulatory efforts). Some countries in the Global South have led with statutes and regulation—for example, Brazil’s Marco Civil⁴⁰ says “preservation and guarantee of network neutrality” and the Chilean Congress amended the General Telecommunications Law in 2010⁴¹ to introduce language stipulating that ISPs cannot “block, interfere with, discriminate, hinder, nor restrict” their users in any way. In contrast, only one developed country, the Netherlands, has such strong statutory provisions.⁴²

The policy lever among the ones listed above that speaks directly to market power is competition. Two competition law perspectives become relevant to the network neutrality debate:

1. Essential Market Facility, which mandates the owner of an essential facility to provide it at a reasonable price. Going back to Misra's definition, this implies that the ISPs ought not to exercise their gatekeeping power over the Internet. Quality of service should be offered by ISPs on fair, reasonable and non-discriminatory terms to all if the objective of net neutrality is to be achieved.⁴³
2. Predatory pricing, where a dominant player sets the prices of a commodity so low that all competitors are deterred from entering the market, giving the dominant player significant exploitative market power.⁴⁴ As seen in the MetroPCS case,⁴⁵ if zero rating is carried out by a dominant player, it can amount to predatory pricing. However, as in the case of Australia, zero rating can actually thrive as long as there are protections in place for healthy competition. The crucial factor to be kept in mind is to avoid monopoly power by any single ISP.

Language Technologies and Content

Languages other than English require specific technologies and infrastructure so that users can enjoy the full benefit of the Internet. These requirements include proper Unicode encoding standards, input methods, fonts, dictionaries, thesauri, spelling and grammar checks, machine translation, text-to-voice (TTS), voice-to-text, optical character recognition (OCR), and internationalized domain names. In populous countries and regions with markets that are well developed and homogeneous (e.g. Mandarin Chinese and Arabic speaking markets), language infrastructures tend to be better developed because there are financial incentives to entice proprietary software companies, as well as critical mass in the communities that build Free/Open Source Software (FOSS). In the case of some languages, like Vietnamese and Bahasa, the cost of language enablement has been reduced significantly by officially adopting a Roman script, which eliminates the need for language specific Unicode, input methods, fonts, and optical character recognition. However, many people living in countries such as India with its 780 languages, or on the African continent with its 3,000 indigenous languages with non-Roman scripts, have almost none of the requisite language infrastructure to take full advantage of what the Internet has to offer. Fully enabling a single language on the Internet requires a significant financial investment and sufficient people with the skills to work on specialized pieces of technology like web-ready and print-ready fonts. It is unlikely that the private sector will make any significant progress in this regard without significant investment by governments because the markets are small and lack buying power.

It is not just technical infrastructure that non-English-speaking Internet users require. Useful content is critical to the growth of the Internet. However, online content in languages other than English is in comparatively short supply. For example, the English Wikipedia has 5.2 million articles in contrast to the Lao Wikipedia, which has only around 1,600 pages, even though there are approximately 20 million Lao speakers worldwide.⁴⁶ According to a 2008 UNESCO

report on the linguistic diversity of the Internet, 50.82 percent of the World Wide Web was in English, with only 7.49 percent in Chinese.⁴⁷ Furthermore, while English and some other colonial languages like French, German, Portuguese, and Spanish have a long tradition of the textual preservation of knowledge, as well as vibrant contemporary movements such as open access, open educational resources, and creative commons, most people in Asia and Africa speak languages where there is scarcity of text, only an oral tradition, or only the beginnings of free knowledge movements.

Unfortunately, generating content is even more expensive than developing technological infrastructure. States in the Global South, unlike their Northern counterparts, have to invest anywhere between USD 10 and 30 million per language to ensure that critical technologies and infrastructure are available, ideally under an open license.⁴⁸ To support the development of language technologies, states should focus on providing commissioned work, grants and prizes for small and medium businesses, academic organizations, informal communities and individuals, rather than providing large grants to government institutions that are responsible for language development and preservation, as such institutions are often less innovative, efficient, and effective. Furthermore, working with diverse actors is important because enabling a single language entails many different tasks. For example, while it is possible for an individual typeface designer to produce a new font after some training, or an individual language expert to programme an OCR or TTS engine, the development of a large digital corpus to enable machine translation may require cooperation between a large number of large and small actors.

Hardware

The affordability and suitability of hardware are important factors that determine how quickly Internet penetration grows within a country. Several high-profile projects have attempted to increase access to the Internet in emerging markets by lowering the cost of hardware. Examples include the Simputer,⁴⁹ One Laptop Per Child (also known as the 100 Dollar Laptop)⁵⁰ and the Aakash tablet.⁵¹ There have also been interesting experiments like Mesh Potato from Village Telco⁵² which uses mesh technology (decentralized networks without a central server) to enable local calls and data exchange. Similar projects like Commotion Wireless from the Open Technology Institute⁵³ accomplish the same using generic hardware. In Indonesia, pioneers like Ono Purbo have created long distance WiFi antennae using woks⁵⁴ and metal tins.⁵⁵

There are a variety of ways in which governments try to reduce the cost of hardware outside the remit of intellectual property rights (IPR),⁵⁶ such as including hardware in welfare or subsidy programs; dismantling licensing requirements for manufacturing, purchase, and usage; and providing preferential market access that promotes indigenous manufacturing. States in the Global South should not adopt the subsidy approach to provide hardware to the economically disadvantaged, as this distorts the functioning of the market and because it is difficult to accurately target subsidies. Preferential market access also does not work in markets where the local industry is not sufficiently mature, and can be counter-productive as citizens are prevented from accessing world-class technologies. States in

the Global South with large indigenous markets should instead adopt stable, simple and business-friendly policies and regulatory frameworks and focus on building infrastructure that encourages manufacturers to shift their factories closer to their target markets. Additionally, states must support and incentivize research and development concerning hardware technologies. Such support can take the form of investments in grassroots activities, such as makerspaces, incubators, and maker fairs, coupled with large and small-scale investments or grants for private sector, non-profit, and academic actors who develop and produce hardware innovations.

Unless policies are carefully calibrated, large global firms might try to dump defective or inappropriate hardware on countries with vulnerable economies. This is seen from Apple's attempts to sell second-hand phones in India, a move which the Indian government has disallowed to prevent dumping of hazardous e-waste.⁵⁷ Another example of this is the devaluation of the yuan by the Chinese government, which would make Chinese goods cheaper abroad.

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In this section, we have provided a definition of access as “access to the Internet via wired or wireless connectivity, provided by a telecom operator or Internet Service Provider (ISP),” and argued that access to the Internet is essential for enhancing (human) security and justice in the Global South, where the benefits of connectivity still elude most people. In support of this assertion, we have provided examples of how access to broadband Internet, particularly mobile broadband, can promote economic growth and financial inclusion, as well as enhance the provision of healthcare and education in developing countries. We have suggested that states in the Global South should play a key role in facilitating access to the Internet, as the only actors with regulatory power and an explicit mandate to act in the interests of security and justice.

The latter part of this section has focused on the realities of access to the Internet in the Global South and provided recommendations regarding what states should do to better facilitate access. Key recommendations included:

- engaging the private sector via incentives, subsidies and partnerships in efforts to provide access through undersea and overland fibre optic cables;
- treating spectrum as public property rather than a commodity, and embracing newer models of spectrum allocation;
- assessing the effectiveness of USOFs and dismantling ones that are ineffective;
- re-assessing network neutrality in light of the development and economic imperatives of Global South countries;
- providing incentives for developing language technologies and creating content in local languages, and focusing on involving multiple stakeholders in such efforts;
- and providing access to affordable, high-quality hardware through stable, simple, and business-friendly policies that encourage manufacturers to enter Global South markets.

While the state plays an important role in creating the necessary regulatory frameworks and providing other actors with incentives to invest in facilitating access to the Internet, it must often rely heavily on the expertise and fiscal resources of the private sector to accomplish access-related goals.

THE ROLE OF THE STATE IN PROTECTING THE FREEDOM OF EXPRESSION ONLINE IN THE GLOBAL SOUTH

What is Meant by the “Freedom of Expression Online”?

Freedom of expression is enshrined in Article 19 of the Universal Declaration of Human Rights (UDHR) and codified in the International Covenant on Civil and Political Rights (ICCPR), as well as regional conventions and charters.⁵⁸ The UDHR holds that “everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas *through any media and regardless of frontiers*” [emphasis added],⁵⁹ while the ICCPR holds that “everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, *regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice*” [emphasis added].⁶⁰ The UN Special Rapporteur, Frank La Rue, has highlighted that these definitions and frameworks are applicable to actions that take place online:

[The UDHR] and the Covenant [were] drafted with foresight to include and to accommodate future technological developments through which individuals can exercise their right to freedom of expression. Hence, the framework of international human rights law remains relevant today and equally applicable to new communication technologies such as the Internet.⁶¹

There is no substantial disagreement on the definition of the freedom of expression or its status as a legal right. It is also clear that the freedom of expression is *not* a non-derogable right, and may therefore be limited subject to safeguards indicated, for example, in Article 19(3) of the ICCPR, which holds that:

(3) The exercise of the rights provided for in paragraph 2 of this article carries with it special duties and responsibilities. It may therefore be subject to certain restrictions, but these shall *only be such as are provided by law and are necessary*:

- (a) For respect of the rights or reputations of others;
- (b) For the protection of national security or of public order (*ordre public*), or of public health or morals. [emphasis added]

However, as evidenced by Article 19(3) quoted above, there is less clarity as to precisely when and how the freedom of expression can be legitimately circumscribed. For example, there is no definitive statement of what constitutes a threat to national security or public health or morals. Significant attempts have been made by civil society groups to articulate more clearly the specific conditions under which derogation is permissible. The Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights (“Siracusa Principles”),⁶² and the Johannesburg Principles on National Security, Freedom of Expression and Access to Information (“Johannesburg Principles”)⁶³ are noteworthy in this regard. The former in its first part elaborates useful principles to be applied when interpreting the limitation clauses contained in Article 19(3), while the latter attempts to provide a more concrete definition of “national security,” and more meaningful guidance in limiting its scope.⁶⁴

Despite being articulated in the UDHR and conferred by the ICCPR, as well as regional conventions and charters, the right to free expression is far from secure in many countries and regions around the world. In its December 2014 report, Freedom House stated that Internet freedom around the world was in decline for the fourth consecutive year, noting a new trend in which governments adopt a “behind-the-scenes” approach to controlling the Internet by adopting “new laws that legitimize existing repression and effectively criminalize online dissent.”⁶⁵ The report also reveals strong regional disparities in Internet freedom—the region comprising Australia, Canada, the EU, Iceland and the US ranks highest with regard to levels of Internet freedom, with all ten examined countries obtaining scores which place them in the “free” category; while the Middle East and North Africa region ranks lowest with all eleven examined countries placed in the “partly free” or “not free” categories.⁶⁶ While the basic tenets of the freedom of expression (both offline and online) are well established in international law, the fact remains that in practice, the freedom of expression online varies considerably between different parts of the world.

Why is the Freedom of Expression Online Important for Security and Justice in the Global South?

Freedom of expression not only has value as a right in itself, but is also an important means by which a range of social, economic, civil, and political rights are realized. UN Special Rapporteur Frank La Rue has underscored this point by describing the freedom of expression as an “enabler of other rights,”⁶⁷ while former US Secretary of State Hillary Clinton, in a now famous speech on Internet freedom, identified the freedom of expression as first among the basic freedoms that allow the Internet to function as “a network that magnifies the power and potential of all others.”⁶⁸ In an age where power is increasingly defined by access to information and the ability to control it,⁶⁹ the freedom of expression online—the ability to seek and impart information, as well as engage others in an exchange of ideas irrespective of physical boundaries—is at the heart of a just and secure society.

Recent events in the Global South have demonstrated how the freedom of expression online can be a vehicle for realizing other rights, while its suppression can undermine multiple rights and freedoms. The Arab Spring—during which protesters used social media to exercise their right to the freedom of expression, and consequently, the political freedoms of association and assembly—is a clear example of the former phenomenon; while examples of the latter can be found in the widespread intimidation and persecution of online journalists and bloggers in many parts of the world,⁷⁰ which has resulted in the violation of a range of civil and political rights.

As elaborated in the first main part of this chapter, we advocate a broad conceptualization of security as human security, which prioritizes the well-being of individuals and communities rather than focusing solely or even primarily on the nation state. However, a focus on national security tends to dominate discussion about the freedom of expression online, particularly in the Global South. The

invocation of national security as a justification for limiting the freedom of expression is exceptionally dangerous, as “a government’s claim of a [national] security threat can deal a knock-out blow to the main institutional safeguards against government abuse: independence of the courts, due process, freedom of the press and open government,”⁷¹ with serious implications for the protection of human rights, and by extension, human security.

The Internet has also demonstrated its potential to be a force for justice, by allowing individuals and communities, including those that have been disempowered historically, to participate in national, regional, and even global conversations about issues, events, and processes that affect their lives. Many of these conversations have taken place via social media, and although only a few have had a measurable or tangible impact in the offline world, they have nonetheless engaged individuals on critical issues far more intensely than many established governance processes. A good example of this kind of participation is the Save The Internet movement for upholding net neutrality in India in 2015.⁷² Such engagement, which contributes to an informed citizenry, is of tremendous value to democratic societies and must be sustained.

Resolving the tensions between free expression and other imperatives such as national security and the protection of intellectual property is therefore essential for greater (human) security and justice in all societies, especially those in the Global South where institutional safeguards against government abuse are often less entrenched, socio-economic inequities are more prevalent, and opportunities for uninhibited engagement on controversial issues are fewer.

Why Should the State Protect the Freedom of Expression Online in the Global South and How?

There are several reasons why nation states must take a preponderant role with regard to protecting the freedom of expression online. Firstly, as explained in the first part of the chapter, states are the only actors with an explicit mandate and obligation to act in the interests of both national and human security, as well as to ensure enabling conditions for the realization of the rights recognized in the UDHR, ICCPR, and ICESCR. Secondly, as recognized by the government of the Netherlands, “via the physical infrastructure on which it runs, the Internet is still intimately connected to the physical world, and as such to the territories of sovereign nation states,”⁷³ and consequently, national or regional regulatory frameworks and legislation. Cavelty and Brunner (2007) reiterate this point, writing that “computer networks and the communications they carry are produced by people, and people live in physical space, under the rule of law.”⁷⁴ Thirdly, political power in the information age lies with the entity able to exert the most control over information, and as observed by Cavelty, “even though the information revolution has put ICT in the hands of non-state actors, it is still the state that has the information advantage most of the time”⁷⁵—states therefore have a vested interest in information flows online. This claim is borne out by the fact that states are the primary source of threats to the freedom of expression online, although there is considerable variation between countries and regions in terms of the content that is targeted and the methods used.⁷⁶

For the reasons outlined above, the remainder of this section will focus on the role of state actors in protecting the freedom of expression online with the caveat that many of these actions affect or involve non-state actors, including the private sector and civil society. In particular, we address issues pertaining to the principle of equivalence and reasonable restrictions, regulatory forbearance and good speech, privacy and surveillance, intellectual property, and intermediary liability.

The Principle of Equivalence and Reasonable Restrictions

As discussed above, international declarations and treaties do not treat the freedom of expression online as substantially different from the freedom of expression offline. Ideally, states should adhere to this principle of equivalence, and refrain from enacting new laws that impose restrictions specifically on online speech. However, there are instances in which such laws are necessary and permissible—when they concern illegal actions that are unique to the online environment, such as spam, phishing, or child pornography, or attempt to address qualities unique to speech online, such as the rapid and widespread dissemination of speech online, as well as the persistence of this speech over time. A recent social media-related defamation case in India provides an example of how the persistence of online speech over time may merit special consideration. In 2013, the New Delhi High Court made a distinction between online and offline speech by adopting the Single Publication Rule and rejecting the Multiple Publication Rule for libel on the Internet.⁷⁷ The court essentially held that the Multiple Publication Rule would constitute a disproportionate interference with the freedom of the press, since an aggrieved party could file suit every time a web page containing the offending material was accessed.⁷⁸ Additionally, a few countries like Malaysia⁷⁹ and South Africa⁸⁰ have recognized that speech on multicast media has less potential to cause harm than speech on broadcast media, since speech online is not necessarily public—it could be semi-public or private—and therefore these countries regulate speech on the Internet more lightly than speech on broadcast media. For example, a comment on a private Facebook group is less likely to cause harm than an article in a national print newspaper.

Unfortunately, the history of colonial rule⁸¹ and the proliferation of authoritarian governments in many parts of the Global South has resulted in a tendency to over-regulate speech. The advent of the Internet has caused many governments in the Global South to become anxious about how citizens could use this medium, and to enact draconian laws such as Myanmar's Electronic Transactions Law,⁸² Zimbabwe's Public Order and Security Act,⁸³ and Thailand's *lèse-majesté* law,⁸⁴ which has been used to crack down on both ordinary citizens and web intermediaries. These laws violate the principle of equivalence and place additional, unconstitutional limits on the freedom of expression. Protecting the freedom of expression both offline and online therefore requires repealing obsolete national laws and amending national laws that exceed the restrictions permitted by international law. Defamation laws, such as those of India,⁸⁵ that prescribe imprisonment for the offence of causing reputational harm also undermine the freedom of expression, and states should move to decriminalize defamation.

Developed countries are leading on this front, along with a few developing countries in Latin America, but most countries in the developing world are yet to follow suit.⁸⁶

Transparency with regard to what content is censored and why is an important aspect of efforts to protect the freedom of speech online. In certain circumstances, for example with regard to child pornography, such transparency may be limited to aggregate information. In general, however, states should strive to provide as much detail as possible regarding censorship procedures and options for recourse if such procedures are abused. For example, when a website is blocked in Saudi Arabia, a web page loads with a hyperlink to appeal the Communications and Information Technology Commission against the block.⁸⁷ In contrast, even some democratic countries in the Global South such as India and Indonesia do not have transparent censorship procedures. While the private sector has, through self-regulatory initiatives like the Global Network Initiative,⁸⁸ started to produce rudimentary transparency reports, this issue should not be left to the discretion of private actors—the transparency of censorship procedures should be a requirement under law. This is particularly important to protect against censorship that seeks to curb civil and political rights, and private censorship, which lacks transparency and does not provide an opportunity for judicial review. Examples include Twitter's censorship of the hash tag "#thingsdarkiessay,"⁸⁹ which originated in South Africa, based on complaints received primarily from clients in the US; Facebook's mass blocking of accounts belonging to a community of people whose surnames sounded similar to a Hindi swear word;⁹⁰ and censorship as a result of overzealous intellectual property enforcement measures such as ex parte John Doe orders⁹¹ (orders issued by courts against unnamed persons, which can then be enforced broadly without the opportunity for contestation) issued in India against file-sharing or streaming websites.

A country that has an exemplary record of internet freedoms in this sense is Iceland.⁹² With high accessibility, very little censorship, content blocking, and no key Internet controls, Iceland commands the status of being a safe haven for free speech, and an international leader for the same. All these are hugely encouraging signs, and provide a good model for how states can contribute towards the blossoming of freedom of expression online.

Regulatory Forbearance and Good Speech

Government efforts to regulate speech online, even if well-intentioned, can often be ineffective or counter-productive. A classic example of this is the Streisand Effect, which refers to how efforts to suppress online content can result in that content being spread more quickly and widely due to heightened public interest in the content.⁹³ Another negative consequence of disproportionately censoring speech online is that Internet users attempt to circumvent censorship measures using anonymization and other privacy protection technologies, which actually makes regulation, surveillance, and law enforcement even more difficult. Thirdly, similar to the manner in which the prohibition of alcohol made obtaining and consuming alcohol more dangerous, excessively stringent obscenity laws and related censorship can result in individuals trying to obtain such material by frequenting dark and dangerous corners of the Internet where they encounter

even more harmful and illegal content and activities. Finally, attempts by governments to censor content without legitimate reasons for doing so can also spark civil unrest, a phenomenon seen in the case of Nepal, where shutting down of communications systems sparked off strife which resulted in King Gyanendra's regime being toppled.⁹⁴

Censorship in the Global North tends to be targeted except in the case of copyright enforcement. In contrast, "overblocking" is common in the Global South. Bangladesh, Pakistan, India, Uzbekistan, and China have blocked entire websites even when not all content on those websites could be deemed illegal. There are several reasons for overblocking by governments in the Global South, including fears that communal or ethnic violence could be precipitated by provocative speech online, limited knowledge within the executive and judiciary about how to censor information in a targeted and legitimate fashion, and a lack of expertise and necessary software amongst ISPs. The prevalence of overblocking is evident in countries like Myanmar,⁹⁵ where the average netizen is aware of tools to circumvent blocking.

A preferable alternative to censoring content that is undesirable or offensive, but not illegal, is encouraging the production and dissemination of counter-narratives—"counter-speech" or "good speech."⁹⁶ Thus far, only civil society organizations⁹⁷ have called for this in a systematic fashion. When states have produced counter-speech it has usually taken the form of state propaganda⁹⁸ or assurances by the local police via SMS regarding the law and order situation.⁹⁹ However, it is time for states—especially those in the Global South where there is a greater incidence of political volatility and social unrest, and where citizens often lack access to independent news sources—to consider producing counter-narratives or "good speech" in a systematic and democratic fashion.¹⁰⁰

Privacy Laws, Surveillance, and the Freedom of Expression

Specific laws are undoubtedly necessary to protect the right to privacy in contemporary information societies. However, badly configured privacy laws can have a "chilling effect" on speech—thereby undermining the freedom of expression—by encouraging self-censorship, discouraging criticism of powerful entities, undoing the successes of the transparency movement (also known as the right to information or freedom of information or access to information movement), and blowing the cover of anonymous media sources and whistle-blowers, who often play an important role in uncovering government or corporate abuses.

Another problematic category of laws relates to the mandatory licensing of Internet publishers, through "Know Your Customer" (KYC) or "Real ID" mandates, which can extinguish anonymous and pseudonymous speech online. Anonymous and pseudonymous speech is particularly important for protecting the rights of different categories of vulnerable persons, including women, sexual minorities, and human rights activists in both democratic and authoritarian states. In many Global South countries (particularly several in Africa) the national security imperative has been used to require KYC for mobile subscribers¹⁰¹ and broadband users, as well as those who access the Internet through cybercafés.¹⁰² Some countries like China¹⁰³ even require that national IDs be used on social

media platforms and other web sites that are used to publish user-generated content. Data retention policies that require TSPs, ISPs, and OTT service providers to store personal data for extended periods of time can also contribute to the death of anonymous and pseudonymous speech online, with or without KYC mandates, since this allows more precise attribution of speech to individuals.

Ideally, states should enact laws that uphold the right to anonymous and pseudonymous speech. Such laws could also serve the purpose of preventing large corporations like Facebook from retroactively forcing Real ID mandates upon its users. Legitimate national security concerns related to anonymous speech can be addressed effectively through innovations such as identity brokers in a federated identity management system, where users who wish to remain anonymous can choose between competing brokers who will help them identify and authenticate against different online services without divulging any personal information. The identity broker therefore has a financial incentive to protect the privacy of individuals, while retaining a partial information trail that can be combined with the logs of the service provider for addressing unlawful activities.

While not specific to the Global South, the NSA revelations, which began in June 2013, highlight how the issues of privacy, the freedom of expression and government-mandated surveillance for national security purposes are intimately connected. As discussed above with regard to the freedom of expression, the right to privacy is also enshrined in international legal instruments, and cannot be circumscribed arbitrarily. Blanket surveillance without probable cause or proper legal authorization is, therefore, illegal. Helpful guidelines for ensuring that state-mandated surveillance for the purpose of national security is legitimate may be found in the Johannesburg Principles,¹⁰⁴ the 2011 Report of the UN Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression,¹⁰⁵ and the thirteen “necessary and proportionate” principles formulated by global civil society under the leadership of Privacy International, Access and the Electronic Frontier Foundation.¹⁰⁶

It is important to keep in mind the power question while addressing privacy. Privacy and transparency can and do go hand-in-hand, as long as privacy protections are inversely proportional to power, and transparency requirements are directly proportional to power.¹⁰⁷

Intellectual Property Law

Intellectual Property Law is an umbrella term used to refer to a variety of laws relating to copyright, patents, trademarks, industrial designs, and geographic indicators, among others. It is a subject on which a clear North–South divide exists. Most governments and many civil society organizations in the Global North readily recognize politically motivated attempts to suppress access to information as censorship, but fail to see how denying access to knowledge through IPR maximalism also undermines the freedom to “seek, receive, and impart information,” i.e. the freedom of expression.

Poorly configured copyright law interferes with access to knowledge on the Internet in several ways, including by preventing circumvention of digital rights management or technical prevention measures to exercise user rights;¹⁰⁸

preventing reverse engineering—thereby undermining security research and the development of competing products;¹⁰⁹ limiting innovative business models and technologies that depend on copyright flexibilities;¹¹⁰ preventing access by persons with disabilities;¹¹¹ preventing access by the education sector;¹¹² interfering with the functioning of libraries and archives;¹¹³ and retarding the production of remixed and derivative works¹¹⁴ on platforms dependent on user-generated content, including translations.¹¹⁵

Patents can also interfere with the freedom of expression online by thwarting the attempts of the Free/Open Source Software (FOSS) movement to build operating systems and applications for computers and mobile devices. The most famous example of this is the lack of support for MP3 and popular video formats on any Linux operating system. Given that most proprietary software cannot guarantee surveillance-free communication, FOSS plays a critical role in protecting the speech of whistle-blowers, media and human rights activists. However, today even FOSS providers like Samsung must pay royalties of USD 3.29 per device¹¹⁶ for Microsoft's patents that have allegedly been implemented by the Android operating system. Patents also interfere with the freedom of expression by compromising interoperability of hardware and software, via both proprietary and open standards, because those wanting to build competing products must license these patents. Open standards are particularly critical because they facilitate the consumption of content without the purchase of proprietary software, which is unaffordable for most people in the Global South.¹¹⁷

Patents also increase the cost of Internet-related hardware and reduce the ability of manufacturers to leverage innovations in their products. For example, it is estimated that more than 25,000 patents¹¹⁸ registered in the Global North are implemented in a single smartphone. Furthermore, some smartphone models available in the Global South, manufactured in Taiwan and China, are packed with innovations that are not available in Northern markets, such as pico-projectors, multiple SIM cards, receivers for terrestrial television, and solar chargers. This raises the total number of patents relating to a single device significantly, with serious implications for the cost of such devices if all royalties were to be paid. However, in markets such as India, only approximately 10 percent of these patents have been applied for and granted,¹¹⁹ which means manufacturers within that jurisdiction need not pay for the approximately 90 percent of patents that have been registered or granted. While patent pools¹²⁰ for ICT standards have traditionally reduced litigation risks for manufacturers in some cases such as the MP3 format, the existence of competing patent pools for the very same standard such as LTE has resulted in not reducing litigation risks for manufacturers. As a consequence, patent wars have started in some developing markets such as India and China.¹²¹ This will significantly increase the cost of hardware and also reduce the innovativeness of products that consumers can purchase. States in the Global South must therefore seriously consider compulsory licenses and patents pools—just as they have done for medicines—to ensure access to affordable ICTs.

The current IPR regime in the Global South has resulted in a situation where developing countries have negative balances of payment,¹²² and some countries lose trillions of dollars every year due to outgoing royalties. This has serious consequences for access to knowledge and therefore the freedom of expression. Developing countries must therefore adopt explicit policies that promote commons-based peer

production alternatives to the traditional IPR system, such as Free/Open Source Software,¹²³ Open Standards,¹²⁴ Open Content, Open Access,¹²⁵ Open Educational Resources,¹²⁶ and Open Government Data. Open Government Data would ideally supplement and not replace Freedom of Information laws. States in the Global South, where access to knowledge is sometimes very limited in terms of books, scholarly articles, and cultural and artistic works, should amend and enact laws that take full advantage of the flexibilities available under international IPR treaties, and promote alternatives to the dominant IPR paradigm.

Intermediary Liability

Safe harbor regimes are legal provisions that grant immunity to intermediaries¹²⁷ from liability emerging from third-party content distributed or published via their platforms. Robust safe harbor regimes are critical for protecting the freedom of expression online. Without the protection provided by such regimes, intermediaries may become excessively risk-averse and delete legitimate content proactively from their platforms, thereby exerting a chilling effect on the freedom of expression. The regular deletion of user-generated content on the Internet reduces the certainty and predictability of many Internet phenomena such as fan culture, remix culture, common-based peer production, and social media, thereby contributing to their decline. Importantly, the lack of strong legal protections for intermediaries makes it easier for state actors to censor content via intermediaries. For example, the government of Turkey has introduced legislation that requires authorized operators to upgrade their infrastructure to facilitate access blocking requests made by the Presidency of Telecommunications and Communication, a government body which works under the Information and Communication Technologies Authority, with harsh penalties for operators who do not comply.¹²⁸ Similarly in India, discussions are underway regarding the installation of a national web filter and the creation of a “National Media Centre to monitor contents of various websites on the Internet on [a] 24 x 7 basis.”¹²⁹

Countries across the world have adopted different approaches to intermediary liability. In some jurisdictions, such as Venezuela,¹³⁰ intermediary liability for the infringement of copyright, as well as other types of speech related offences (e.g. hate speech, or pornography) are addressed by the same legal provision, which results in different entities (e.g. corporations or individuals) being treated as comparable. Other countries such as India¹³¹ and Brazil¹³² maintain a distinction between copyright-related infringements and other types of infringements in their intermediary liability regime, which allows for the quicker provision of relief for individuals. Some countries, such as India and Chile,¹³³ require judicial review of take-down notices related to copyright infringements. South Africa¹³⁴ and South Korea¹³⁵ have a “notice and take down” regime while Canada¹³⁶ has a “notice and notice” regime.¹³⁷ Many countries in the Global South have failed to provide adequate protection for intermediaries by not enacting any laws against intermediary liability, while others should consider moving from the “notice and take down” standard to the “notice and notice” standard, as this dramatically reduces private censorship.

States in the Global South should ensure that their intermediary liability regimes only deal with liability emerging from third-party content; ensure

transparency to reduce censorship by private actors; require notice to all parties concerned (the third party responsible for the content on the intermediary's platform, as well as potential readers and members of the general public); incorporate best practices in terms of executive or judicial oversight of the take-down process; and prescribe punitive measures against those who abuse the intermediary liability regime to target legal content.

* * *

In this section, we discussed how the freedom of expression online is not substantially different from the freedom of expression offline, and should only be circumscribed in accordance with the limitations permitted by international instruments such as the ICCPR. We also outlined civil society initiatives that have attempted to provide greater clarity regarding the appropriate scope of these limitations. In the first portion of this segment, we posited that the freedom of expression plays an enabling role with regard to a range of other rights, and forms part of the bedrock of a truly free and democratic society. As such, it is indispensable for greater security and justice in the Global South. We also underscored that states, particularly several in the Global South, are the primary source of threats to the freedom of expression online, and often (illegitimately) invoke national security to justify circumscribing this right. For this reason—and the fact that, as with the issue of access to the Internet, the state is the only actor with actual regulatory power and a clear mandate to act in the interests of its people—we asserted that the state should play a preponderant role in protecting the freedom of expression online in the Global South.

The second portion of the section contained a discussion of key issues affecting the freedom of expression online in the Global South and proposed what states should do (or not do) in this regard. Recommendations concerning state action included:

- adhering to the principle of equivalence between online and offline speech;
- ensuring transparency of censorship procedures;
- producing counter-narratives or “good speech” as an alternative to censorship;
- configuring privacy laws to avoid a chilling effect on speech online;
- protecting anonymous and pseudonymous speech online, and using identity brokers to address valid security concerns related to such speech;
- prohibiting blanket surveillance and adhering to existing guidelines regarding balancing the freedom of expression and national security imperatives;
- recognizing that poorly configured IP regimes undermine the freedom of expression by denying access to information, and modifying such regimes to protect the FOSS movement and lower the cost of hardware and software;
- promoting commons-based, peer-production alternatives to existing IPR regimes;
- and enacting laws to protect intermediaries from liability for third-party content, recognizing that failing to do so leaves intermediaries vulnerable to co-option in government censorship efforts and causes intermediaries to become risk-averse, resulting in the deletion of legitimate content.

While non-state stakeholders, such as the private sector and civil society, have made and continue to make vital contributions to protecting the freedom

of expression online, we conclude that state actors retain the ability to exert the greatest influence in this regard.

In the present context, it cannot be denied that platforms are increasingly becoming publishers, and are no longer mere intermediaries. Think tanks that are credible in the eyes of the government advocate that platforms contribute towards radicalization. There is evidence to show that there has been political pressure on intermediaries to monitor and prevent perceived threats of terrorism in online communities outside legal due process.¹³⁸ Google, for instance, has developed a program which utilizes Google's advertising algorithms and YouTube to target aspiring ISIS recruits, and dissuade them from joining ISIS.¹³⁹ Further, intermediaries must also be subject to algorithmic accountability. Facebook's experiment in 2010—where they introduced a graphic containing a link for showing polling stations, a button to show that one had voted, and profile pictures of one's friends who had voted—resulted in over 340,000 additional voters casting their votes that day.¹⁴⁰ Even in the case of the 2016 US presidential election, it has been suggested Facebook helped make a Trump presidency become a reality through algorithms which encouraged the spreading of fake news.¹⁴¹ This is only verifiable if the algorithms that intermediaries use are made transparent, as it is these algorithms that filter out viewpoints and news pieces different from one's own—creating an "echo chamber," as it were.¹⁴²

CONCLUSION

This chapter has sought to clarify the appropriate scope of state activity with regard to the twin challenges of facilitating access to the Internet and protecting the freedom of expression online in the Global South. Although discussed separately in this chapter, it is important to reiterate that Internet access and the freedom of expression online are intimately connected, and have the greatest impact when operating in tandem. Despite this close connection, however, the facilitation of access and the protection of the freedom of expression online make different demands of state actors. With regard to access, states must play an important role, but likely cannot succeed in the absence of support and investment from the private sector: the state is necessary, but not sufficient. In the case of protecting the freedom of expression online, the role of the state is preponderant—no other stakeholder wields as much influence over information flows within and between countries, which underscores that despite its potential for borderless information flows, the Internet is ultimately subject to the jurisdiction of sovereign states. These findings suggest that states must learn when to act and when to forbear, as well as how to solicit and coordinate the necessary support from other stakeholders, if they are to succeed in facilitating access and protecting the freedom of expression online in the Global South. Only then will it be possible to develop and implement policies and practices that truly enhance the provision of security and justice in the Global South, which is home to the majority of the world's population.

The recommendations contained in the first two sections of this chapter draw on current best practices (for example, with regard to investment in fiber optic backbones to facilitate access, and guidance regarding how to reconcile national security imperatives and the freedom of expression), but also question conventional

wisdom and the status quo where these do not serve the interests of the Global South (for example, with regard to USOFs as a means of promoting access, current IP regimes, and conceptualizations of network neutrality prevalent in the Global North). Ultimately, states in the Global South must work to craft policies that respond to the security and justice needs of their respective populations and make best use of available resources, while adhering to core, global principles concerning the protection of human rights and fundamental freedoms.

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ENDNOTES

1. William Drake, "Reframing Internet Governance Discourse: Fifteen Baseline Propositions," in Don MacLean (ed.), *Internet Governance: A Grand Collaboration* (New York: United Nations ICT Task Force, 2004), pp. 122–61.
2. Jan A. G. M. van Dijk, "Digital Divide Research, Achievements and Shortcomings," *Poetics* 34, no. 4–5 (August–October 2006), pp. 221–35.
3. See Durch, Larik, and Ponzio, "The Intersection of Security and Justice in Global Governance: A Conceptual Framework," Chapter 2 in this volume.
4. United Nations Development Programme, *Human Development Report 1994* (Oxford: Oxford University Press, 1994), pp. 24–5.
5. McKinsey Global Institute, "Internet Matters: The Net's Sweeping Impact on Growth, Jobs, and Prosperity" (McKinsey & Company, May 2011), p. 3.
6. McKinsey Global Institute, "Internet Matters," p. 3.
7. McKinsey Global Institute, "Internet Matters," p. 3.
8. The World Bank, *Information and Communications for Development 2009: Extending Reach and Increasing Impact* (Washington, DC: The World Bank, 2009), p. 45.
9. Deloitte, *Value of Connectivity: Economic and Social Benefits of Expanding Internet Access* (February 2014), p. 3,https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/TechnologyMediaCommunications/2014_uk_tmt_value_of_connectivity_deloitte_irland.pdf.
10. Broadband Commission Task Force on Sustainable Development, *Transformative Solutions for 2015 and Beyond* (Broadband Commission, September 2013), p. 38, <http://www.broadbandcommission.org/documents/working-groups/bb-wg-taskforce-report.pdf>. M-PESA, Kenya's mobile-money system, is a good example of how mobile broadband can promote financial inclusion. Launched in 2007, M-PESA is estimated to cover more than two-thirds of Kenya's adult population and facilitate the flow of approximately 25 percent of the country's GDP: See T.S., "Why Does Kenya Lead the World in Mobile Money?" *The Economist*, March 2, 2015, <http://www.economist.com/blogs/economist-explains/2013/05/economist-explains-18>. By offering a registration process far simpler than those required by banks (the provision of an official ID card), and facilitating the safe storage and quick transfer of money, M-PESA (and mobile banking more generally) has "the potential to reach remote corners of the socio-economic, as well as geographic, spectrum." See also William Jack and Tavneet Suri, *Mobile Money: The Economics of M-PESA* (January 2011), <http://mitsloan.mit.edu/shared/ods/documents/?DocumentID=2484>.

11. Broadband Commission Task Force on Sustainable Development, *Transformative Solutions for 2015 and Beyond*, p. 40. Nokia Life Tools, an SMS-based, subscription information service designed for emerging markets, provides a wealth of information on a variety of topics such as healthcare, agriculture, and education, and is a useful example of how mobile broadband can be leveraged to improve access to education and information in the Global South. See Foundation for Social Change, "Nokia Life Tools," <http://foundationchange.org/nokia-life-tools/>.
12. Broadband Commission Task Force on Sustainable Development, *Transformative Solutions for 2015 and Beyond*, p. 42. For example, Medic Mobile enables healthcare workers to register and monitor patients via an open source platform that runs on many different devices, and is used for antenatal care, childhood immunization, disease surveillance and drug-stock monitoring in a range of developing countries. See Medic Mobile, <http://medicmobile.org/>.
13. Broadband Commission Task Force on Sustainable Development, *Transformative Solutions for 2015 and Beyond*, p. 47. For details regarding m-governance initiatives in the developing world, including "Mobile Election Monitoring with Lebanese Association for Democratic Elections (LADE)" in Lebanon, "Wisdom of the Crowds" in Madagascar, and "Cuidemos el Voto!" in Mexico, see Raúl Zambrano and Ruhya Kristine Seward, *Mobile Technologies and Innovation: Case Studies in m-Governance* (United Nations Development Programme, 2014). In particular, LADE and Cuidemos el Voto! allow citizens to participate in election monitoring by reporting incidents, crimes and fraud through SMS and similar technology.
14. Durch, Larik, and Ponzio, "The Intersection of Security and Justice in Global Governance: A Conceptual Framework," Chapter 2 in this volume.
15. International Telecommunication Union, *The World in 2013: ICT Facts and Figures* (Geneva: ITU, February 2013), <http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2013-e.pdf>.
16. International Telecommunication Union, *The World in 2013*.
17. United Nations General Assembly, "Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression, Frank La Rue," A/HRC/17/27 (May 16, 2011), paragraph 3, p. 4, http://www2.ohchr.org/english/bodies/hrcouncil/docs/17session/A.HRC.17.27_en.pdf.
18. Broadband Commission for Digital Development, *Planning for Progress: Why National Broadband Plans Matter* (Geneva: International Telecommunication Union, July 2013), p. 14.
19. Bobby Johnson, "Finland Makes Broadband Access a Legal Right," *The Guardian* (October 14, 2009), <http://www.theguardian.com/technology/2009/oct/14/finland-broadband>.
20. Broadband Commission for Digital Development, *Planning for Progress: Why National Broadband Plans Matter*, p. 14.
21. Conseil Constitutionnel, *Decision 2009-580, Act Furthering the Diffusion and Protection of Creation on the Internet* (original: *Loi favorisant la diffusion et la protection de la création sur internet*) (June 10, 2010), http://www.conseil-constitutionnel.fr/conseil-constitutionnel/root/bank_mm/anglais/2009_580dc.pdf.
22. Vinton G. Cerf, "Internet Access is Not a Human Right," *New York Times* (January 4, 2012), http://www.nytimes.com/2012/01/05/opinion/internet-access-is-not-a-human-right.html?_r=0.
23. Cerf, "Internet Access is Not a Human Right."
24. Cerf, "Internet Access is Not a Human Right."
25. International Telecommunication Union, *Connect 2020 Agenda, for Global Telecommunication/ICT Development*, <http://www.itu.int/en/connect2020/Pages/default.aspx>. See also United Nations Department of Economic and Social Affairs, *Sustainable Development Goal 9*, <https://sustainabledevelopment.un.org/sdg9>.

26. Karl Frederick Rauscher, *ROGUCCI: The Report, Proceedings of the Reliability of Global Undersea Cable Communications Infrastructure* (IEEE Communications Society, 2010), <http://www.ieee-rogucci.org/files/The%20ROGUCCI%20Report.pdf>.
27. Yevgeniy Sverdlik, “0020 b cv,” Data Center Knowledge (December 4, 2014), <http://www.datacenterknowledge.com/archives/2014/12/04/submarine-cable-to-germany-to-boost-finland-internet-bandwidth/>.
28. Rauscher, *ROGUCCI: The Report*.
29. Seacom, “Regulators and Government in Africa are Key to Fibre Development,” (Seacom, June 11, 2013), <http://seacom.mu/regulators-and-government-in-africa-are-key-to-fibre-deployment/>.
30. Sergui Conovalu and Tim Kelly, “A New Toolkit to help develop national broadband strategies,” World Bank Information and Communication for Development (IC4D) Blog (June 19, 2014), <http://blogs.worldbank.org/ic4d/new-toolkit-help-develop-national-broadband-strategies>.
31. Colin Blackman and Lara Srivastava (eds), *Telecommunications Regulation Handbook*, Tenth Anniversary Edition (Washington, DC: The World Bank, 2011), pp. 9–11, http://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-TRH.1-2011-PDF-E.pdf.
32. Ernesto M. Flores-Roux, “Mexico’s Shared Spectrum Model,” Paper prepared for Expert Forum on Broadband Policy and Regulation Conducive to Access by the Poor, March 12, 2014, New Delhi, <http://broadbandasia.info/wp-content/uploads/2014/04/EFloresRoux-Mexicos-shared-spectrum-model-March-2014-2.pdf>.
33. Rohan Samarajiva, “Myanmar is Last on Telecom List: What Can Be Done?” LIRNEAsia (2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2055556.
34. Samarajiva, “Myanmar is Last on Telecom List.”
35. Siam Intelligence Unit, “TRE Seminar on Bangkok Post Database” (October 28, 2009), <http://siu.co.th/2009/10/tre-seminar-on-bangkok-post-database/>.
36. Parvez Iftikhar, “Utilization of Universal Service Funds,” *Piftikhar Blog* (January 13, 2015), <http://www.piftikhar.com/2015/01/utilization-of-universal-service-funds/#sthash.HZ9hENMe.dpuf>.
37. Vishal Mishra, “Internet is a platform where ISPs provide no competitive advantage to specific apps/services, either through pricing or QoS,” (August 11, 2015), <https://twitter.com/vishalmisra/status/631285727024672768>.
38. Tarun Krishnakumar, *Collection of Net Neutrality Definitions*, Center for Internet & Society, India (February 8, 2015), <http://cis-india.org/internet-governance/blog/collection-of-net-neutrality-definitions/>.
39. Rackspace Support Network, “CDN Concepts” (June 2, 2016), http://www.rackspace.com/knowledge_center/article/what-is-a-cdn.
40. Article 3(IV) of the “Marco Civil Brazilian Internet Bill of Rights—English translation,” Association for Progressive Communications, <http://www.apc.org/en/blog/marco-civil-brazilian-internet-bill-rights-english>.
41. Cámara de Diputados de Chile, “Cámara aprueba modificaciones del Senado a proyecto que protege derechos de usuarios de internet” (July 13, 2010), https://www.camara.cl/prensa/noticias_detalle.aspx?prmid=38191.
42. Ot van Daalen, “Translations of Key Dutch Internet Freedom Provisions,” *Bits of Freedom* (June 27, 2011), <https://www.bof.nl/2011/06/27/translations-of-key-dutch-internet-freedom-provisions/>.
43. Christopher T. Marsden, “Network Neutrality: History, Regulation and Future,” in Agustí Cerrillo-i-Martínez, Miquel Peguera, Ismael Peña-López, and Mònica Vilasau Solana (eds), *Net Neutrality and Other Challenges for the Future of the Internet*, Proceedings of the 7th International Conference on Internet, Law and Politics, Universitat Oberta de Catalunya, Barcelona, 11–12 July, 2011 (Barcelona: UOC-Huygens, 2011), pp. 24–43.

44. Organisation for Economic Co-operation and Development, *Predatory Pricing* (OECD, 1989), p. 7, <https://www.oecd.org/competition/abuse/2375661.pdf>.
45. Ryan Singel, "Accused of Violating Net Neutrality, MetroPCS Sues FCC," *Wired* (January 25, 2011), <https://www.wired.com/2011/01/metropcs-net-neutrality-challenge/>.
46. Wikimedia Meta Wiki, "List of Wikipedias," http://meta.wikimedia.org/wiki/List_of_Wikipedias.
47. Daniel Pimienta, Daniel Prado and Alvaro Blanco, *Twelve Years of Measuring Linguistic Diversity in the Internet: Balance and Perspectives* (Paris: UNESCO Publications for the World Summit on the Information Society, 2009), p. 49.
48. Estimate by Sunil Abraham, The Center for Internet and Society India, 2015.
49. Simputer, "What is a Simputer?" <http://www.simputer.org/simputer/about/>.
50. One Laptop per Child, <http://one.laptop.org/about/mission>.
51. Moudgalya, Kannan M., D. B. Pathak, N. K. Sinha, and Pradeep Varma, "Genesis of Aakash 2," *CSI Communications* 36, no. 10 (January 2013), pp. 21–3, 29.
52. Ot van Daalen, "Translations of Key Dutch Internet Freedom Provisions."
53. Commotion, "About Commotion," <https://commotionwireless.net/about/>.
54. Onno W. Purbo, *Wokbolic: Parabolic 2.4GHz Evolution*, <http://kambing.ui.ac.id/onnopurbo/library/library-onno-eng/onno-eng-1/physical/wireless/OWP-20080219-Wokbolic-Parabolic-2.4GHz-Evolution.pdf>.
55. Onno W. Purbo, *Multimedia Training Kit: Homebrew Antenna*, http://bebasi.ui.ac.id/v14/onno/WiFiWiki/WirelessTrainingUnitAntennaeOverview/mmtk_antenna_homebrew.doc.
56. See below for a discussion of intellectual property rights (IPR) in the context of protecting the freedom of expression online.
57. Anandita Singh Mankotia and GulveenAulakh, "Hazardous E-waste: Apple can't Import or Sell Second-hand Phones in India," *The Economic Times* (May 4, 2016), <http://economictimes.indiatimes.com/tech/hardware/hazardous-e-waste-apple-can-t-import-or-sell-second-hand-phones-in-india/articleshow/52099477.cms>.
58. See Council of Europe, *European Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by Protocols Nos. 11 and 14*, ETS 5 (November 4, 1950), Article 10; Organization of American States, *American Convention on Human Rights*, "Pact of San Jose," Costa Rica (November 22, 1969), Article 13; and Organization of African Unity (OAU), *African Charter on Human and Peoples' Rights* ("Banjul Charter"), CAB/LEG/67/3 (27 June 1981), rev. 5, 21 I.L.M. 58 (1982), Article 9.
59. United Nations General Assembly, *Universal Declaration of Human Rights* (December 10, 1948), 217 A (III), Article 19 (emphasis added).
60. United Nations General Assembly, *International Covenant on Civil and Political Rights* (December 16, 1966), United Nations Treaty Series, vol. 999, p. 171, Article 19(2) (emphasis added).
61. United Nations General Assembly, *Report of the Special Rapporteur*, paragraph 21.
62. United Nations Commission on Human Rights, *The Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights*, E/CN.4/1985/4 (September 28, 1984).
63. Article 19, *The Johannesburg Principles on National Security, Freedom of Expression and Access to Information* (London: Article 19, November 1996), <https://www.article19.org/data/files/pdfs/standards/joburgprinciples.pdf>.
64. Sandra Coliver, "Commentary on the Johannesburg Principles on National Security, Freedom of Expression and Access to Information," in Sandra Coliver, Paul Hoffman, Joan Fitzpatrick and Stephen Bowen (eds), *Secrecy and Liberty: National Security, Freedom of Expression and Access to Information* (The Hague: Martinus Nijhoff, 1999), p. 7.
65. Freedom House, *Freedom on the Net 2014: Tightening the Net—Governments Expand Online Controls* (Washington, DC: Freedom House, 2014), p. 1.

66. Freedom House, *Freedom on the Net 2014*, pp. 20–1.
67. United Nations General Assembly, *Report of the Special Rapporteur*, paragraph 22.
68. Hillary Rodham Clinton, “Remarks on Internet Freedom,” United States Department of State (January 21, 2010).
69. Myriam Dunn Cavelty and Elgin M. Brunner, “Information, Power, and Security—An Outline of Debates and Implications,” in Myriam Dunn Cavelty, Victor Mauer and Sai Felicia Krishna-Hensel (eds), *Power and Security in the Information Age: Investigating the Role of the State in Cyberspace* (Aldershot: Ashgate, 2007), pp. 8–9.
70. For an overview of such incidents around in the world in 2013/2014, see Freedom House, *Freedom on the Net 2014*, pp. 7–8.
71. Coliver, “Commentary on the Johannesburg Principles,” p. 3.
72. Rahul Bhatia, “The Inside Story of Facebook’s Biggest Setback,” *The Guardian* (May 12, 2016), <https://www.theguardian.com/technology/2016/may/12/facebook-free-basics-india-zuckerberg>.
73. Freedom Online Coalition, *The Role of Governments in Protecting and Furthering Internet Freedom*, Background Paper (Ministry of Foreign Affairs of the Netherlands), http://www.minbuza.nl/binaries/content/assets/minbuza/en/the_ministry/the-role-of-governments-in-protecting-internet-freedom—freedom-online.pdf.
74. Cavelty and Brunner, “Information, Power, and Security,” p. 3.
75. Myriam Dunn Cavelty, “Is Anything Ever New? Exploring the Specificities of Security and Governance in the Information Age,” in Myriam Dunn Cavelty, Victor Mauer and Sai Felicia Krishna-Hensel (eds), *Power and Security in the Information Age: Investigating the Role of the State in Cyberspace* (Aldershot: Ashgate, 2007), p. 30.
76. OpenNet Initiative, “Regional Overviews,” <https://opennet.net/research/regions>.
77. Supreme Court of India, *Shreya Singhal v. Union of India*, AIR 2015 SC 1523.
78. Aparajita Lath, “Defamation on Social Media: Delhi High Court Adopts the ‘Single Publication Rule,’” *SpicyIP* (July 12, 2014), <http://spicyip.com/2014/07/defamation-on-social-media-delhi-high-court-adopts-the-single-publication-rule.html>.
79. MSC Malaysia, “MSC Malaysia Bill of Guarantees,” <https://www.mdec.my/msc-malaysia/bill-of-guarantees>.
80. Lisa Steyn, “Spectre of an Online Content Censor Looms,” *Mail & Guardian* (November 28, 2014), <http://mg.co.za/article/2014-11-27-spectre-of-an-online-content-censor-looms>.
81. For example, Section 508 of the Indian Penal Code, which criminalizes “inducing [a] person to believe that he will be rendered an object of the Divine displeasure,” is a colonial era law still in force. See Republic of India, *Central Government Act: The Indian Penal Code*, (Act No. 45 of 1860), <http://indiankanoon.org/doc/1734694/>. Another colonial era law is Section 298 of the Singapore Penal Code, Indian Penal Code, and Pakistan Criminal Code, which criminalizes “uttering words, etc., with deliberate intent to wound the religious or racial feelings of any person.” See Republic of Singapore, *Penal Code (Ordinance 4 of 1871)*, <http://statutes.agc.gov.sg/aol/search/display/view.w3p;ident=7c092107-3d76-4b17-8c82-dbec9efd97a4;page=0;query=DocId%3A%22025e7646-947b-462c-b557-60aa55dc7b42%22%20Status%3Ainforce%20Depth%3A0;rec=0#pr298-he->; Republic of India, *The Indian Penal Code*; and Islamic Republic of Pakistan, *Pakistan Penal Code (XLV of 1860)*, <http://www.oecd.org/site/adboecdanti-corruptioninitiative/46816797.pdf>. In Malaysia, at least fourteen persons have been charged with seditious speech since 2013 under the country’s colonial era Sedition Act. See Jennifer Pak, “What is Malaysia’s Sedition Law?” *BBC* (November 27, 2014), <http://www.bbc.com/news/world-asia-29373164>.
82. The Union of Myanmar, *The State Peace and Development Council Law No. 5/2004 (Electronic Transactions Law)* (April 30, 2004), <http://unpan1.un.org/intradoc/groups/public/documents/un-dpadm/unpan041197.pdf>.

83. President and the Parliament of Zimbabwe, Public Order and Security Act, <http://www1.umn.edu/humanrts/research/zimbabwe-POSA.pdf>.
84. "Thailand's Lese Majeste Laws Explained," *BBC* (December 1, 2014), <http://www.bbc.com/news/world-asia-29628191>.
85. Section 499, Indian Penal Code, 1860.
86. Article 19, "Defamation Maps," <http://www.article19.org/defamation/map.html>.
87. Wikipedia, "Internet Censorship by Country," http://en.wikipedia.org/wiki/Censorship_in_Saudi_Arabia#mediaviewer/File:SaudiCensorship.png. The image is a screenshot of the Saudi Arabian Communications and Information Technology Commission's filtering proxy's censorship message, related to a Wikipedia page on evolution.
88. Global Network Initiative, <https://www.globalnetworkinitiative.org/>.
89. Khaya Dlanga, "Yesterday a Short-lived War Broke out Between the US and SA," *Thought Leader Blog, Mail & Guardian* (November 5, 2009), <http://www.thoughtleader.co.za/khayadlanga/2009/11/05/yesterday-a-short-lived-war-broke-out-between-america-and-south-africa/>.
90. Ankit Tuteja, "Facebook Blocks 'Chutiyas,' Is Twitter Next?" *IBN Live* (March 13, 2012), <http://ibnlive.in.com/news/facebook-blocks-chutiyas-is-twitter-next/238851-26.html>.
91. Ananth Padmanabhan, "Can Judges Order ISPs to Block Websites for Copyright Infringement? (Part 1)," *The Centre for Internet & Society India* (January 30, 2014), <http://cis-india.org/a2k/blogs/john-doe-orders-isp-blocking-websites-copyright-1>.
92. Freedom House, "Table of Country Scores, June 1, 2015–May 31, 2016," <https://freedomhouse.org/report/table-country-scores-fotn-2016>.
93. T.C., "What is the Streisand Effect?" *The Economist* (April 15, 2013), <http://www.economist.com/blogs/economist-explains/2013/04/economist-explains-what-streisand-effect>.
94. Rohan Samarajiva, "Technologies and Freedom," *Himal* (March 3, 2011), <http://old.himalmag.com/component/content/article/4319-technologies-and-freedom.html>.
95. OpenNet Initiative, "Internet Filtering in Burma in 2005: A Country Study" (October 2005), <https://opennet.net/studies/burma>.
96. Zurairi AR, "In 2015, Let's Have Freedom of Speech for Everyone . . . Even Idiots," *Malaymail Online* (December 28, 2014), <http://www.themalaymailonline.com/opinion/zurairi-ar/article/in-2015-lets-have-freedom-of-speech-for-everyone...-even-idiots>.
97. Muslim Advocates, *Click Here to End Hate: Anti-Muslim Bigotry Online & How to Take Action* (May 2014), <http://www.muslimadvocates.org/wp-content/uploads/Click-Here-to-End-Hate.pdf>.
98. Adam Taylor, "Is Vladimir Putin Behind An Army Of Internet Trolls?" *Business Insider* (February 7, 2012), <http://www.businessinsider.com/putin-nashi-anonymous-opyoungbustards-2012-2?IR=T&>.
99. Maya Sharma, "Police in Bengaluru Fight Rumours of Threats Through Social Media," *NDTV* (December 19, 2014), <http://www.ndtv.com/bangalore-news/police-in-bengaluru-fight-rumours-of-threats-through-social-media-715114>.
100. A good example of this is the reaction of the government of the Netherlands to *Fitna*, a controversial short film by far right-wing Dutch parliamentarian Geert Wilders, which equates Islam with violence and extremism. Rather than censoring the film, the government helped create a counter-narrative that was moderate and encouraged discussion. See Islamic Research Foundation International, "Reactions by Dutch Prime Minister, Dutch Muslims and Dutch Politicians to *Fitna*," http://www.irfi.org/articles/articles_2101_2150/reaction%20by%20dutch%20prime%20ministerhtml.htm, accessed February 8, 2015.

101. Kevin P. Donovan and Aaron K. Martin, "The Rise of African SIM Registration: The Emerging Dynamics of Regulatory Change," *First Monday* 19, no. 2 (2014), <http://firstmonday.org/ojs/index.php/fm/article/view/4351/3820>.
102. Reporters Without Borders, "Internet in Vietnam," <http://surveillance.rsf.org/en/vietnam/>, accessed January 31, 2015.
103. Amy Qin, "China to Force Authors to Provide Real Names When Publishing Online," *New York Times* (January 26, 2015), <http://sinosphere.blogs.nytimes.com/2015/01/26/china-to-force-authors-to-provide-real-names-when-publishing-online>.
104. Article 19, *Johannesburg Principles*.
105. United Nations General Assembly, *Report of the Special Rapporteur*.
106. Privacy International, Access and the Electronic Frontier Foundation, "International Principles on the Application of Human Rights to Communications Surveillance" (May 2014), <https://en.necessaryandproportionate.org/>.
107. Sunil Abraham, "Privacy vs Transparency," *New Internationalist* (January 2015), <https://newint.org/features/2015/01/01/privacy-transparency/>.
108. India is one of the few countries in the Global South that explicitly allows for circumvention of DRM/TPMs. See Parliament of the Republic of India, Indian Copyright Act, 1957, Sec. 65B(2) sub-clauses (b) to (g), <http://copyright.gov.in/documents/copyrightrules1957.pdf>.
109. For example, Malaysia criminalizes the building of reverse engineering software. See Consumers in the Digital Age, "Malaysia 2012," <http://a2knetwork.org/reports2012/malaysia>, accessed February 7, 2015.
110. For example, if transient storage is not permitted then services like web caches and search engines would be illegal. Compulsory licenses are important for online streaming and interactive radio.
111. Rishika, "Disability Exceptions in Copyright Legislations," *Centre for Internet and Society* (January 12, 2015), <http://cis-india.org/accessibility/blog/disability-exceptions-in-copyright-legislations>.
112. For example, Lebanese law prevents the use of copyrighted material in the classroom either by the student or the teacher. See Consumers in the Digital Age, "Lebanon 2012," <http://a2knetwork.org/reports2012/lebanon>, accessed February 7, 2015.
113. International Federation of Library Associations and Institutions, "Treaty Proposal on Copyright Limitations and Exceptions for Libraries and Archives, last modified January 25, 2013, <http://www.ifla.org/node/5856>.
114. Derivative works are defined as "translations, adaptations, arrangements and similar alterations of preexisting works which are protected under Article 2(3) of the Berne Convention for the Protection of Literary and Artistic Works of 1971 as such without prejudice to the copyright in the preexisting works." See World Intellectual Property Organization, *Glossary*, <http://www.wipo.int/tk/en/resources/glossary.html>, accessed December 2, 2016.
115. Right2Remix, "Petition," <http://right2remix.org/petition/>.
116. Andrew Orlowski, "How Much is Microsoft Earning From its Android Taxes Again?" *The Channel* (October 7, 2014), http://www.channelregister.co.uk/2014/10/07/how_much_is_that_microsoft_android_tax_again/.
117. Rishab Ghosh, "License Fees and GDP Per Capita: The Case for Open Source in Developing Countries," *First Monday* 8, no. 12 (2003), <http://firstmonday.org/ojs/index.php/fm/article/view/1103/1023>. The author writes that "the price of a typical, basic proprietary toolset required for any ICT infrastructure, Windows XP together with Office XP, is USD 560 in the United States. This is more than two months of GDP/capita in South Africa and over sixteen months of GDP/capita in Vietnam. This is the equivalent of charging a single-user license fee in the US of USD 7,541 and USD 48,011 respectively, which is clearly unaffordable."

118. David Drummond, "When Patents Attack Android," *Google Official Blog* (August 3, 2011), <http://googleblog.blogspot.com/2011/08/when-patents-attack-android.html>.
119. Nehaa Chaudhari, "Mobile Phone Patents Prior Art Survey," Centre for Internet & Society, India (October 23, 2013), <http://cis-india.org/a2k/blogs/mobile-phone-patents>.
120. Patent pools can be defined as an agreement between two or more patent owners to license one or more of their patents to one another or to third parties. See World Intellectual Property Organization, *Patent Pools and Antitrust—A Comparative Analysis* (March 2014), http://www.wipo.int/export/sites/www/ip-competition/en/studies/patent_pools_report.pdf.
121. Tanushri Purohit and Jasleen Kaur, "Patent War amidst Globalization: Focus on India & China Deliberating United States Perspective," *American International Journal of Research in Humanities, Arts and Social Sciences* 10, no. 2 (March–May 2015), pp. 119–26.
122. Roya Ghafele and Benjamin Gibert, "IP Commercialization Tactics in Developing Country Contexts," *Journal of Management and Strategy* 5, no. 2 (2014), <http://www.sci.edu.ca/journal/index.php/jms/article/viewFile/4744/2749>.
123. James A. Lewis, "Government Open Source Policies," Center for Strategic and International Studies (2010), http://csis.org/files/publication/100416_Open_Source_Policies.pdf.
124. Emmanuel C. Lallana, "e-Government Interoperability: Guide," *United Nations APCICT-ESCAP* (2007), <http://www.unapcict.org/ecohub/resources/e-government-interoperability-guide/>.
125. Roarmap, "Welcome to Roarmap," <http://roarmap.eprints.org/>.
126. Creative Commons, "OER Policy Registry," https://wiki.creativecommons.org/OER_Policy_Registry.
127. There are many different types of intermediaries, such as for-profits and non-profits; search engines, social media services and web hosting services.
128. Giancarlo Frosio, "Intermediary Liability Updates from Turkey: Forcing Online Intermediaries to Create a Website Blocking-friendly Infrastructure," *Center for Internet and Society, Stanford Law School* (January 28, 2015), <http://cyberlaw.stanford.edu/blog/2015/01/intermediary-liability-updates-turkey-forcing-online-intermediaries-create-website>.
129. Nikhil Pahwa, "It Looks Like India's Going to Get a Web Filter," *Medianama* (November 13, 2014), <http://www.medianama.com/2014/11/223-it-looks-like-indias-going-to-get-a-web-filter>.
130. The Center for Internet and Society, Stanford Law School, "WILMap: Venezuela," <http://cyberlaw.stanford.edu/page/wilmap-venezuela>, accessed February 4, 2015.
131. The Center for Internet and Society, Stanford Law School, "WILMap: India," <http://cyberlaw.stanford.edu/page/wilmap-india>, accessed February 4, 2015.
132. The Center for Internet and Society, Stanford Law School, "WILMap: Brazil," <http://cyberlaw.stanford.edu/page/wilmap-brazil>, accessed February 4, 2015.
133. The Center for Internet and Society, Stanford Law School, "WILMap: Chile," <http://cyberlaw.stanford.edu/page/wilmap-chile>, accessed February 4, 2015.
134. The Center for Internet and Society, Stanford Law School, "WILMap: South Africa," <http://cyberlaw.stanford.edu/page/wilmap-south-africa>, accessed February 4, 2015.
135. The Center for Internet and Society, Stanford Law School, "WILMap: South Korea," <http://cyberlaw.stanford.edu/page/wilmap-south-korea>, accessed February 4, 2015.
136. The Center for Internet and Society, Stanford Law School, "WILMap: Canada," <http://cyberlaw.stanford.edu/page/wilmap-canada>, accessed December 2, 2016.
137. In a "notice and take-down" regime, the intermediary has to make a decision regarding legality of the content and then act on that decision by either taking down the content or rejecting the take-down notice and risking liability. In a "notice

and notice" regime, the intermediary passes the notice on to the person responsible for the content—if the person responsible does not respond within a reasonable period the intermediary takes down the content. If the person responsible responds saying they are willing to defend their right to free speech, then the matter is now between the entity that issued the take-down notice and the person responsible for the content—the intermediary is no longer liable. In other words, the intermediary is not required to make a decision regarding the legality of the content.

138. European Digital Rights, "Input on Human Rights and Preventing and Countering Violent Extremism" (March 18, 2016), <https://edri.org/files/2016-UN-consultation.pdf>.
139. Andy Greenberg, "Google's Clever Plan to Stop Aspiring ISIS Recruits," *Wired* (July 9, 2016), <https://www.wired.com/2016/09/googles-clever-plan-stop-aspiring-isis-recruits/>.
140. Jonathan Zittrain, "Facebook Could Decide an Election Without anyone Ever Finding Out," *New Republic* (June 1, 2014), <https://perma.cc/ED8B-C7YL>.
141. Matthew Braga, "Only Facebook Knows how it Spreads Fake Election News," *CBC News* (November 11, 2016), <http://www.cbc.ca/news/technology/facebook-fake-news-us-election-algorithm-transparency-1.3846073>.
142. Zeynep Tufekci, "Facebook Said Its Algorithms Do Help Form Echo Chambers. And the Tech Press Missed It" (*Huffington Post*, May 11, 2015), http://www.huffingtonpost.com/zeynep-tufekci/facebook-algorithm-echo-chambers_b_7259916.html.

REFERENCES

- Abraham, Sunil, "Privacy vs Transparency," *New Internationalist* (January 2015), <https://newint.org/features/2015/01/01/privacy-transparency/>.
- Article 19, *The Johannesburg Principles on National Security, Freedom of Expression and Access to Information* (London: Article 19, November 1996), <https://www.article19.org/data/files/pdfs/standards/joburgprinciples.pdf>.
- Article 19, "Defamation Maps," <http://www.article19.org/defamation/map.html>, accessed February 3, 2015.
- Bhatia, Rahul, "The Inside Story of Facebook's Biggest Setback," *The Guardian* (May 12, 2016), <https://www.theguardian.com/technology/2016/may/12/facebook-free-basics-india-zuckerberg>.
- Braga, Matthew, "Only Facebook Knows how it Spreads Fake Election News," *CBC News* (November 11, 2016), <http://www.cbc.ca/news/technology/facebook-fake-news-us-election-algorithm-transparency-1.3846073>.
- Broadband Commission for Digital Development, *Planning for Progress: Why National Broadband Plans Matter* (Geneva: International Telecommunication Union, July 2013).
- Broadband Commission Task Force on Sustainable Development, *Transformative Solutions for 2015 and Beyond* (Broadband Commission, September 2013), <http://www.broadbandcommission.org/documents/working-groups/bb-wg-taskforce-report.pdf>.
- Cámara de Diputados de Chile, "Cámara aprueba modificaciones del Senado a proyecto que protege derechos de usuarios de internet" (July 13, 2010), https://www.camara.cl/prensa/noticias_detalle.aspx?prmid=38191.
- Cavelty, Myriam Dunn and Elgin M. Brunner, "Information, Power, and Security—An Outline of Debates and Implications," in Myriam Dunn Cavelty, Victor Mauer, and Sai Felicia Krishna-Hensel (eds), *Power and Security in the Information Age: Investigating the Role of the State in Cyberspace* (Aldershot: Ashgate, 2007), pp. 1–18.
- Cavelty, Myriam Dunn, "Is Anything Ever New? Exploring the Specificities of Security and Governance in the Information Age," in Myriam Dunn Cavelty, Victor Mauer, and

- Sai Felicia Krishna-Hensel (eds), *Power and Security in the Information Age: Investigating the Role of the State in Cyberspace* (Aldershot: Ashgate, 2007), pp. 19–44.
- Center for Internet and Society, Stanford Law School, "WILMap: Brazil," <http://cyberlaw.stanford.edu/page/wilmap-brazil>, accessed February 4, 2015.
- Center for Internet and Society, Stanford Law School, "WILMap: Canada," <http://cyberlaw.stanford.edu/page/wilmap-canada>, accessed February 4, 2015.
- Center for Internet and Society, Stanford Law School, "WILMap: Chile," <http://cyberlaw.stanford.edu/page/wilmap-chile>, accessed February 4, 2015.
- Center for Internet and Society, Stanford Law School, "WILMap: India," <http://cyberlaw.stanford.edu/page/wilmap-india>, accessed February 4, 2015.
- Center for Internet and Society, Stanford Law School, "WILMap: South Africa," <http://cyberlaw.stanford.edu/page/wilmap-south-africa>, accessed February 4, 2015.
- Center for Internet and Society, Stanford Law School, "WILMap: South Korea," <http://cyberlaw.stanford.edu/page/wilmap-south-korea>, accessed February 4, 2015.
- Center for Internet and Society, Stanford Law School, "WILMap: Venezuela," <http://cyberlaw.stanford.edu/page/wilmap-venezuela>, accessed February 4, 2015.
- Cerf, Vinton G., "Internet Access is Not a Human Right," *New York Times* (January 4, 2012), http://www.nytimes.com/2012/01/05/opinion/internet-access-is-not-a-human-right.html?_r=0.
- Chaudhari, Nehaa, "Mobile Phone Patents Prior Art Survey," *Centre for Internet & Society* (October 23, 2013), <http://cis-india.org/a2k/blogs/mobile-phone-patents>.
- Clinton, Hillary Rodham, "Remarks on Internet Freedom" (US Department of State, January 21, 2010), <http://www.state.gov/secretary/20092013clinton/rm/2010/01/135519.htm>.
- Coliver, Sandra, "Commentary on the Johannesburg Principles on National Security, Freedom of Expression and Access to Information," in Sandra Coliver, Paul Hoffman, Joan Fitzpatrick and Stephen Bowen (eds), *Secrecy and Liberty: National Security, Freedom of Expression and Access to Information* (The Hague: Martinus Nijhoff, 1999), pp. 1–81.
- Commotion, "About Commotion," [https://commotionwireless.net/about/](https://commotionwireless.net/), accessed February 7, 2015.
- Conseil Constitutionnel, *Decision 2009-580, Act Furthering the Diffusion and Protection of Creation on the Internet* (original: *Loi favorisant la diffusion et la protection de la création sur internet*) (June 10, 2010), http://www.conseil-constitutionnel.fr/conseil-constitutionnel/root/bank_mm/anglais/2009_580dc.pdf.
- Consumers in the Digital Age, "Lebanon 2012," <http://a2knetwork.org/reports2012/lebanon>, accessed February 7, 2015.
- Consumers in the Digital Age, "Malaysia 2012," <http://a2knetwork.org/reports2012/malaysia>, accessed February 7, 2015.
- Conovalu, Sergui and Tim Kelly, "A new Toolkit to help develop national broadband strategies," World Bank Information and Communication for Development (IC4D) Blog, June 19, 2014, <http://blogs.worldbank.org/ic4d/new-toolkit-help-develop-national-broadband-strategies>.
- Council of Europe, *European Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by Protocols Nos. 11 and 14*, ETS 5 (November 4, 1950).
- Creative Commons, "OER Policy Registry," https://wiki.creativecommons.org/OER_Policy_Registry, accessed February 4, 2015.
- Deloitte, *Value of Connectivity: Economic and Social Benefits of Expanding Internet Access*, Report (February 2014), https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/TechnologyMediaCommunications/2014_uk_tmt_value_of_connectivity_deloitte_irland.pdf.
- Dlanga, Khaya, "Yesterday a Short-lived War Broke out Between the US and SA," Thought Leader Blog, *Mail & Guardian* (November 5, 2009), <http://www.thoughtleader.co.za/>

- khayadlanga/2009/11/05/yesterday-a-short-lived-war-broke-out-between-america-and-south-africa/.
- Donovan, Kevin P. and Aaron K. Martin, "The Rise of African SIM Registration: The Emerging Dynamics of Regulatory Change," *First Monday* 19, no. 2 (2014), <http://firstmonday.org/ojs/index.php/fm/article/view/4351/3820>.
- Drake, William, "Reframing Internet Governance Discourse: Fifteen Baseline Propositions," in Don MacLean (ed.), *Internet Governance: A Grand Collaboration* (New York: United Nations ICT Task Force, 2004), pp. 122–61.
- Drummond, David, "When Patents Attack Android," *Google Official Blog* (August 3, 2011), <http://googleblog.blogspot.com/2011/08/when-patents-attack-android.html>.
- European Digital Rights, "Input on Human Rights and Preventing and Countering Violent Extremism" (March 18, 2016), <https://edri.org/files/2016-UN-consultation.pdf>.
- Flores-Roux, Ernesto M., "Mexico's Shared Spectrum Model," Paper prepared for Expert Forum on Broadband Policy and Regulation Conducive to Access by the Poor (March 12, 2014), New Delhi, <http://broadbandsasia.info/wp-content/uploads/2014/04/EFloresRoux-Mexicos-shared-spectrum-model-March-2014-2.pdf>.
- Freedom House, *Freedom on the Net 2014: Tightening the Net—Governments Expand Online Controls* (Washington, DC: Freedom House, 2014).
- Freedom House, "Table of Country Scores, June 1, 2015–May 31, 2016," <https://freedomhouse.org/report/table-country-scores-fotn-2016>.
- Freedom Online Coalition, *The Role of Governments in Protecting and Furthering Internet Freedom*, Background Paper (The Hague: Ministry of Foreign Affairs of the Netherlands), http://www.minbuza.nl/binaries/content/assets/minbuza/en/the_ministry/the-role-of-governments-in-protecting-internet-freedom—freedom-online.pdf, accessed January 25, 2015.
- Frosio, Giancarlo, "Intermediary Liability Updates from Turkey: Forcing Online Intermediaries to Create a Website Blocking-friendly Infrastructure," (Center for Internet and Society, Stanford Law School, January 28, 2015), <http://cyberlaw.stanford.edu/blog/2015/01/intermediary-liability-updates-turkey-forcing-online-intermediaries-create-website>.
- Ghafele, Roya and Benjamin Gibert, "IP Commercialization Tactics in Developing Country Contexts," *Journal of Management and Strategy* 5, no. 2 (2014), <http://www.sciedu.ca/journal/index.php/jms/article/viewFile/4744/2749>.
- Ghosh, Rishab, "License Fees and GDP Per Capita: The Case for Open Source in Developing Countries," *First Monday* 8, no. 12 (2003), <http://firstmonday.org/ojs/index.php/fm/article/view/1103/1023>.
- "Global Network Initiative," <https://www.globalnetworkinitiative.org/>, accessed December 2, 2016.
- Greenberg, Andy, "Google's Clever Plan to Stop Aspiring ISIS Recruits," *Wired* (July 9, 2016), <https://www.wired.com/2016/09/googles-clever-plan-stop-aspiring-isis-recruits/>.
- International Federation of Library Associations and Institutions, "Treaty Proposal on Copyright Limitations and Exceptions for Libraries and Archives," <http://www.ifla.org/node/5856>.
- International Telecommunication Union, *The World in 2013: ICT Facts and Figures*, <http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2013-e.pdf>.
- International Telecommunication Union, *Connect 2020 Agenda for Global Telecommunication/ICT Development*, <http://www.itu.int/en/connect2020/Pages/default.aspx>, accessed December 1, 2016.
- Islamic Republic of Pakistan, *Pakistan Penal Code (XLV of 1860)*, <http://www.oecd.org/site/adboecdanti-corruptioninitiative/46816797.pdf>.
- Islamic Research Foundation International, "Reactions by Dutch Prime Minister, Dutch Muslims and Dutch Politicians to Fitna," http://www.irfi.org/articles/articles_2101_2150/reaction%20by%20dutch%20prime%20ministerhtml.htm, accessed February 8, 2015.

- Johnson, Bobby, "Finland makes Broadband Access a Legal Right," *The Guardian* (October 14, 2009), <http://www.theguardian.com/technology/2009/oct/14/finland-broadband>.
- Krishnakumar, Tarun, "Collection of Net Neutrality Definitions," *Centre for Internet & Society, India*, <http://cis-india.org/internet-governance/blog/collection-of-net-neutrality-definitions/>, accessed February 8, 2015.
- Lallana, Emmanuel C., "e-Government Interoperability: Guide," *United Nations APCICT-ESCAP* (2007), <http://www.unapcict.org/ecohub/resources/e-government-interoperability-guide/>.
- Lath, Aparajitha, "Defamation on Social Media: Delhi High Court Adopts the 'Single Publication Rule,'" *SpicyIP* (July 12, 2014), <http://spicyip.com/2014/07/defamation-on-social-media-delhi-high-court-adopts-the-single-publication-rule.html>.
- Lewis, James A., "Government Open Source Policies," *Center for Strategic and International Studies* (2010), http://csis.org/files/publication/100416_Open_Source_Policies.pdf.
- Marsden, Christopher T., "Network Neutrality: History, Regulation and Future," in Agustí Cerrillo-i-Martínez, Miquel Peguera, Ismael Peña-López, and Mònica Vilasau Solana (eds), *Net Neutrality and Other Challenges for the Future of the Internet*, Proceedings of the 7th International Conference on Internet, Law and Politics, Universitat Oberta de Catalunya, Barcelona, 11–12 July, 2011 (Barcelona: UOC-Huygens, 2011), pp. 29–43.
- McKinsey Global Institute, *Internet Matters: The Net's Sweeping Impact on Growth, Jobs, and Prosperity* (McKinsey & Company, May 2011).
- Medic Mobile, <http://medicmobile.org/>, accessed January 20, 2015.
- Mishra, Vishal, "Internet is a platform where ISPs provide no competitive advantage to specific apps/services, either through pricing or QoS" (August 11, 2015), <https://twitter.com/vishalmisra/status/631285727024672768>.
- Moudgalya, Kannan M., D. B. Pathak, N. K. Sinha, and Pradeep Varma, "Genesis of Aakash 2," *CSI Communications* 36, no. 10 (January 2013).
- MSC Malaysia, "MSC Malaysia Bill of Guarantees," <http://www.msccmalaysia.my/bogs>, accessed February 7, 2015.
- Muslim Advocates, *Click Here to End Hate: Anti-Muslim Bigotry Online & How to Take Action* (May 2014), <http://www.muslimadvocates.org/wp-content/uploads/Click-Here-to-End-Hate.pdf>.
- One Laptop per Child, <http://one.laptop.org/about/mission>, accessed February 3, 2015.
- Openmedia.ca. "Chile: A Leader in Net Neutrality Legislation," <https://openmedia.ca/plan/international-comparisons/chile>, accessed February 7, 2015.
- Open Net Initiative, "Internet Filtering in Burma in 2005: A Country Study" (October 2005), <https://opennet.net/studies/burma>.
- OpenNet Initiative, "Regional Overviews," <https://opennet.net/research/regions>, accessed January 25, 2015.
- Organisation for Economic Co-operation and Development, *Predatory Pricing* (OECD, 1989), <https://www.oecd.org/competition/abuse/2375661.pdf>.
- Organization of African Unity (OAU), *African Charter on Human and Peoples' Rights ("Banjul Charter")*, CAB/LEG/67/3 (27 June 1981) rev. 5, 21 I.L.M. 58 (1982).
- Organization of American States, *American Convention on Human Rights, "Pact of San Jose," Costa Rica* (22 November 1969).
- Orlowski, Andrew, "How Much is Microsoft Earning From its Android Taxes Again?" *The Channel* (October 7, 2014), http://www.channelregister.co.uk/2014/10/07/how_much_is_that_microsoft_android_tax_again/.
- Padmanabhan, Ananth, "Can Judges Order ISPs to Block Websites for Copyright Infringement? (Part 1)," *The Centre for Internet & Society, India* (January 30, 2014), <http://cis-india.org/a2k/blogs/john-doe-orders-isp-blocking-websites-copyright-1>.
- Pahwa, Nikhil, "It Looks Like India's Going to Get a Web Filter," *Medianama* (November 13, 2014), <http://www.medianama.com/2014/11/223-it-looks-like-indias-going-to-get-a-web-filter/>.

- Pak, Jennifer, "What is Malaysia's Sedition Law?" *BBC* (November 27, 2014), <http://www.bbc.com/news/world-asia-29373164>.
- Parliament of the Republic of India, Indian Copyright Act, 1957, <http://copyright.gov.in/documents/copyrightrules1957.pdf>.
- Parvez, Iftikhar, "Utilization of Universal Service Funds," *Piftikhar Blog* (January 13, 2015), <http://www.piftikhar.com/2015/01/utilization-of-universal-service-funds/#sthash.HZ9hENMe.dpuf>.
- Pimienta, Daniel, Daniel Prado, and Alvaro Blanco, *Twelve Years of Measuring Linguistic Diversity in the Internet: Balance and Perspectives* (Paris: UNESCO Publications for the World Summit on the Information Society, 2009).
- President and the Parliament of Zimbabwe, Public Order and Security Act, <http://www1.umn.edu/humanrts/research/zimbabwe-POSA.pdf>, accessed February 3, 2015.
- Privacy International, Access and the Electronic Frontier Foundation, *International Principles on the Application of Human Rights to Communications Surveillance* (May 2014), <https://en.necessaryandproportionate.org/>.
- Purbo, Onno W., *Multimedia Training Kit: Homebrew Antenna*, http://bebabs.ui.ac.id/v14/onno/WiFiWiki/WirelessTrainingUnitAntennaeOverview/mmtk_antenna_homebrew.doc.
- Purbo, Onno W., *Wokbolic: Parabolic 2.4GHz Evolution*, <http://kambing.ui.ac.id/onnopurbo/library/library-onno-eng/onno-eng-1/physical/wireless/OWP-20080219-Wokbolic-Parabolic-2.4GHz-Evolution.pdf>.
- Purohit, Tanushri and Jasleen Kaur, "Patent War amidst Globalization: Focus on India & China Deliberating United States Perspective," *American International Journal of Research in Humanities, Arts and Social Sciences* 10, no. 2 (March–May 2015), pp. 119–26.
- Qin, Amy, "China to Force Authors to Provide Real Names When Publishing Online," *New York Times* (January 26, 2015), <http://sinosphere.blogs.nytimes.com/2015/01/26/china-to-force-authors-to-provide-real-names-when-publishing-online/>.
- Rackspace Support Network, "CDN Concepts," (June 2, 2016), http://www.rackspace.com/knowledge_center/article/what-is-a-cdn.
- Rauscher, Karl Frederick, *ROGUCCI: The Report, Proceedings of the Reliability of Global Undersea Cable Communications Infrastructure* (IEEE Communications Society, 2010), <http://www.ieee-rogucci.org/files/The%20ROGUCCI%20Report.pdf>.
- Reporters without Borders, "Internet in Vietnam" <http://surveillance.rsf.org/en/vietnam/>, accessed January 31, 2015.
- Republic of India, *Central Government Act: The Indian Penal Code*, (Act No. 45 of 1860), <http://indiankanoon.org/doc/1734694/>.
- Republic of Singapore, *Penal Code (Ordinance 4 of 1871)*, <http://statutes.agc.gov.sg/aol/search/display/view.w3p;ident=7c092107-3d76-4b17-8c82-dbec9efd97a4;page=0;query=DocId%3A%22025e7646-947b-462c-b557-60aa55dc7b42%22%20Status%3Ainforce%20Depth%3A0;rec=0#pr298-he->.
- Right2Remix, <http://right2remix.org/petition/>, accessed February 3, 2015.
- Rishika, "Disability Exceptions in Copyright Legislations," *Centre for Internet and Society* (January 12, 2015), <http://cis-india.org/accessibility/blog/disability-exceptions-in-copyright-legislations>.
- Roarmap, "Welcome to Roarmap," <http://roarmap.eprints.org/>, accessed February 4, 2015.
- Samarajiva, Rohan, "Leveraging the Budget Telecom Network Business Model to Bring Broadband to the People," *Information Technologies & International Development* 6 (2010), <http://itidjournal.org/itid/article/view/630/270>.
- Samarajiva, Rohan, "Technologies and Freedom," *Himal* (March 3, 2011), <http://old.himalmag.com/component/content/article/4319-technologies-and-freedom.html>.
- Samarajiva, Rohan, "Myanmar is Last on Telecom List: What Can Be Done?" LIRNEasia (2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2055556.

- SF, "Marco Civil Brazilian Internet Bill of Rights—English translation" (Association for Progressive Communications, May 10, 2014), <http://www.apc.org/en/blog/marco-civil-brazilian-internet-bill-rights-english>.
- Seacom, "Regulators and Government in Africa are Key to Fibre Development" (Seacom, June 11, 2013), <http://seacom.mu/regulators-and-government-in-africa-are-key-to-fibre-deployment/>.
- Sharma, Maya, "Police in Bengaluru Fight Rumours of Threats Through Social Media," NDTV (December 19, 2014), <http://www.ndtv.com/bangalore-news/police-in-bengaluru-fight-rumours-of-threats-through-social-media-715114>.
- Siam Intelligence Unit, "TRE Seminar on Bangkok Post Database" (October 28, 2009), <http://siu.co.th/2009/10/tre-seminar-on-bangkok-post-database/>.
- Simpputer, "What is a Simputer?" <http://www.simpputer.org/simpputer/about/>, accessed February 3, 2015.
- Singel, Ryan, "Accused of Violating Net Neutrality, MetroPCS Sues FCC," *Wired* (January 25, 2011), <https://www.wired.com/2011/01/metropcs-net-neutrality-challenge/>.
- Singh Mankotia, Anandita and Gulveen Aulakh, "Hazardous E-waste: Apple can't Import or Sell Second-hand Phones in India," *The Economic Times* (May 4, 2016), <http://economictimes.indiatimes.com/tech/hardware/hazardous-e-waste-apple-can-t-import-or-sell-second-hand-phones-in-india/articleshow/52099477.cms>.
- Steyn, Lisa, "Spectre of an Online Content Censor Looms," *Mail & Guardian* (November 28, 2014), <http://mg.co.za/article/2014-11-27-spectre-of-an-online-content-censor-looms>.
- Supreme Court of India, *Shreya Singhal v. Union of India*, AIR 2015 SC 1523.
- Sverdlik, Yevgnyi, "Finland Building Direct Submarine Cable to Germany," Data Center Knowledge (December 4, 2014), <http://www.datacenterknowledge.com/archives/2014/12/04/submarine-cable-to-germany-to-boost-finland-internet-bandwidth/>.
- Taylor, Adam, "Is Vladimir Putin Behind An Army Of Internet Trolls?" *Business Insider* (February 7, 2012), <http://www.businessinsider.com/putin-nashi-anonymous-opyoungbustards-2012-2?IR=T&R>.
- T.C., "What is the Streisand Effect?" *The Economist* (April 15, 2013), <http://www.economist.com/blogs/economist-explains/2013/04/economist-explains-what-streisand-effect>.
- "Thailand's Lese Majeste Laws Explained," BBC (December 1, 2014), <http://www.bbc.com/news/world-asia-29628191>.
- T.S., "Why Does Kenya Lead the World in Mobile Money?" *The Economist* (March 2, 2015), <http://www.economist.com/blogs/economist-explains/2013/05/economist-explains-18>.
- Tufekci, Zeynep, "Facebook Said Its Algorithms Do Help Form Echo Chambers. And the Tech Press Missed It," *Huffington Post* (May 11, 2015), http://www.huffingtonpost.com/zeynep-tufekci/facebook-algorithm-echo-chambers_b_7259916.html.
- Tuteja, Ankit, "Facebook Blocks 'Chutiyas,' Is Twitter Next?" *IBN Live* (March 13, 2012), <http://ibnlive.in.com/news/facebook-blocks-chutiyas-is-twitter-next/238851-26.html>.
- Union of Myanmar, *The State Peace and Development Council Law No. 5/2004 (Electronic Transactions Law)* (April 30, 2004), <http://unpan1.un.org/intradoc/groups/public/documents/un-dpadm/unpan041197.pdf>.
- United Nations Commission on Human Rights, *The Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights*. E/CN.4/1985/4 (28 September 1984).
- United Nations Department of Economic and Social Affairs, *Sustainable Development Goal 9*. Accessed on December 1, 2016, <https://sustainabledevelopment.un.org/sdg9>.
- United Nations Development Programme, *Human Development Report 1994* (Oxford: Oxford University Press, 1994).
- United Nations General Assembly, *Universal Declaration of Human Rights* (December 10, 1948).

- United Nations General Assembly, *International Covenant on Civil and Political Rights* (December 16, 1966).
- United Nations General Assembly, *Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression*, Frank La Rue, A/HRC/17/27 (May 16, 2011).
- van Daalen, Ot, "Translations of Key Dutch Internet Freedom Provisions," *Bits of Freedom* (June 27, 2011), <https://www.bof.nl/2011/06/27/translations-of-key-dutch-internet-freedom-provisions/>.
- van Dijk, Jan A. G. M., "Digital Divide Research, Achievements and Shortcomings," *Poetics* 34, no. 4–5 (August–October 2006), pp. 221–35.
- Wikimedia Meta Wiki, "List of Wikipedias," http://meta.wikimedia.org/wiki/List_of_Wikipedias, accessed February 2, 2015.
- Wikipedia, "Internet Censorship by Country," http://en.wikipedia.org/wiki/Censorship_in_Saudi_Arabia#mediaviewer/File:SaudiCensorship.png, accessed February 7, 2015.
- William, Jack and Tavneet Suri, *Mobile Money: The Economics of M-PESA* (January 2011), <http://mitsloan.mit.edu/shared/ods/documents/?DocumentID=2484>.
- World Bank, *Information and Communications for Development 2009: Extending Reach and Increasing Impact* (Washington, DC: The World Bank, 2009).
- Blackman, Colin and Lara Srivastava (eds), *Telecommunications Regulation Handbook*, Tenth Anniversary Edition (Washington, DC: The World Bank, 2011), http://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-TRH.1-2011-PDF-E.pdf.
- World Intellectual Property Organization, *Patent Pools and Antitrust—A Comparative Analysis* (WIPO, March 2014), http://www.wipo.int/export/sites/www/ip-competition/en/studies/patent_pools_report.pdf.
- World Intellectual Property Organization, *Glossary*, <http://www.wipo.int/tk/en/resources/glossary.html>, accessed December 2, 2016.
- Zittrain, Jonathan, "Facebook Could Decide an Election Without anyone Ever Finding Out," *New Republic* (June 1, 2014), <https://perma.cc/ED8B-C7YL>.
- Zambrano, Raúl and Ruhiya Kristine Seward, *Mobile Technologies and Innovation: Case Studies in m-Governance* (United Nations Development Programme, 2014).
- Zurairi AR, "In 2015, Let's Have Freedom of Speech for Everyone . . . Even Idiots," *Malay-mail Online* (December 28, 2014), <http://www.themalaymailonline.com/opinion/zurairi-ar/article/in-2015-lets-have-freedom-of-speech-for-everyone . . . -even-idiots>.