RESTRUCTURING THE INTERNATIONAL

TELECOMMUNICATION UNION IN A DECADE OF

DEVELOPMENT, 1985-1994

National Sovereignty vs. the Free Flow of Information

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<u>Abstract of the Thesis</u>

Restructuring the International Telecommunication Union

in a Decade of Development, 1985-1994:

National Sovereignty vs. the Free Flow of Information

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Although the International Telecommunication Union is the oldest existing international treaty organization in the world, it has attracted relatively little scholarly study or media attention aside from recent debates about its proposed role in Internet governance and "bridging the digital divide." Utilizing the published "Final Acts" of the Union's periodic conferences, this study explores the history of the ITU—with a particular focus on the decade between the Maitland Report in 1985 and the Union's most recent restructuring in 1994—in order to illustrate how the Union has evolved, both structurally and in terms of policy and purview, in response to new communications technologies and changing political, economic and social climates. I argue that ITU regulations have historically been the result of political considerations aimed at maintaining the *sovereignty principle*, the right of each member-state to regulate information networks within its borders. This principle has consistently proven antithetical to the Union's stated purpose, and has generated further ambiguities and conflicts in recent debates as delegates have attempted to extend it to regulation of the borderless Internet.

Table of Contents

List of Acronyms

AAP   Alternative Approval Process.

BDT   Telecommunication Development Bureau, now called the ITU-D.

CCIF   International Consulting Committee on the Telephone.

CCIR   International Technical Consulting Committee on Radio Communications.

CCIT   International Telegraph Consultative Committee.

CCITT   International Telegraph and Telephone Consultative Committee.

CISPA   Cyber Intelligence Sharing and Protection Act.

EFF   Electronic Frontier Foundation.

FCC   Federal Communications Commission.

IFRB   International Frequency Registration Board.

IMF   International Monetary Fund.

ISOC   Internet Society.

ITR   International Telecommunication Regulations.

ITU   International Telecommunication Union (originally International Telegraph Union).

ITU-D   Telecommunication Development Sector of the ITU.

ITU-R   Radiocommunication Sector of the ITU.

ITU-T   Telecommunication Standardization Sector of the ITU.

MIFR   Master International Frequency Register.

OECD   Organization for Economic Co-operation and Development.

RRB   Radio Regulations Board.

TCP/IP   Transmission Control Protocol/Internet Protocol.

WARC-79   World Broadcasting Satellite Administrative Radio Conference, 1979.

WATTC-88   World Administrative Telegraph and Telephone Conference, 1988.

WCIT '12   World Conference on International Telecommunications, Dubai 2012.

WTO   World Trade Organization.

Basic Chronology

1865: International Telegraph Union convenes for the first time in Paris, France.

1932: Radio regulations are incorporated into the Madrid Convention, and the International Telegraph Union becomes the International Telecommunication Union.

1947: ITU restructures to become a special branch of the United Nations at the Atlantic City Conference.

1948: U.N. adopts the Universal Declaration of Human Rights, including Article 19 guaranteeing freedom of expression and the right to receive and impart information through any media and regardless of frontiers.

1965: ITU passes Resolution Number 28, noting "an additional emphasis on the importance of development assistance activities."

1972: U.N. adopts Resolution 37/92, setting international principles for state use of "artificial earth satellites" and granting the ITU exclusive authority over signal "overspill."

1979: The ITU holds the World Broadcasting Satellite Administrative Radio Conference (WARC-79) in Geneva, which further regulated state use of satellites.

1982: Resolution 20 of the Nairobi Convention stresses "the fundamental importance of communications infrastructures as an essential element in the economic and social development of all countries" and establishes the Maitland Commission to study development issues.

1985: ITU publishes the report of the Maitland Commission, "The Missing Link," and subsequently establishes the Centre for Telecommunications Development.

1988: ITU passes the International Telecommunication Regulations (ITRs) at the World Administrative Telegraph and Telephone Conference (WATTC-88) in Melbourne.

1989: ITU passes Resolution 55 at the Nice Plenipotentiary Conference, establishing a High Level Committee to conduct a comprehensive review of the Union's structure.

1991: High Level Committee releases "Tomorrow's ITU: The Challenges of Change," outlining proposed structural changes to the Union.

1992: ITU reviews and accepts the High Level Committee's proposals at an Additional Plenipotentiary Conference in Geneva.

1994: ITU completes the restructuring process at the Kyoto Plenipotentiary Conference.

2012: ITU hosts the World Conference on International Telecommunications (WCIT '12) in Dubai, to review and revise the International Telecommunication Regulations.

Introduction

In December 2012, 155 member-states of the International Telecommunication Union met in Dubai for the World Conference on International Telecommunications (WCIT '12) with the purpose of reviewing the International Telecommunication Regulations (ITRs). This binding treaty, adopted at the 1988 Melbourne Conference, established general principles relating to the operation of international telecommunication services, with *telecommunications* defined as "Any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems," and *international telecommunication services* defined as "The offering of a telecommunication capability between telecommunication offices or stations of any nature that are in or belong to different countries."[1]

In a press conference a month prior to the Convention, Malcolm Johnson, the Elected Director of the ITU Telecommunication Standardization Bureau, explained the impetus behind reviewing the twenty-four year old ITRs:

> So the purpose of WCIT is to review the only truly global treaty on international telecommunications known as the International Telecommunication Regulations (ITRs), that was adopted in 1988 and to which 178 countries are bound to.
>
> By advocating market liberalization this treaty laid the foundations for the growth of the Internet and mobile telephony. But since the treaty is 24 years old it clearly needs to be updated to address a number of concerns that did not exist in 1988.
>
> That is why ITU's membership, (a membership that includes 193 governments, over 700 private sector entities, academia and civil society, as well as other international bodies both governmental and non-governmental) has spent quite some time preparing for this conference that should ensure the continued – and expanded – access to what we now know as information and communications technologies (ICTs) for the next generation of users.[2]

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[1] "International Telecommunication Regulations," Final Acts of the World Administrative Telegraph and Telephone Conference in Melbourne 1988 (Geneva 1989), 5.

[2] Malcolm Johnson, "Global Media Briefing on WCIT-12" (17 September 2012). www.itu.int/en/wcit-12/documents/wcit-briefing-sep2012-johnson.docx

Many of the "concerns" Johnson alludes to in this statement relate to the maturation of the Internet and the rapid growth of the commercial World Wide Web in the decade following the 1988 Convention. The 1980s saw a global wave of liberalism in the telecommunications industry that extended to both "developed" nations that had long had state-run telecommunication monopolies (mostly in Europe), and to newly independent "developing" countries looking to secure national autonomy and promote their economies through the burgeoning global information industry. Article 9 of the 1988 ITRs essentially reified this neoliberal trend by permitting "Special Arrangements" —not subject to ITRs so long as they did not violate the ITU Convention—between administrations, organizations or persons, "in order to meet specialized international telecommunication needs within and/or between the territories of the Members concerned, and including, as necessary, those financial, technical, or operating conditions to be observed."[3] This, in practice, allowed private operators to use leased lines to provide data services, which otherwise would have been a major obstacle to the expansion of the commercial Internet and World Wide Web.

As Johnson noted at the press conference, however, the Internet was still in its infancy in 1988, and many concerns have been raised in the subsequent two decades over the potential expansion of the ITRs to the Internet. At first glance, the Internet fits the ITU's longstanding definition of "telecommunications," but there has been a consistent, dedicated opposition to the notion that the Internet is or should be subject to international regulation.

Organizations long involved with early development of the Internet, such as the Internet Society (ISOC) and the Electronic Frontier Foundation (EFF), and international

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[3] "International Telecommunication Regulations," Article 9, 11.

companies that have subsequently become synonymous with Internet activities, such as Google, took umbrage at the notion that the Internet needed regulation by the ITU. Prior to WCIT '12, a group of more than thirty civil society organizations issued an open letter denouncing the ITU for its lack of transparency and inclusiveness, which they argued was contrary to the mandate of the Tunis Agenda "to ensure that all stakeholders, particularly from developing countries, have the opportunity to participate in policy decision-making… and to promote and facilitate such participation."[4] They requested that the ITU declassify all preparatory and Working Group documents; allow civil society participation "in its own right and without cost;" and encourage member-states to establish national forums to better solicit input from alternative stakeholders.

Google, one of the most vocal opponents to the Conference, collected over three million signatures on its "Take Action" petition that highlighted issues such as the freedom to participate in Internet governance, freedom of expression, and the protection of basic human rights. Noting that not all governments support the free and open Internet, Google asserted, "Governments alone should not determine the future of the Internet. The billions of people around the globe that use it and the experts that build and maintain it should have a say."[5]

At the heart of these objections is a desire for transparency and inclusiveness in the ITU, an international governmental organization that has played a large role in telecommunication regulation for almost 150 years. Despite this remarkably long history, the general public knows very little about the Union—its structure, purview or authority—and therefore cannot easily separate fact from fiction in the rare cases that the

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[4] "Letter for Civil Society Involvement in WCIT," *Center for Democracy and Technology* (17 May 2012).
[5] "Take Action," https://www.google.com/intl/en/takeaction/.

ITU has become an international news item. The ITU has not attracted extensive study by historians or policy-makers, either, outside of these recent debates, and the technical nature of its activities make it appear an even more esoteric and forbidding subject of study. Thus, it can be difficult even for dedicated scholars to understand the origins of these recent conflicts and the complex history of the Union that predates them.

This study is an attempt to create a cohesive (if not comprehensive) narrative that places current debates over Internet governance and "bridging the digital divide" into the historical context of international telecommunication regulation via the ITU. Specifically, I aim to illustrate the political nature of the ITU and the ways in which it has evolved—both structurally and in terms of policy and purview—over the course of its almost-150 year history. These changes, perhaps best exemplified by the dramatic restructuring initiated by the Maitland Report in 1985 and finalized at the 1994 Kyoto Plenipotentiary Conference, reveal how member-states have perceived contemporaneous communication technologies—as threats, or as possible information networks—and how they have often attempted to fuse national and international policies in order to bolster national, hierarchical control of information. In other words, these changes show that international telecommunication regulations have historically been the result of considerations that are distinctly *political* rather than *technical*. These political decisions, in turn, have influenced technological adoption, adaptation and utilization across the world, leading to the current telecommunications disparity known as the "digital divide," as well as to current debates over perceived systemic threats emerging from an increasingly globalized network like the Internet.

By exploring the historic relations between national governments and international regulatory institutions such as the ITU, we might better augur the fate of the Internet and evaluate whether we have sufficiently competent institutions capable of addressing Internet-related challenges. We must determine if the Internet truly represents a unique communications technology capable of resisting hierarchical control as many initially believed, or if it is simply one of many indicators of the post-World War II global shift towards transnational, sub-national and non-governmental powers that have diminished the authority of the traditional nation-state.

Current debates over Internet governance and the digital divide are deeply embedded in the recurring, ever-changing concept of *state sovereignty*—which, in the case of telecommunications, refers to the unassailable right of each sovereign nation to regulate its information networks and to determine communication policies within its borders, most commonly at the governmental level. This study will build on the vast literature on the history of the Internet—much of which has, in recent years, turned to dispelling the initial misconceptions about the fundamental principles and the "ungovernability" of the Internet (misconceptions which still persist among the less technologically-literate global population)—and more recent scholarship on liberalization, globalization and sovereignty in an attempt to illustrate that many current concerns about the Internet—such as those alluded to by Malcolm Johnson prior to the WCIT '12—are not actually inherent structural problems but rather the result, intentional or otherwise, of a long series of political decisions made in response to specific political, economic and social concerns.

Given this understanding, and the knowledge that national or regional policy decisions regarding a global network such as the Internet or the World Wide Web will *necessarily* influence global policy, we can begin to consider whether an international treaty organization such as the ITU is the appropriate venue to debate issues such as the digital divide.

<p align="center">Outline</p>

Chapter 1 presents a brief history of the origins of the International Telecommunication Union, emphasizing the specific political and technological environment in Europe that spurred its creation. The ITU is the oldest international treaty organizations in the world, and many of the initial decisions made regarding its structure and purpose—decisions made in a specific political environment, Europe in 1865, in reference to a specific technology, telegraphy—had exceptionally longstanding effects on the development, transfer and regulation of communications technologies. Contrasting conditions in Europe and the United States during this period helps to illuminate early trends in international telecommunication regulation, specifically the emerging tendencies towards a strong bureaucratic organization on the international level and the simultaneous protection of state sovereignty on the national level. The *sovereignty principle* on which the ITU was founded—"fully recognizing the sovereign right of each state to regulate its telecommunication"—directly contradicted the general objective of the Union.[6] This conflict is a recurring theme in international telecommunications history, as nation-states realize the technical necessity of an international regulatory board, but resist granting it any real power to enforce its edicts for fear that it might

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[6] Final Protocols to the International Telecommunication Convention in Atlantic City 1947 (Berne 1947), 1-E. Also see Article 31 of Telegraph Convention of 1865 which recognizes the right of every sovereign state to hinder or at least suspend any communication by telegraph for reasons of public order.

obstruct national interests. This is particularly significant today as the ITU competes with a number of different agencies for the exclusive right to determine Internet governance. It also explains why the ITU and other nondemocratic international organizations (such as the WTO and the World Bank) are vulnerable to exploitation by richer, more developed nations that seek to utilize international law or alliance to bolster national interests and maintain the global status quo. These organizations do not provide an accessible, receptive and established forum for disenfranchised states or individuals to appeal international policies that favor one party or another.

Chapter 2 picks up the narrative in 1932 after radio had emerged as a major disruptive technology on the international stage. Radio developed rapidly throughout the twentieth century, stimulated greatly by military concerns during the World Wars and the subsequent Cold War. The international community at large responded to broadcasting as a threat to national security and sovereignty, as radio waves permeated national borders regardless of content or permission. International broadcasts also introduced the problem of signal interference, the avoidance of which necessitated international coordination and cooperation through an advisory body. As such, the ITU expanded and matured during this period, finalizing its structure in a form that would last more or less intact for sixty years and integrating spectrum registration and allocation into its purview. The regulation of frequency remains one of the most important tasks performed by the ITU to this day, though it also instigated much conflict and debate within the Union between "developed" member-states that dominated much of the available spectrum, and "developing" member-states that felt the "first come, first serve" principle of frequency registration unfairly benefitted nations with extensive broadcast networks. By 1985, developing

countries accounted for the majority of ITU membership. Developing nations, quickly swelling the ranks of the ITU during this period, utilized the majority vote to drastically shift the focus of the Union toward developmental assistance studies and programs. This "development" movement culminated in the publication of The Missing Link; an ITU report that, for the first time on a global stage, detailed the distinctly unequal global distribution of accessible communications networks and technology and proposed recommendations to address the divide. The Report prompted the creation of a new organ of the ITU in 1985, the Centre for Telecommunications Development (later the Telecommunication Development Bureau, BDT). However, its impact was somewhat muted by a global wave of liberalization and a concurrent review of the ITU's structure that culminated in a major restructuring of the organization in 1992.

In Chapter 3, I attempt to place this "development" narrative within the broader political, economic and technological context of the 1970s and '80s so as to better understand why the expansion of telecommunications to underserved territories finally became a globally recognized goal at during this period, and why that goal has largely gone unfulfilled for almost three decades. The continued conflict between the sovereignty principle and the desire for efficient, coordinated international communications piqued at this time due to a convergence of new technologies—specifically direct satellite broadcasting and the nascent Internet—and global economic instability that resulted in a wave of liberalization, significantly shifting the political climate surrounding telecommunications by eliminating the longstanding national monopolies that had served as the focal point of the ITU since its establishment. The Union's most recent restructuring, finalized in 1994, can therefore be interpreted as an attempt to modernize

the agency so as to enable it to react more quickly to the rapidly changing telecommunications environment and create open markets for private investment. It is vital to determine whether the Union succeeded in this effort prior to exploring its current bid to expand its role in telecommunication regulation to the Internet.

Chapter 4 returns to the WCIT '12 and current debates over the digital divide and Internet governance in an attempt to understand why there has been consistent international resistance to ITU efforts to expand its influence to the Internet. I will draw on the recent work of historians, policy-makers, constitutional lawyers and computer engineers to present a brief history of the Internet and an introduction into the ways in which it presents new challenges to telecommunications policy. I will argue, however, that the central issue remains the conflict between the sovereignty principle and increasingly international, or transnational, sources of authority and information.

It is not a systemic flaw in the structure of the Internet that has led to increasingly dire calls for hierarchical regulation of the network, or to the periodic accusations of digital spying or "cyber-warfare" over the last decade. Conflicting (or simply uncoordinated or misinformed) political decisions made on the national and international levels inevitably create panic and fear as states scramble to protect national interests against international corporations, nongovernmental organizations and even individuals who have access to the Internet. Transnational forces have increasingly relegated national power to responding to crises rather than defining their own political, economic and cultural agenda, and have thus prompted aggressive, counterproductive reactions rather than critical dialogue. It therefore seems likely that current issues regarding Internet governance and national sovereignty will only be addressed when a majority of the

population gains a greater technical understanding of the issues at hand and proves willing to actively petition their leaders to approach the problem not from the standpoint of promoting national interests, but from the position of creating an efficient organization that is an open forum, equally accessible to all.

Such an organization would have to be transparent and sufficiently modular to allow for continuous, informed dialogue on the regional as well as the international level, between all interested parties—not just state and corporate representatives. Interestingly, the Internet has the potential to facilitate this kind of organization, but only if policy-makers during this critical period *choose* to relinquish traditional hierarchical control over information and embrace what Milton Mueller calls a *denationalized liberalism*, that "favors a universal right to receive and impart information regardless of frontiers, and sees freedom to communicate and exchange information as fundamental and primary elements of human choice and political and social activity."[7]

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[7] Milton L. Mueller, *Networks and States: The Global Politics of Internet Governance* (Cambridge: MIT Press, 2010), 269.

1.   Origins of the ITU, 1865-1932

The ITU is the oldest existing international organization, originally convened in France in 1865 as the International Telegraph Union. Its early history is important to review here because many of the decisions—or as Paul Starr would call them, *constitutive choices*—made during this era had a lasting impact well into the twentieth century, providing interesting parallels and contrasts to current debates about international telecommunication regulations. Particularly noteworthy for the purposes of this study is the significance of *political necessity* in establishing telegraphy regulations in mid-nineteenth century Europe. Although Europe was at the forefront of developing telegraph technology, the highly fragmented political environment greatly retarded network penetration into foreign territories, preventing a unified continental system. Thus, it typically proved fruitless to attempt to build a network of any significance without also forging political alliances and agreements with neighboring countries.

This fact greatly facilitated the establishment and the lasting influence of the ITU. The main impetus for the nascent International Telegraph Union was to standardize telegraphy code, connect Europe's various national networks and to negotiate terms between nations so that efficient and reliable service could be expanded across national borders. These negotiations undoubtedly had a considerable political element to them, but it must be noted that political negotiations were of secondary importance to the proliferation and expansion of telegraph technology. In other words, in its earliest form, the ITU was a political body that served to remove international political, economic and social barriers that had restricted technological-communications growth to that point.

In contrast, the concurrent telegraph systems of the United States and Great Britain, both of which began as subsidized, protected commercial industries,[8] expanded with almost no political resistance,[9] with each nation adopting starkly different policies than those of continental Europe. This model of the government-supported, loosely-regulated private telecommunications industry has increasingly become the world standard over the past three decades, so it is interesting to keep in mind as our analysis continues that the ITU was born in continental Europe, where private industry played a diminished role in communication compared to the public sector.

Finally, it is important to explore the ways in which international communications agreements, beginning in 1865, have undermined or, at times, determined national and industrial communication policies, often benefitting certain nations or industries more so than others. The early emphasis of the ITU, to promote efficient and reliable telegraphy throughout Europe by connecting its nationalized networks, effectively cemented governmental control of telecommunications for over a century. This provides an interesting context for the wave of liberalization that occurred in the 1970s and '80s, punctuated by a determined focus on expanding access to telecommunications to "developing" nations. This shift, fully realized by the Maitland Report and the eventual creation of the International Development Sector, marks the official expansion of the ITU into political territory without the requisite technical justification historically provided. At times, international laws and the mechanisms of the ITU have been utilized by

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[8] Great Britain retained a private telegraph industry until 1868-1870, when it was nationalized due to public uproar over rampant price-fixing. See: Paul Starr, *The Creation of the Media* (New York: Basic Books, 2004), 168.
[9] That is, after Samuel Morse and the "Magnetic Telegraph Company" in the U.S., and William Cooke/Charles Wheatstone and the "Electrical Telegraph Company" in G.B., completed the first successful, commercially viable lines, and quickly erased the skepticism that surrounded the new technology. See: Tom Standage, *The Victorian Internet* (New York: Walker and Company, 1998), 57-62.

developed nations as means of maintaining power or protecting domestic interests in ways that would not be possible without an international regulatory authority. These same mechanisms, conversely, have also been used as an incentive for developing nations to open their domestic markets to international competition or new technologies, often without the necessary consideration of the costs or the cultural impact of such an action.

<u>The Telegraph and Technological Determinism</u>

The telegraph came into existence in what must be called a revolutionary period in the West. From a technological standpoint, the rapid proliferation of railroads and telegraphy in conjunction seems in retrospect a perfect symbiosis, a "revolution" in long distance communications. Many historians have attributed to these particular technologies a special significance in "shrinking the world faster and further than ever before," as individuals were empowered to travel and communicate over long distances more easily than ever before.[10] To avoid being overly deterministic when studying technological development, it is important to distinguish the technologies and their respective origins from their subsequent cultural use and influence. *Technological determinism* is the view that societies and cultures respond to new technologies, which evolve autonomously and independently, by reorganizing around them or by incorporating them in some way that fundamentally changes the subsequent development of that society. This view is promoted by various "techno-cultural" actors, as historian Thomas J. Misa calls them, who have been at least somewhat successful in promulgating the popular notion that "technology changes culture," but only in cases where their chosen technology is widely adopted (even if the technology is not utilized for the

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[10] An example of this type of analysis is Standage, *The Victorian Internet,* XIII, 106, 217. Standage claims that "the telegraph really did transform the world… It also redefined forever our attitudes toward new technologies." 211.

purpose originally envisioned by its inventors, which is often the case). Misa explains, "Social actors, often asserting a technological fundamentalism that resonates deeply in the culture, actively work to create aesthetic theories, exemplary artifacts, pertinent educational ventures, and broader social and political movements that embed their views in the wider society. When the techno-cultural actors fail, we largely forget them. If they succeed, we believe that technology itself has changed culture."[11]

Rather than attribute agency to technology itself in this manner, we must recognize the various cultural, economic and political factors that contribute to successful technological innovation, transfer, adoption and adaptation, which is almost never one-sided or mandatory. In other words, although the introduction of the telegraph remains a critical moment in world history, it is important to review the historical context for its rapid global implementation and to identify how policies and cultural norms relating to the rapidity and efficiency of long-distance travel and communication not only predated telegraphy, but significantly influenced the way electronic communication was, and still is, utilized and regulated in different regions around the world.

Arnold Pacey calls this process a *technology dialogue* or dialectic, in which developing ideas or techniques spread to a new culture and trigger *responsive inventions*, which may be quite dissimilar to the original technology that inspired it, or technologically similar but adapted to serve a different purpose in that culture.[12] These new ideas, in turn, inspire innovation elsewhere. As Pacey asserts in *Technology in World Civilization*, failure to recognize this dialectic, this complex back-and-forth interaction

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[11] Thomas J. Misa, *Leonardo to the Internet: Technology and Culture from the Renaissance to the Present*, Second Edition (Baltimore: Johns Hopkins University Press, 2011), 189.
[12] Arnold Pacey, *Technology in World Civilization: A Thousand-Year History* (Cambridge: MIT Press, 1991), viii, 137, 147, 207.

between different cultures and societies, has led to policy failures on an international level as "Programmes designed to encourage transfer of technology from industrial nations to 'less developed' countries have often been frustrated because they have not allowed for responsive invention in the countries concerned."[13] Thus, as the ITU moves forward with its development program to "bridge the digital divide," for example, it might be beneficial to balance its standardization efforts (which increasingly struggle to keep up with advancing technologies) with an increased focus on interoperability and backwards compatibility that would allow less-developed nations to focus on expanding their existing infrastructure. This approach is usually less expensive than attempting to upgrade to new, foreign technologies that require high investment costs and usually require a certain level of dependence on foreign interests to either maintain the network or train local workers to do so.

Paul Starr's concept of "constitutive choices" is a useful *social constructivist's* response to technological determinism. In *The Creation of the Media*, Starr contends that political decisions about technological innovations regarding "their design and rules of operation" have significant and long-lasting implications for the development of that, and future, innovation.[14] The unique geopolitical position of the United States in its founding years, for example, paired with its emphasis on democracy and self-governance resulted in an environment that encouraged strong communications monopolies while still maintaining free speech and the constitutional protection of individual rights through a system of checks and balances. These conditions allowed for "broader access to telecommunications, more advanced long-distance networks, [and] more rapid diffusion

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[13] Ibid., vii.
[14] Paul Starr, *The Creation of the Media: Political Origins of Modern Communications* (New York: Basic Books, 2004), 4.

of innovation in communication technologies and products" than was possible in Europe at the time.[15] Furthermore, these conditions fomented a political atmosphere in which "military and other security-related concerns figured far less prominently in the constitutive decisions about communications in America from the founding of the republic to World War I."[16] Instead, founders in the U.S. enacted policies that encouraged the free use of various forms of communication to promote a strong, unified nation.

The creation of the federal Postal Office is a perfect example of the U.S. government actively working to promote civic nation-building through communications monopolies. The Post Office Act of 1792 "made Congress itself responsible for designating postal routes, gave newspapers special discount rates and privileges, and categorically barred government officials from violating the privacy of letters."[17] This act, which required the Post Office to carry all newspapers indiscriminately, effectively created a subsidy that significantly reduced the rates that private publishers had to pay to ship their newspapers to their subscribers, allowing for larger subscription bases. Additionally, by barring state surveillance of parcels, the government engendered public confidence in the Post Office, "promoting communication by restricting its own power over the mail."[18]

The U.S. Post Office Act ultimately resulted in an autonomous press, both economically and ideologically independent from the government. As Starr notes, "With certain well-known exceptions… the press in America enjoyed an exceptional degree of political autonomy throughout the period before World War I. Populist and socialist

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[15] Ibid., 387.
[16] Ibid., 389.
[17] Ibid., 88.
[18] Ibid., 96.

newspapers, for example, circulated freely."[19] The flat shipping rate offered to publishers by the Post Office maintained an open market in which small newspapers could compete with large ones, and in which the government could not consolidate and exploit the press for political gain.

The American system was radically different from concurrent European postal services. In the first half of the nineteenth century, Britain utilized high taxes to restrict the diversity of news publications and readership, and "regularly intercepted mail of potential interest to the government."[20] Many European nations similarly taxed newspapers, artificially reducing readership by raising the cost of shipping newsletters and pamphlets through stamp duties. Contrary to American efforts to divorce the government and the media, European nations took a more authoritarian view of the flow of information, and took strides to control or manipulate it accordingly. France, for example, struggling with a flourishing industry of extraterritorial printers[21] flooding the market with what would otherwise be forbidden literature and foreign news stories, opted for a kind of quid pro quo arrangement where foreign papers were allowed to circulate with relative freedom (though they could not explicitly attack French authority) in exchange for including strategically planted stories favorable to France.[22]

As we shall see, these radically different national policies on information and the press, constitutive choices born of political considerations and of particular economic and cultural environments, continued to influence the adoption and utilization of

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[19] Ibid., 392.
[20] Ibid., 91, 95.
[21] These printers were mainly located in the Netherlands, where the absence of a strong central government allowed for the printing and export of literature and newspapers across Europe. See, Robert Darnton, *The Forbidden Best-Sellers of Pre-Revolutionary France* (New York: W. W. Norton & Company Ltd, 1996).
[22] Starr, *Creation of the Media*, 43.

communication technologies on a national and international level well into the twentieth century. Authoritative, restrictive European policies predated the telegraph and, for many years, actively restricted its growth and set an important precedent for government control of information.

By the 1860s, authorities realized the need for an international organization to mediate political conflicts over telegraphy and to unify the major telegraph networks of Europe. Prior to the conference in 1865, telegraphy in continental Europe was highly fragmented and often utilized for nationalistic military purposes, though it undoubtedly promoted domestic commercial interests as well when industry gained the state's blessings. As such, it was almost exclusively state-operated, funded and regulated from its conception, typically orchestrated by the national postal system.[23] By 1850, for example, no one in France could send a telegraph without the express permission of the Interior Department, tasked with overseeing all telegraphy in the country, and most ciphers and codes were banned across Europe until 1865 as governments wanted to retain the ability to review all messages sent within their borders.[24] In such an environment, it was risky, if even possible, for an individual or company to endeavor into the European telegraph industry.

Another reason for the absence of commercial endeavors into telegraphy in Europe, aside from the initial capital investment required and the high risk of nationalization, was the difficulty of expanding a network across political borders in a highly fragmented environment. Such a feat proved difficult even for state-owned networks at the time. Starr cites Germany as a perfect example of this challenge: in order

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[23] Ibid., 158.
[24] Ibid., 159.

to construct a single telegraph line to span Germany (which was struggling to achieve national unification during this period) from Berlin to the Belgian border, twelve regional authorities representing twelve individual governments had to meet and agree to terms. The Austro-German Telegraphic Union convened for the first time in 1850 in an attempt to mitigate these challenges. Delegates at the conference managed to settle on the Morse system as the standard code of telegraphy and established a priority list for transmissions: first to government messages, second to messages relating to the functioning of the railroad, and third to public correspondence.[25] In 1857, the Austro-German Telegraphic Union also pioneered the (now universal) division of its constituent documents into a basic, immutable agreement (the Convention) and supporting, lesser articles intended to be regularly altered and amended in subsequent conferences as necessary (the Constitution).[26] However, as Starr notes, "the fragmentation of authority continued to impede development" of the telegraph across Europe despite efforts such as these.[27]

This difficulty only increased on the continental level, as evidenced by the various other bilateral and regional agreements that popped up between 1849 and 1865—the most significant being the Brussels and Berne Conventions, both of which took place in 1858.[28] Messages crossing national borders in Europe had to be transcribed and translated, inspected by the proper officials in the neighboring country, and transmitted

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[25] Telegraph Convention between Austria and Prussia in Berlin (Oct. 3, 1849), as quoted in Francis Lyall, *International Communications: The International Telecommunication Union and the Universal Postal Union* (Burlington: Ashgate Publishing Ltd, 2011), 18.

[26] Francis Lyall, *International Communications: The International Telecommunication Union and the Universal Postal Union* (Burlington: Ashgate Publishing Ltd, 2011), 7, 19. Interestingly, the ITU did not adopt a constitutional structure until 1992.

[27] Starr, *Creation of the Media*, 159.

[28] "Plenipotentiary Conferences" in *History of ITU Portal*, available at www.ITU.int/en/history.

again, hopefully to its final destination.[29] This amounted to a very inefficient process, complicated by a number of economic questions—such as how much international telegrams should cost to transmit and which carrier was entitled to what portion of the fee—as well as national concerns—such as how to prioritize messages transmitted from neighboring states and whether coded messages would remain private or not. The Telegraph Convention of 1865 assembled to address these, and other, contentious issues.

First Convention of the ITU

Twenty European nations sent diplomats and technical experts to represent their interests in the first Telegraph Convention, including Austria, Baden, Bavaria, Belgium, Denmark, France, Greece, Hamburg, Hanover, Italy, The Netherlands, Portugal, Prussia, Russia, Saxony, Spain, Sweden-Norway, Switzerland, Turkey and Württemberg.[30] Although the Union did not produce an official statement of purpose until the Madrid Conference in 1932, the 1865 International Telegraph Convention clearly focused on increasing the efficiency and reliability of telegraphy across national borders in order to establish "a single continuous territory, to suppress zones, reduce rates, send telegrams in any language or in cipher… and establish the franc as the monetary unit of exchange."[31]

The 1865 Convention addressed several contentious issues relating to international telegraphy, mostly economic and political in nature. One of the first issues

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[29] Stephanie Schmahl, "The United Nations Facing the Challenges of the 'Information Society,'" *Max Planck Yearbook of United Nations Law, Vol. 11* (2007): 210.

[30] For a full list of participant nations and their representatives, see: "International Telegraphic Conference 1865: Signature of Convention by twenty sovereign States opens era of international Co-operation." *Telecommunication Journal Vol. 32, no. 5* (1965), available at http://www.itu.int/dms_pub/itu-s/oth/02/01/S02010000014E02PDFE.pdf. For the original in French, see: "Conférence télégraphique internatinoale (1865: Paris France) Liste des participants," available at http://www.itu.int/dms_pub/itu-s/oth/02/01/S02010000014102PDFF.pdf.

[31] Keith Clark, *International Communications: The American Attitude* (New York: Columbia University Press, 1931), 94. Also see:
http://www.itu.int/en/history/Pages/PlenipotentiaryConferences.aspx?conf=1&dms=S0201000001.

decided was to abandon the "area" rate system for telegraphy, where regions independently set their own rates, and replace it with a single tariff rate across Europe that would greatly reduce both costs and conflicts arising from international telegraphy.[32] The Convention granted Russia a "departure" from this standard pricing scheme similar to an exemption for Prussia, in "the enormous area of that Empire with its scattered population" which made it "impossible to adopt a single rate."[33] It is noteworthy that rural and border areas continue to pose a significant barrier to telecommunication access to this day, not necessarily because of technological limitations but because of the shrinking profit margin of such endeavors, due to higher infrastructure costs paired with less consumer demand.

Apart from the pricing system, the Convention provided definitions and principles for various services associated with telegraphy, such as the "registered telegram," the "telegram to be forwarded," and the use of cipher for private telegrams.[34] Most of these services were simply analogous to their postal counterparts. The Convention also established a standing Committee tasked with preparing a draft treaty prior to future conferences, outlining possible amendments and proposed topics for debate. In order to guarantee equality and protection of the interests of each state, the Convention guaranteed that each nation would be allowed one vote in the Committee regardless of the number of delegates it had sent.[35] This one-country, one-vote system remains in place today, and, as we shall see, proved a significant factor in the 1960s and '70s, as ITU

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[32] "1865: Signature of Convention by twenty sovereign States opens era of international Co-operation," 180.
[33] Ibid., 180.
[34] Ibid., 183.
[35] Ibid., 181.

membership swelled in ranks with newly-independent, developing nations interested in bridging the inequitable global distribution of communication technology.[36]

Two particular political declarations of the 1865 Convention are significant within the scope of this analysis, because they illustrate how the founding members of the Union viewed the impact of the telegraph and their role in its regulation. First, Édouard Drouyn de Lhuys, the French foreign minister and ITU delegate, referred to the conference as "a veritable Peace Congress," and put forth the following proposition about the telegraph:

> Although it is true that war is frequently caused by a mere misunderstanding, is it not a fact that the destruction of one of the causes makes it easier for nations to exchange ideas and brings within their reach this prodigious means of communication, this electric wire which conveys thoughts through space at lightning speed, providing a speedy and unbroken link for the scattered members of the human race?[37]

This quote illustrates the military importance attributed to speedy and accurate communications in Europe, and across the globe, that remains to this day. It is paired, however, with an assumption that a unified European telegraph network would "destroy" one of the causes of war: *miscommunication*. Indeed, the delegates hoped the Convention would address several of the most contentious issues in this regard, specifically relating to the use of codes and ciphers to protect the privacy of international communications, but this statement set a very lofty goal for an industry that had up to that point been distinctly characterized by miscommunication and disharmony. To a historian, furthermore, the absolutism of this statement rings of technological determinism and, without delving too deeply into that stream of thought, does not consider the potential for the rapid transmission of short, impersonal messages afforded by the telegraph to

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[36] Voting would also become an issue in 1871-72 when the ITU Committee adopted "colonial voting," which granted several colonial powers additional votes based upon their holdings.

[37] "1865: Signature of Convention by twenty sovereign States opens era of international Co-operation," 183.

increase international political misunderstanding or enmity, as leaders might feel obligated to reply to international events or provocations before they have properly considered their response. Most significantly for the purposes of this analysis, however, Drouyn de Lhuys' statement reified the notion that the purview of governmental authority extended to telecommunications and the control of information, since it directly influenced international relations and national security. Continuing the European trend of controlling access to information and communication, the ITU now appeared in a position to secure governmental control of telecommunications though international agreement, greatly benefitting those nations that secured a place on the Committee.

The second important political declaration of the 1865 Convention illustrates the delegates' confidence in the new international authority they were creating. The delegates' explicitly acknowledged at the conference that England had not been invited to join in the process because "it was well known that the telegraph services in that country were in the hands of private companies," but that "they would in any event, doubtless align their system with that accepted in the [Treaty]."[38] This assertion rests on a principle that we would now call the *network effect*, and it is a revealing concession from the delegates.

The network effect describes how the benefits of a network grow as its total number of users or products increase, or more simply, as its basic technologies and principles are standardized. The resulting benefits are known as positive *network externalities*.[39] The basic principles of the network effect are not hard to comprehend; imagine, for example, if "Facebook Friends" were limited to those people who live

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[38] Ibid., 181.
[39] Michael Katz and Carl Shapiro "Technology Adoption in the Presence of Network Externalities," *Journal of Political Economy Vol. 94, no. 4* (August 1986): 823.

within 10 miles of your residence, and beyond those limits were a series of competing social networks. The network would still retain some value as a means of communication and expression, but it certainly would not have the potential that it has as a unified global network, capable of connecting long-lost friends and family or propagating news stories from around the world. Similarly, a technology such as a CD player or a VCR benefits from universal standardization, as users gain access to a larger stock of common materials, can exchange materials with a larger base of users, and potentially gain access to superior services and cheaper accessories associated with the technology.[40]

As Dennis Calton and J. Mark Klamer assert in "The Need for Coordination Among Firms, with Special Reference to Network Industries," communication industries are particularly susceptible to negative network externalities, the negative consequences that can occur in a decentralized and non-standardized network. A decentralized price system, such as the one that prompted the 1865 Paris Convention, "cannot guarantee an optimal spatial configuration" of the nodes of a communication network, which means that it will not operate as efficiently as a unified, well-planned system.[41] In the case of early European telegraphy, this meant that the spread of the new technology was restricted by political and economic fragmentation, which would be best addressed by the implementation a single tariff system.

An implicit acknowledgement of the network effect among the attending delegates accounts for their confidence that England would accede to the agreements set by the Committee, even though England was not represented at the conference and had a private, rather than a state-operated, telegraph industry. In order to connect with the new

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[40] Ibid., 823.
[41] Dennis Carlton and J. Mark Klamer, "The Need for Coordination Among Firms, with Special Reference to Network Industries," *University of Chicago Law Review Vol. 50 no. 446* (1983): 450.

unified European system and benefit from its positive network externalities, England would have to adopt the standards of that system.

This in effect granted ITU member-states great power in determining the conditions for accepting future members and further solidified governmental control of telecommunications in Europe, since only member-states could vote at the Convention. Furthermore, the delegate's concession regarding England's inevitable compliance augurs one of the likely potential hazards of the network effect identified by Carlton and Klamer: monopolization of the network through horizontal and vertical integration. Specifically in the case of telecommunications, horizontal integration is utilized to expedite routing, network expansion and pricing, while vertical integration is utilized to lower research and development costs. Successful horizontal and vertical integration can additionally promote innovation by removing some of the financial risk inherent in a competitive environment.[42] In effect, these amount to efforts to *internalize* negative network externalities, thereby mitigating their impact, and to *maximize* both efficiency and profit. The role of government regulation of telecommunications monopolies has become a vital issue in recent decades as the industry has become increasingly privatized. In the case of the Internet, specifically, intense debate has focused on how far international regulations should go in an attempt to internalize network externalities and reduce incidents of cybercrime/terrorism, spam, copyright violations, and cyber espionage. However, before an organization such as the ITU is assigned the task of regulating the Internet, we must try to understand its origins, how it has historically

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[42] Ibid., 454. For a good example of the network effect and attempted horizontal/vertical integration, see Jon Gertner, *The Idea Factory: Bell Labs and the Great Age of American Innovation* (New York: Penguin Books, 2013).

utilized its powers, and whether the Internet truly is inherently different from previous telecommunication networks, thus requiring entirely new regulatory bodies.

<div align="center">Subsequent Conferences, 1868-1932</div>

In the years following its establishment, the ITU met periodically to revise the Convention. Between 1865 and 1932, delegates directed the Union's regulatory influence at the problem of telegram rates, as many felt that strict technical standardization or regulation might further hinder development and expansion of telegraphy.[43] As Codding and Rutkowski note in their comprehensive history of the ITU, delegates aimed to fix a rate that would be high enough to "render the maximum return to the telegraph administration while, at the same time, not so high as to encourage the public to use an alternative method of communication."[44] The fact that most governments managed telegraphy under the aegis of the national post office and used its services free of charge complicated the process of determining the actual cost of sending a telegram, thus prompting much debate in the Union. The interests of the public during this period, therefore, were deemed subordinate to the interests of the state, and public access to telegraphy was largely determined by the economic interests of the government.[45]

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[43] George Codding Jr., and Anthony Rutkowski. *The International Telecommunication Union in a Changing World*. (Massachusetts: Artech House Inc.,1982), 7.
[44] Ibid., 7-8.
[45] This sentiment is illustrated by the report of an American observer to the St. Petersburg Telegraph Conference in 1875: "The interests of the public who use the telegraph seemed to be entirely subordinated to the interests of the state and to the administrations: that is, to a fear lest any improvement (in the rate structure) might produce less revenue than is got at present, and lest it might throw more work on the telegraph bureau." See: George Codding Jr., *The International Telecommunication Union: An Experiment in International Cooperation* (Leiden: E. J. Brill, 1952), 55.

Britain, newly appointed to the Committee after nationalizing its telegraph industry,[46] sent two separate delegations to the Rome Convention in 1871-72, representing its own network and the "British India" network that it operated in its colony, and proposed that each should be guaranteed a vote under the original 1865 agreement.[47] In 1875, delegates incorporated this so-called "colonial voting" into the Convention, granting colonial powers such as Great Britain, France, Italy and Portugal six additional votes each. This practice, which clearly favored the interests of established colonial powers in the international arena, was not amended until 1973.[48]

On the technical front, the late 1870s saw the introduction of the telephone, although international telephony proved an expensive and unreliable technology until the second quarter of the twentieth century. As described by Codding and Rutkowski, "The technological breakthrough of the telephone was easily incorporated into the mandate of the ITU because, in the beginning, it was considered no more than an adjunct to the telegraph, thus not a threat to the entrenched interests of telegraph bureaucracies."[49] It did not play a large role in the Union until 1925, when delegates considered its regulation alongside another prominent new technology: radio, or specifically, wireless telegraphy. Radiocommunication became a topic of extreme interest at the turn of the century because of its importance to naval and air communications, and because radio spectrum was a limited, and therefore valuable, resource.

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[46] Great Britain initially attended the 1868 Convention under the pretense of running the Indian telegraph system, though its own telegraph network was still privatized. This changed soon after, however, when Britain nationalized its network.
[47] Codding and Rutkowski, *International Telecommunication Union in a Changing World*, 11.
[48] Jill Hills, *Telecommunications and Empire* (Chicago: University of Illinois Press, 2007), 118.
[49] Codding and Rutkowski, *ITU in a Changing World*, 318.

## 2.	The International Telecommunication Union, 1932-1985

Initially, international regulation of wireless telegraphy, or radio, mirrored that of wired telegraphy, as the two systems were interoperable and both utilized Morse Code. In the years leading up to and following World War I, however, it became obvious that radio required dedicated international regulation. Contrary to wired telegraphy in Europe, wireless telegraphy developed as a commercial industry dominated by large corporations such as the British telecom, the Marconi Wireless Telegraph Company, which by 1912 "was on the verge of total domination of global radio communications," causing conflict between Great Britain and the Marconi Company, as well as between Great Britain and its rising challenger: the United States.[50]

Additionally, the emerging concept of *broadcasting* proved to be a significant departure from the extensive point-to-point telegraph networks constructed during the previous century. Radio necessitated further international regulation in order to limit *interference* on the limited available spectrum, as broadcasts from multiple stations using the same frequency resulted in disrupted and scrambled signals.[51] The ability of radio messages to permeate national and political boundaries, regardless of intent and of substance, challenged the sovereign right of each nation to regulate telecommunications within their borders and fomented a renewed concern with the security of international communications—in effect reversing many of the initial problems facing the expansion of the telegraph and foreshadowing more recent issues with allocating satellite orbits and with Internet content regulation.

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[50] Peter J. Hugill, *Global Communications Since 1844: Geopolitics and Technology* (Baltimore: Johns Hopkins University Press, 1999), 95-107. Also: Codding and Rutkowski, *ITU in a Changing World*, 12.
[51] Lyall, *International Communications*, 71.

In 1932, the ITU took on its current moniker, the International Telecommunication Union, when it integrated radio regulation into its Convention. The Union went through a period of standardization between 1932 and 1982 involving the formalization of the organization and operation of its various branches tasked with studying and regulating telegraphy, telephony and wireless communication. This period was also one of stagnation, however, as the political fragmentation of the two World Wars disrupted much of the political and technical work of the Union.

Following World War II, the ITU formally became a specialized agency of the United Nations. The subsequent influx of member-states associated with the UN, including dozens of newly independent former-colonies, combined with a rapidly changing political, economic and technical environment, quickly shifted the focus of the ITU in the following decades towards direct facilitation of network development in underserved territories in an attempt to achieve equal access to telecommunications across the globe. This movement is best exemplified by the 1985 Maitland Report, which noted the significant economic, political and social importance of unified telecommunications networks and highlighted the vast technical disparity that existed in the field between the "developed" and "developing" world. The Maitland Report marks the beginning of the modern age of the ITU, as it inaugurated a decade-long introspective review of the Union's organization, activities and goals that culminated in a complete restructuring of the ITU into its current form.

Radio: Prior Consent vs. the Free Flow of Information

A comprehensive review of the history of wireless communication is beyond the scope of this study; it suffices to note that radio became a primary focus of international

conflict and debate at the turn of the twentieth century. In some ways, these debates reflected previous ones on telegraphy; for example guaranteeing the efficient and secure transmission of messages, especially during wartime and in emergency situations. Regulation resulting from several major events, such as the sinking of the Titanic and the use of wireless during World War I for military communication and propaganda, resembled prior regulation of telegraphy. Similarly, the constitutive choices of radiocommunication largely adhered to the national inclinations established during the previous century, upholding trends we have previously identified. As Paul Starr notes succinctly, European governments continued to tax communications, including radio, and concentrate control of communications media "not just in the state, but in a single bureaucracy," typically the post office.[52] The United States, in contrast, avoided a tax on radio and continued its practice of disallowing "legacy" institutions from expanding horizontally into new mediums; the 1927 Radio Act barred telegraph and telephone companies from obtaining radio licenses if they would "substantially lessen competition or [restrain] commerce."[53]

In many ways, however, broadcasting eventually reversed both the technical and political trends of the previous century of telecommunication regulation, complicating and ultimately expanding the role of the ITU. Contrary to the extensive and expensive point-to-point telegraph networks constructed throughout the nineteenth century that required international coordination and agreement to physically maintain service and efficiency, wireless communication enabled the broadcast of a signal from a given station in every direction, regardless of political or national boundary, with the strength of the

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[52] Starr, *Creation of the Media*, 345.
[53] Ibid., 346.

transmission only limited by the power of the station.[54] Contemporary policy-makers such as German state secretary for postal affairs H. G. M. Kraetke quickly recognized this fact, exclaiming in 1906, "Therefore radiotelegraphy, more than any other means of news transmission, has an international character right from the beginning which doubtlessly requires and international order."[55]

Instead of requiring international treaties to physically extend networks across borders, radio necessitated regulation of the available broadcast spectrum so as to prevent or resolve issues of signal interference, as well as to guarantee technical interoperability regardless of the origin/destination of the transmission or the type of transmitter/receiver used. This fact compelled the Union to expand the definition of an *international service*. Previously applied only to costal installations and any station physically connected to an international network, as of 1927 the Union considered its regulations applicable to "any international or national station capable of causing interference beyond the boundaries of its home state," regardless of location.[56]

These circumstances also instigated an international debate about whether nations should be required to allow a free flow of information (*free flow principle*) across borders or whether transmitting nations should be required to seek the *prior consent* of sovereign nations within broadcast range.[57] Instances of "jamming" international signals and utilizing radio for propaganda campaigns began as early as 1931, when twelve nations

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[54] Typically only High Frequency transmissions, developed in later years, proved capable of truly long-distance communication, though border stations could theoretically breach national borders with AM or FM signals as well.

[55] Wolfgang Kleinwaechter, "The People's 'Right to Communicate' and a 'Global Communication Charter:' How does Cyberspace Change the Legal concepts of Human Rights and Participation?" *Journal of International Communication Vol. 5 no. 1-2 (1998):* 113.

[56] Lyall, *International Communications*, 65.

[57] James G. Savage and Mark W. Zacher, "Free Flow verses Prior Consent: The Jurisdictional Battle over International Communications," *International Journal Vol. 42 no. 2* (Spring 1987): 342.

attempted to block the first Vatican broadcast.[58] The Second World War and subsequent

Cold War, as well as various technological innovations, such as direct satellite

broadcasting and the development of the Internet, further augmented this problem, and

the prior-consent/free-flow debate remains inadequately addressed to this day.

Significantly for the purposes of this study, it proved one of the major dividing points

between the "developed" and "developing" member-states of the ITU starting in the

1970s that forced a drastic shift in the focus and structure of the ITU in the 1980s.

<div align="center">The International Telecommunication Union Matures, Stagnates</div>

Several International Radiotelegraph Conferences were held between 1903 and

1932,[59] mainly with the intent of allocating radio spectrum so as to avoid harmful

interference across borders but also to implement safety regulations ensuring the

efficiency and reliability of emergency wireless communications.[60] The "International

Radio Union," however, never achieved formal international status; its proceedings were

severely hampered by the First World War.[61] Thus in Madrid in 1932, the International

Telegraph Union incorporated the International Radiotelegraph Conference into its

Convention, thereby formalizing international radio regulations. The Union took on its

current moniker, the International Telecommunication Union, to signify its increased

range of function and authority, and the Convention defined for the first time

telecommunications as "Any telegraph or telephone communication of signs, signals,

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[58] Ibid., 347.

[59] These included the Preliminary Conference Concerning Wireless Telegraphy in Berlin in 1903, and subsequent conferences in Berlin 1906, London 1912, Washington D.C. 1927, Prague 1929, and Madrid 1932.

[60] The 1912 London conference convened in the wake of the Titanic disaster to require all coast stations to receive transmissions from ships regardless of the brand of equipment used, and that "there should be imposed on certain classes of ship the obligation to carry a radio-telegraphic installation." (Hugill, 96). The prior-consent/free-flow debate remained an ever-present, yet unaddressed issue until the late 1950s.

[61] Lyall, *International Communications,* 76.

writings, images and sounds of any nature, by wire, radio, or other systems or processes of electric or visual (semaphore) signaling."[62]

The following decades saw a strange period of both maturation and stagnation of the ITU, as the details of its structure were finalized in a form that would last more or less intact for sixty years, but its actual proceedings were greatly hampered by a rapidly changing political, technological and economic environment. By 1938, the ITU divided its duties between three main branches that studied technical and operating questions: the International Consultative Committee on the International Telegraph (CCIT), the International Telephone Consulting Committee (CCIF) and the International Technical Consulting Committee on Radio Communications (CCIR).[63] Each branch had a similar organization, with a plenary assembly that met periodically (in principle every three to five years, though it varied widely, especially during wartime), and smaller working groups tasked with studying technical, political and economic issues related to their field and drafting proposals for consideration at the plenary convention.[64] This branched structure helped reduce the preparation work required for the Convention by maintaining "a [continual] dialogue for the exchange of information on new technology and developing standards" between the Union's ever more numerous member-states.[65] It also represented the first implicit indication that the growing bureaucracy was struggling to keep up with the global technological environment.

World War II disrupted the status quo by indefinitely postponing ITU conferences while simultaneously providing a huge stimulus to technological innovation, particularly

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[62] "Annex," International Telecommunication Convention Madrid 1932 (London: General Post Office, 1933), 25.
[63] The acronyms derive from the French translation.
[64] Codding and Rutkowski, *ITU in a Changing World*, 87.
[65] Ibid., 319.

in the field of radio broadcasting. The usable radio spectrum expanded greatly between 1938 and 1947, and authorities on both sides of the intervening conflict failed to abide by the Radio Regulations of 1932. Thus, the ITU reconvened in Atlantic City 1947 to a chaotic communications environment and a complex political atmosphere.

In order to better deal with this crisis, the ITU again underwent restructuring in 1947 to become a specialized body of the nascent United Nations—though, in practice, it retained much of its established structure. In addition to the three CCI branches (Telegraph, Telephone and Radio Consultative Committees), the Union divided its main conference into a Plenipotentiary Conference and an Administrative Conference, and established an Administrative Council, General Secretariat, and an International Frequency Registration Board (IFRB).[66] The workhorse of the Union was the Plenipotentiary Conference which met every five years in order to:

> establish budgets and approve accounts, to elect the members of the Administrative Council, to enter into arrangements with other international organizations, to revise the Convention, if necessary to enter into or revise agreements with any other international body, and deal with other telecommunications questions as needed.[67]

Administrative Conferences coincided with Plenipotentiary Conferences, and were tasked with revising regulations in a specific field (i.e. telegraphy, telephony or radio). The General Secretariat facilitated the administrative activities of the Conferences and supervised the collection and publication of data accumulated by the Union.[68] These organs, along with the three Consultative Committees,[69] did not represent a significant

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[66] Lyall, *International Communications*, 99.
[67] Ibid., 99-100.
[68] Ibid., 100.
[69] The three CCIs were consolidated into two in 1956; radio retained its own branch, the CCIR, while the Telegraph and Telephone branches (CCIT and CCIF, respectively) were combined into the International Telegraph and Telephone Consultative Committee (CCITT).

practical change from the structure established in Madrid 1932. They served to further distribute the Union's workload and to provide international oversight of its activities.[70]

The creation of the Administrative Council and the International Frequency Registration Board, however, signified a major shift in the proceedings of the ITU. The Administrative Council, which met once a year, served as a kind of surrogate for the Plenipotentiary Conference which met every five years—though, as Codding and Rutkowski noted prior to the 1982 Nairobi Conference, "it [was] only a pale reflection of its parent" because it met so briefly and represented only a small portion of the ITU's membership.[71] Delegates from thirty-six member-states,[72] elected by the Plenipotentiary Conference, met for three weeks each year to review and coordinate the activities of the various branches of the ITU and to provide international oversight for the IFRB.

The IFRB, in turn, had the singular goal of addressing the chaotic post-war radio situation. Initially, the Board addressed the problem largely from an advisory role, maintaining a Master International Frequency Register (MIFR) that detailed which services were authorized to use which frequencies in a given region.[73] In this manner, the IFRB could arbitrate conflicts resulting from interference, although only the good faith implementation of the Board's recommendations on behalf of the parties involved gave them any legal credence on the international stage. Many of the most prominent advocates (i.e. the United States) for the creation of the IFRB desired a more dynamic and authoritative organ, "something of a cross between the Federal Communications

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[70] The Swiss government had served in this oversight/advisory role since the Union moved from Paris to Geneva.
[71] Codding and Rutkowski, *ITU in a Changing World*, 139.
[72] Originally the Council was limited to eighteen members.
[73] Lyall, *International Communications*, 102.

Commission and the International Court of Justice."[74] In practice, the idea of an authoritative frequency board conflicted with the desire of sovereign member-states to determine their own services and frequencies.[75] Eventually the Union extended the IFRB's purview to include active advisement and coordination of international spectrum allotment so as to minimize the negative network externalities described above, but reserved the right to formally implement these recommendations at the Plenipotentiary Conference, rather than the Radio Consulting Committees. Regardless, the management of radio spectrum remains one of the most essential activities of the ITU.

Thus, by the 1970s the ITU had a well developed though increasingly unwieldy structure, the result of a century of political and technological evolution. The Union's stated purpose, on the other hand, was less defined and again in a state of flux as its membership swelled with new members of the United Nations. Between 1959 and 1965, ITU membership increased from ninety-six nations to one hundred and twenty-nine—a trend that continued throughout the 1970s.[76] More to the point, a majority of these new member-states represented post-colonial, newly independent nations. In 1959, Egypt and Ghana were the only independent African member-states of the ITU; by 1982, there were forty-six African members.[77] This drastic demographic shift had significant implications for the ITU, which still operated as a conventional, or treaty-based, organization—an antiquated form of diplomacy for such a large organization. The entire Telecommunications Convention was, in theory, open to revision every five years at the

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[74] Harold Jacobson, "The International Telecommunication Union: ITU's Structure and Functions," in *The International Law of Communications*, ed. Edward MacWhinney (Leiden: A. W. Sijthoff, 1971), 62.
[75] Codding and Rutkowski, *ITU in a Changing World*, 119.
[76] Ibid., 44.
[77] Quoted in Lyall, *International Communications*, 116n154. A list of UN members and their dates of admission can be found at: http://www.un.org/en/members/index.shtml. All UN members are entitled to ITU membership.

Plenipotentiary Conference based upon a simple majority vote. By 1982, that implied organizing a delegation of over one hundred and fifty nations and attempting to determine precisely which issues to address, while it was becoming increasingly obvious that the majority of the membership did not feel adequately represented by the Union and its recommendations.

The new majority of developing nations used their newfound influence to shift the focus of the Union towards the active promotion of low-cost, accessible technologies and equal access to telecommunications. Although this process started as early as 1965, when the ITU passed Resolution Number 28 which "placed an additional emphasis on the importance of development assistance activities," it did not gain traction until after the ITU published a seminal report entitled "The Missing Link" that, for the first time on the global stage, outlined in detail the glaring discrepancy between telecommunications in the most developed nations and the least developed nations.

<div align="center">The Missing Link, 1985</div>

In January 1985, the ITU published "The Missing Link: The Report of the Independent Commission for World-Wide Telecommunications Development" outlining the studies and proposals of "The Maitland Commission," named after its chairman Sir Donald Maitland. Initiated at the 1982 Plenipotentiary Conference in Nairobi, the Missing Link was the one of the first international studies to explore the direct correlation between telecommunications accessibility and national prosperity and economic growth.[78] Resolution 20 of the Nairobi Convention described the basis for the Commission as an international recognition of "the fundamental importance of communications infrastructures as an essential element in the economic and social

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[78] "The Missing Link/Maitland Report," in *History of ITU Portal*, available at: www.ITU/int/en/history.

development of all countries," and the ensuing concern that, "notwithstanding [this fundamental importance], a relatively low level of resources has so far been allocated to telecommunications development by international aid and investment organizations."[79]

Drawing statistics from various publications and studies,[80] as well as decades of international telecommunications data collected by the ITU on 110 countries, the Commission highlighted what it called "the gross and growing imbalance in the distribution of telecommunications throughout the world."[81] *Telecommunications*, as explored within the limitations of the available statistics, largely translated to fixed line telephony and its related infrastructure, although the scope of the Report left room for tailored national recommendations that accounted for up to twenty years of development and technical innovation.[82]

The Commission noted with alarm that of a global total of roughly 600 million telephones in 1985, more than three-quarters were concentrated in just nine countries.[83] Policy-makers in developed nations (who took extensive, reliable networks for granted) and developing nations (who often prioritized more tangible or practical investments) failed to recognize the numerous beneficial aspects of telecommunications in fields such as emergency and health services, administration and commerce, the promotion of

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[79] Res. 20, "Final Protocol, Additional Protocols, Optional Additional Protocol, Resolutions, Recommendations and Opinions," International Telecommunication Convention Nairobi 1982 (Geneva 1982), 255.
[80] The Commission explained that it did not conduct its own research for two reasons: limited time and funds, and an existing, extensive literature on the subject of telecommunications in the developing world. The Report specifically mentions the following studies as particularly useful: "Telecommunications for Development," prepared jointly by the ITU and the Development Centre of the Organisation for Economic Cooperation and Development (OECD) in 1983; the World Development Reports 1983 and 1984 by the International Bank for Reconstruction and Development (IBRD); the World Telecommunications Report 1980-1990 by Arthur D. Little; and the proceedings of the three Seminars on telecommunications for development held in San Jose (Costa Rica), Lome and Kuara Lumur, and the Commonwealth Telecommunications Conference at Leeds Castle (all 1983). See Preface, "Maitland Report."
[81] Maitland Report, 3.
[82] Ibid., 41.
[83] Ibid., 3, 14, 20.

international trade and good relations, and national autonomy. As noted in the Report's concluding section, "The process of creating effective networks world wide will provide new markets for the high technology and other industries, some of which are already suffering the effects of surplus productive capacity."[84] In other words, expanding telecommunication access to the developing world would make international communications and trade more efficient, benefitting the developed and developing world alike.

The Commission recommended that "all concerned with telecommunications give more favourable consideration than hitherto to assistance for the expansion of telecommunications world wide in view of the importance of [the] sector to the effectiveness of the process of development as a whole."[85] Specific recommendations included calls for increased foreign investment and cooperation in telecommunications; increased national investment in expanding telecommunications to rural areas, and in telecommunications in general; and increased indigenous production of equipment so as to minimize technological dependence on foreign parties.

The Commission also called for the creation of a new branch of the ITU, the Centre for Telecommunications Development, which materialized later that year at the first World Telecommunication Development Conference in Arusha, Tanzania. Noting that the "existing mechanisms for aiding the development of telecommunications [were] loosely structured and… inadequate," the new Development Bureau was to study and to collect data about telecommunications policies and experiences around the world, and apply that accumulated knowledge through a Telecommunications Development Service

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[84] Ibid., 65.
[85] Ibid., 28.

that would provide planning advice as well as training for local workers and vital technical information about new technologies.[86] This advisory role remains a vital feature of the ITU's activities since it is one of the primary international mechanisms to minimize negative network externalities related to broadcast networks, satellite networks, or telephone networks. As reiterated by a representative at the Arusha Conference, "Highly skilled network planners are in short supply even in the developed countries yet without the application of their skills there is the very real danger of wasteful deployment of the available equipment, and failure to exploit its full capability even after being installed."[87]

It is significant and a little surprising in retrospect that the Maitland Report largely restricted its focus to telephony. This is at least partly attributable to the financial decision to utilize existing data and studies (much of which focused on telephony) rather than to conduct independent research. Still, telephones remained an expensive method of international communication in 1985, especially compared with radio. As such, it served as a stark indicator of the unequal distribution of communications technologies at the time. It is noteworthy, however, that the Commission's recommendations did not focus more on the potential to utilize existing analogue networks such as radio for two-way communication.

Radio remained in 1985 (outside of the U.S.) a state-regulated monopoly "with varying degrees of autonomy of the broadcasting agency and programming inputs from

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[86] Ibid., 54.
[87] Ibid., 98.

the private sector."[88] Consequently, the constitutive decisions of radio had largely relegated it to a broadcast technology—that is, a means of communicating in only one direction: from the top down. Radio remained one of the main sources of disseminating governmental messages and information to the public since World War II.[89] Given the wide availability of the technology, however, and its potential for expanding inexpensive, two-way communications to rural and underserved areas, it is notably absent from the Report.[90] This can be attributed to several possible explanations, the most plausible of which is that the Commission stressed "expected future demand" as much as possible.[91] While acknowledging that it would not always be possible to incorporate digital technologies into existing infrastructures and that such conversions would "take many years," the Commission pressed the importance of building the foundations for a wholly digital network since the benefits of digitization were already apparent in 1985.

While this recommendation seems sound from an ideal planning perspective, in practice it put an enormous burden on many already troubled economies by failing to account for local conditions. It also clearly revealed a longstanding tendency in development policy (perhaps encouraged by the ITU's standardization duties) to promote the newest, fastest technology over a realistic assessment of regional resources and technology. This stubbornly persistent approach to technological development does not

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[88] Edward S. Herman, "The Externalities of Commercial and Public Broadcasting," in *Beyond National Sovereignty: International Communications in the 1990s*, ed. Kaarle Nordenstreng and Herbert I. Schiller (New Jersey: Ablex Publishing, 1993), 87.
[89] For a more in-depth analysis of government use of radio, see Gerd Horten, *Radio Goes to War: The Cultural Politics of Propaganda during World War II* (Berkeley and Los Angeles: University of California Press, 2002).
[90] In Uganda, for example, where the number of FM stations increased from two to more than one hundred between 1995 and 2005, bringing new forms of interactive communication such as call-in talk shows and broadcast "town-hall" type discussions. See: *Maitland+20: Fixing the Missing Link*, ed. Gerald Milward-Oliver (The Anima Centre Limited and contributing authors, 2005), 59.
[91] Maitland Report, 33.

allow for the kind of technological dialogue or responsive invention described by Arnold Pacey (see Chapter 1). Rather than begin with a technological assessment, it might be more fruitful to start by analyzing the social requirements of a given region, "to understand why people want to communicate and with whom, and what information they need in what form – before concluding how a new technology might be most beneficial to them."[92]

Two final aspects of the Missing Link are noteworthy. First, in its chapter on "Financing the Development of Telecommunications," the Commission called for increased international investment in telecommunications—commercial and federal investment, both foreign and local—while acknowledging that "in the present difficult world economic situation any direct call for substantial extra concessionary finance *is likely to fall on deaf ears* [emphasis added]."[93] Then in Chapter 5, "Internal Organization and Management of Telecommunications," the Commission recommended that telecommunications be treated financially as a separate, self-sufficient enterprise, divorced from governmental control as much as reasonably possible.[94] While respecting the sovereign right of individual countries to determine how to regulate telecommunications, the Maitland Commission strongly encouraged private operation of telecommunications infrastructure over traditional government-run monopolies because "decisions [whether] or not to introduce a new technology into a country's network affects almost every facet of operations—finance, procurement, marketing, personnel,

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[92] David Souter, "Then and now: What would be the remit of a modern-day Maitland Commission?" in *Maitland+20*, 13.
[93] Maitland Report, 59.
[94] Ibid., 38.

training, and so on."[95] The Report suggested that these considerations could be most efficiently handled by private enterprise, separated from "the structure and financial machinery of central government"—where, for example, telephony profits were frequently used to subsidize the postal service or other governmental programs.[96] This represented a stark contrast to the typical, longstanding Union emphasis on governmental control of information.

Taken together, these two statements begin to reveal the political and economic climate in which the ITU released the Maitland Report. Although the Commission stopped short of advocating liberalization in the telecommunications industry, it certainly hinted at a much larger role for private industry than had previously been accepted. Ultimately, an increase in private control of telecommunications (and a corresponding decrease in government financial investment and responsibility) served to derail the Union's nascent "development" endeavors. In order to understand how this occurred, it is important to analyze the convergence of technological innovation and economic instability during this period that resulted in liberalization of the telecommunications industry and the ITU itself. While developing member-states of the ITU continued to work towards the goals of the Maitland Commission, more developed countries began to work on restructuring the ITU to allow for increased competition in global telecommunications.

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[95] Ibid., 37.
[96] "Global Opportunities for Internet Access Developments," Organisation for Economic Co-operation and Development (2007), 12. Available at:
http://search.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=COM/DSTI/DCD(2007)3/FINAL&docLanguage=En.

3.   Reorganization and Privatization in Telecommunications

The beginning of the "space age" in the early 1960s quickly brought the prior-consent/free-flow debate back to the forefront of international dialogue in the ITU, further revealing the growing rift between the developed and developing member-states. As developing satellite technologies facilitated global communications and new digital data services, the value of securing national orbital and satellite-spectrum rights became paramount. Even more so than radio at the turn of the century, satellite technology evoked national concerns about sovereignty, cultural identity, military security and commercial profit.

Administrations in Europe and North America, most of which had united in the Organization for Economic Co-operation and Development (OECD) in 1961, viewed space communications as a welcome opportunity to radically change the telecommunications industry, as well as the organization of the ITU, in their favor. They asserted that the "free flow of information" principle should be respected as "international customary law" based upon its general acceptance with respect to radio broadcasting, as well as the intent of Article 19 of the Universal Declaration of Human Rights.[97] Ultimately, the potential of space communications and the digitization of telecommunications allowed for a wave of liberalization that resulted in the dissolution of many of longstanding government monopolies. During the global recession of the 1980s, this process emphasized reduced financial burdens on national governments by transferring control of the telecommunications industry to private industries, most of which were already concentrated in OECD countries. Thus, these administrations would

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[97] Schmahl, "The United Nations Facing the Challenges of the 'Information Society,'" 204. Also: United Nations, "Universal Declaration of Human Rights," adopted December 10, 1948.

profit from the sale of state-owned operators and see an increase in tax revenue from communications providers and manufacturers that were suddenly free to expand into new, international markets.

Developing states, on the other hand, realized that they could not compete, financially or technologically, in the field of space exploration and communication, and therefore exhausted much energy trying to challenge the "first come, first served" principle of assigning limited orbital positions and spectrum. Furthermore, it proved difficult for developing members of the ITU to accept the diminished role of the state as a telecommunications provider, since the traditional monopoly/revenue-sharing model of international communications produced significant revenue that could not be matched in the developing world by a commercial system. Developing members, many of which were socialist during this period, also saw OECD supremacy in the field a threat to national sovereignty, as they feared satellite technology could be utilized for political or cultural propaganda campaigns (aside from its obvious military applications). Thus, developing nations tended to support the prior consent principle.

Neoliberalism preceded and, in many ways, served to derail the "development" movement epitomized by the Maitland Commission. As the economic climate swayed toward liberalization, developed member-states, bolstered by technologies such as satellite communications and newly established organizations such as the OECD, initiated a comprehensive review of the structure of the ITU. By 1994, the Union had once again been restructured, this time to a form that greatly facilitated the role of the private sector and the creation of economic markets primed for investment. Many

subsequent ITU activities labeled "development" seem more closely associated with neoliberal ideals and private interest than with bridging the digital divide.

<u>Satellite Broadcasting and Prior Consent</u>

In 1962, the U.S. launched the first active communication/broadcast satellite, "Telstar," into orbit, officially marking the beginning of "the space era."[98] Within three years, multiple geosynchronous satellites were in operation, including Intelsat I: the first commercial broadcast satellite. Satellite broadcasting quickly escalated the prior-consent/free-flow debate, necessitating action from the General Assembly of the U.N. In 1972, the General Assembly adopted Resolution 37/92, which set out the international principles for state use of "artificial earth satellites."[99] After the usual rhetoric acknowledging the sovereign right of each nation to regulate its own telecommunications, including "the principle of non-intervention," the Resolution required any state that wished to establish or authorize an international direct broadcasting satellite service to "without delay notify the proposed receiving State or States of such intention and promptly enter into consultation with any of those States which so requests."[100] Finally, the Resolution transferred all questions related to "overspill" (as in overspill of the radiation of the satellite signal that reaches a broader area than intended) to "the relevant instruments of the International Telecommunication Union."[101]

All Western states either abstained or voted against the Resolution on the basis that it violated the principle of "free flow of information," which they asserted had

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[98] Ibid., 213.
[99] Resolution 37/92, "Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting," United Nations General Assembly, Thirty-seventh Session (Geneva 1972).
[100] Ibid., para. 13.
[101] Ibid., para. 15.

become accepted as international customary law with respect to radio broadcasting.[102] Since no technical reasons existed in this case to mandate receiving the prior consent of the receiving nation, many administrations argued that the Resolution violated Article 19 of the Universal Declaration of Human Rights, which guaranteed the right "to seek, receive and impart information and ideas through any media and regardless of frontiers."[103] The Resolution passed, however, due to broad support from developing nations.

Many developing countries feared that Western telecommunications supremacy would lead to the use of direct satellite broadcast for military or political propaganda campaigns; they consequently asserted the applicability of the prior consent principle to satellite communications. Developing nations also recognized that they were at a distinct disadvantage given the unequal global distribution of technology and capital, as orbital space was a limited resource allocated by the ITU on a "first come, first served" basis that favored states with the capabilities to invest heavily in the field. Multiple attempts were made to challenge this arrangement, the most notable being the Bogotá Declaration of 1976 which demanded the right for "the equatorial countries to exercise their sovereignty over the corresponding segments of the geostationary orbit."[104] Asserting that geosynchronous orbits were protected natural resources, the Bogotá Declaration lamented that treaties up to that point had created nothing more than a "technological partition of the orbit, which [was] simply a national appropriation" because of the existing technological disparity between the developed and developing world. Although the

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[102] Schmahl, "UN Facing the Challenges of the 'Information Society,'" 204.

[103] U.N. Universal Declaration of Human Rights, Art. 19.

[104] "Declaration of the First Meeting of Equatorial Countries," Bogotá Declaration, adopted on December 3, 1976.

Declaration had no binding impact on international law, it did help to define the position of developing nations in the coming telecommunications debates.

The conflict piqued in 1979 when the ITU held the World Broadcasting Satellite Administrative Radio Conference (WARC-79). The Final Acts of WARC-79 measure over a thousand pages long, with over twelve thousand proposals specifically dealing with frequency allocation in light of developing space communications. The most significant outcome of the Conference, however, relates to its regulation of satellite "overspill"—authority over which Resolution 37/92 "exclusively" granted to the ITU. The Conference decided that orbits reserved to states must be limited to "their proper economical utilization," and prohibited international overspill—even though overspill was, to some degree, technically inevitable.[105] Because neither of these regulations had an explicit technical basis, the 1979 Conference marked a drastic shift for the ITU into distinctly political territory, as it effectively endorsed the prior consent principle with respect to satellite communications.

As technical, political and economic conditions rapidly changed over the following decade, the ITU proved more willing to cross political boundaries in this manner, apparently in an attempt to maintain its influence and status quo. This was often achieved at the expense of its stated goals, which at this time were leaning heavily toward the development movement. Thus, although the Union technically ruled in favor of developing nations with respect to geosynchronous orbits in 1979, in practice OECD nations continued to dominate space communications. A follow up WARC meeting in 1985 clarified that although every state had a reserved "orbital slot" along with appropriate uplink and downlink frequencies, other parties could legally utilize this

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[105] Schmahl, "UN Facing the Challenges of the 'Information Society,'" 215.

allotted space until the controlling state was capable of acting on it.[106] In other words, the ITU guaranteed equality of access to orbital space but did nothing to ensure that every state had the ability to capitalize on that right.

This ruling coincided with a global wave of neoliberalism that resulted in the dissolution of most of the traditional state-monopoly telecommunication providers in favor of *competition* in the industry. The 1980s thus witnessed a dramatic increase in the international power of OECD countries allied with the private sector over the needs of the developing world, as satellite broadcasting—and eventually the Internet—enabled private operators to provide new global data services.

<u>Neoliberalism and Telecommunications</u>

The ITU published the Maitland Report during a period of global economic upheaval, which saw the end of post-World War II "embedded liberalism." This global economic system replaced classical liberalism and surrounded market processes in "a web of social and political constraints and a regulatory environment that sometimes restrained but in other instances led the way in economic and industrial strategy."[107] Contrary to classical liberal theory, many states after World War II took a proactive position in planning and/or ownership of key sectors of the economy, guided by the basic principle that the state should guarantee "full employment, economic growth, and the welfare of its citizens."[108]

Embedded liberalism began to break down in the 1970s, however, as a crisis of capital accumulation led to skyrocketing unemployment and inflation throughout Europe and the United States. This crisis represented both a political threat to capitalism, as

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[106] Lyall, *International Communications*, 183.
[107] David Harvey, *A Brief History of Neoliberalism* (New York: Oxford University Press, 2005), 11.
[108] Ibid., 10.

communism and socialism gained popular attention with calls for significant reforms, and an economic threat to the ruling elites, who saw their already-reduced share of national wealth drop precipitously.[109] Developed nations thus began a process—now referred to as neoliberalism—to restore their power by discrediting the notion that governments could regulate the economy effectively, and by creating an environment that was conducive to privatization and capital accumulation.[110]

In the field of telecommunications, the neoliberal trend first appeared in the United States during the late 1950s, as U.S. companies rapidly expanded domestically and overseas following the war, increasing their reliance on telecommunications to coordinate administration, distribution and production.[111] In the 1960s and '70s, the needs of these transnational corporations combined with telecommunications *convergence*—the lessening distinctions between telecommunications and computer/digital services—prompted the Federal Communications Commission (FCC) to conduct a series of "Computer Inquiries" in response to numerous petitions to allow competing equipment and providers in long-distance and international information services.[112] Subsequent actions by the FCC, without any particular planning or oversight, resulted in the breakup of the AT&T monopoly in 1982. The communications industry in the U.S. and much of the world had long been considered a natural monopoly because of the enormous capital investment required to build and maintain an efficient and reliable infrastructure. Telecom companies like Bell were considered *common carriers,* based on the "the idea

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[109] Ibid., 15.
[110] Ibid., 19.
[111] Dan Schiller and RosaLinda Fregoso, "A Private View of the Digital World," in *Beyond National Sovereignty: International Communications in the 1990s*, 214.
[112] Robert W. Crandall, "Telecommunications Liberalization: The U.S. Model," in *Deregulation and Interdependence in the Asia-Pacific Region, NBER-EASE Vol. 8* (University of Chicago Press, 2000), 417.

that certain businesses are so intimately connected, even essential, to the public good, or so inherently powerful… that they must be compelled to conduct their affairs in a nondiscriminatory way."[113] Convergence—including digitalization of all forms of communication and the development of computer-based data services—had by 1989 challenged this notion in OECD nations, "where information-based services had emerged as a leading source of employment… and where new opportunities were arising to use electronic communication networks in the design and delivery of public and social services."[114] In the context of the global recession, liberalization of the telecommunications industry provided a means for developed nations to reduce government spending while increasing revenue accrued through the sale of state-owned operators and corporate taxes.

Japan began liberalizing its telecommunications industry soon after the U.S., with Europe lagging only a few years behind. In 1987, the European Commission published the green paper "Towards a Dynamic European Economy: green paper on the development of the common market for telecommunications services and equipment," which stressed:

> Under pressure from the measures already adopted by the United States and Japan, and under pressure from users anxious to reduce state dominance and give a freer reign to competition... European integration can move forward only if it has at its disposal efficient networks of information systems and services accessible at low cost that will make a vital contribution to the establishment of the single market.[115]

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[113] Tim Wu, *The Master Switch: The Rise and Fall of Information Empires* (New York: First Vintage Books, 2011), 58.

[114] Don MacLean, "The Quest for Inclusive Governance of Global ICTs: Lessons from the ITU in the Limits of National Sovereignty," *Information Technologies and International Development Vol. 1, no. 1* (Fall 2003): 5-6.

[115] Commission of the European Communities, "Towards a Dynamic European Economy" (Brussels, 30 June 1987).

Thus, by 1989 the majority of OECD countries were committed to liberalizing the telecommunications industry.

As Don MacLean, head of ITU strategic planning unit from 1992 to 1999, notes in his brief but pointed analysis of Internet governance and the ITU, deregulation raised "a tidal wave" of new troubles on the international stage, most of which extended beyond the traditional purview of the ITU because they introduced a number of new interested parties from the public, private and not-for-profit sectors.[116] Though the private sector had always been included in ITU delegations and conferences, it had never exerted any meaningful power since it was not afforded the right to vote on proposals; traditionally, only governmental representatives had the authority to influence ITU policies and regulations. As neoliberalism spread, administrations were forced to cede more power to private interests.

Although developed member-states lost a measure of the hierarchical control they had commanded for decades, both in the ITU and in the general field of telecommunications, in this process, they succeeded in realigning the focus of international dialogue away from development and towards competition—a shift that favored OECD nations greatly. In many ways, this was achieved by diluting the power of the ITU itself through the establishment of alternate international organizations concerned with telecommunications and financial development, such as the OECD, the International Monetary Fund and the World Bank. Throughout the 1980s and '90s, these organizations preached the potential benefits of privatization to developing nations as a "creative process designed to shift whole areas of economic activity... from the politicized, non-commercial sector to the consumer-responsive profit making private

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[116] MacLean, "Quest for Inclusive Governance," 6.

sector," resulting in more efficient and profitable power generation, agriculture, health services, education and telecommunications.[117]

Gradually throughout the 1980s and '90s, administrations in the developing world accepted the principle of privatization in telecommunications, despite the fact that it undermined the development agenda in many ways. As noted in the Maitland Report, "The income from and revenue and capital account expenditure on telecommunications [were] often an important proportion of a country's total gross domestic product" prior to privatization.[118] The international status quo for decades had incentivized inflated charging schemes that produced valuable federal revenue for developing nations. In such an environment, many administrations dismissed or failed to appreciate the economic value of developing and expanding national telecommunications infrastructure, since doing so would require hefty capital investment typically reserved for government programs with more immediate and tangible benefits.

The main telecommunications efforts of organizations such as the IMF and World Bank focused on replacing these shortsighted national policies with the supposed benefits of privatization. Telecommunications historian Dan Schiller (son of sociologist and media critic Herbert Schiller) notes that the privatization process did not have to be immediate or comprehensive for it to have a significant impact on the telecommunications industry, since each step increased "Western information technology equipment sales while further opening up the less developed countries to the in-house model of telecommunications development."[119]

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[117] Schiller, "Private View of the Digital World," 221. Interestingly, these claims resembled those made in the 1950s "modernization" campaign.
[118] Maitland Commission, 37.
[119] Schiller, "A Private View of the Digital World," 222.

As international organizations championed privatization and formalized rules for international charging schemes and competition, the ITU's traditional role as a regulatory and standardization board began to weaken. By the early 1990s, as the neoliberal wave proceeded to extend to the developing world, the Union was left scrambling to reform its mechanisms and redefine its guiding principles.

<p style="text-align:center">The Modern ITU</p>

The ITU took two definitive steps towards reasserting its international influence: first, in 1988 it developed and passed the International Telecommunication Regulations (ITRs) at the World Administrative Telegraph and Telephone Conference (WATTC-88). This treaty consolidated and, where appropriate, updated ITU regulations to account for increased telecommunications traffic between state- and privately-owned carriers. Most importantly, Article 9 of the ITRs allowed for "Special Arrangements" between administrations and organizations and persons "for the establishment, operation, and use of special telecommunication networks, systems and services," outside of ITU regulation.[120] Originally intended to facilitate international banking transactions and virtual private networks, the 1988 ITR Treaty had a large impact on the development of IP-services in the 1990s.[121] As described on the ITU's history webpage, the ITRs "have been instrumental in facilitating continuing privatization and liberalization of telecommunications markets… [by explicitly allowing private operators] to use leased lines to provide services, including data services."[122] It is important to note that this was an unintended consequence of the ITRs; significant precisely because it exempted these

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[120] Final Acts, WATTC-88. ITRs, Article 9. http://www.itu.en/history/Pages/
TelegraphAndTelephoneConferences.aspx?conf=33&dms=S0201000021.
[121] Internet Society Background Paper: "International Telecommunication Regulations," 2012.
[122] "WATTC-88" in *History of ITU Portal*, available at www.ITU/int/en/history.

types of services from ITU regulations. Proposals to expand the ITRs to the Internet remains one of the main reasons for concern voiced by critics of the recent WCIT '12.

The second step the ITU took to reestablish its role in telecommunication regulation was to initiate a comprehensive review of its structure at the Nice Plenipotentiary Conference in 1989. Resolution 55, "Review of the Structure and Functioning of the International Telecommunication Union," was an explicit acknowledgement that the various mechanisms of the institution had been rendered obsolete by the technological, political and economic changes of the previous four decades.[123] Following the release of the appointed committee's report, "Tomorrow's ITU: The Challenges of Change," the Union outlined plans for reform at an Additional Plenipotentiary Conference in Geneva, 1992 and finalized the structural changes at the 1994 Kyoto Plenipotentiary Conference.

The major reforms focused on streamlining the branches of the ITU, as well as to "modernize" the agency's activities and mechanisms. The Union split the Convention into a permanent Constitution and a Convention open to revision at Plenipotentiary Conferences, allowing for a more stable declaration of principles and regulations while retaining the ability to adjust to the changing telecommunications climate.[124] The new Constitution broadly outlined four goals of the ITU: to encourage international cooperation; to promote and improve access to the benefits of telecommunications

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[123] Lyall, *International Communications*, 122.
[124] Brian E. Harris, "The New Telecommunications Development: Bureau of the International Telecommunication Union," *American University International Law Review Vol. 7 no. 1.* (1991): 85.

technologies; to offer technical assistance to developing countries; and to promote peaceful relations between members of the Union.[125]

The Union consolidated and, where appropriate, updated the three Consultative Committees for the telegraph, telephone and radio to meet these goals. The establishment of three new branches, the ITU-T, the ITU-R and the ITU-D, significantly altered the balance of power in the Union by granting the private sector much greater influence in its proceedings, subtly enabling the ITU (specifically the developed member-states) to circumvent the sovereignty principle and undercut the development movement.

Reflecting the diminished importance of fixed-line telegraphy and telephony and the Union's decreased role in related regulations, the Consultative Committee for Telephone and Telegraph was abolished and its responsibilities incorporated into the new Telecommunication Standardization Sector (ITU-T).[126] In many ways, the ITU-T is the modern equivalent of the International Telegraph Union founded in 1865. Encompassing equipment standardization and interoperability, operating protocols, and review of the ITRs, the ITU-T operates to ensure efficient communication and reduce or avoid international conflict.

The ITU granted the private sector more influence in the standardization sector than it ever held prior to the Union's restructuring. In order to speed up the process of developing standards and specifications for telecommunications systems, which had previously been considered only every four years, the ITU-T adopted the "Alternative Approval Process" (AAP) that enabled study groups (made up primarily of private sector

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[125] Chun Hung Lin, "International Telecommunications Union and the Republic of China (Taiwan): Prospects of Taiwan's Participation," *Annual Survey of International & Comparative Law* Vol. 10 no. 1, Art. 6 (2004): 138.
[126] Lyall, *International Communications*, 163.

representatives) to approve and implement their own recommendations, significantly speeding up the approval process.[127] Despite this, the ITU-T has still struggled to keep up with rapidly shifting technologies over the past two decades.[128] Additionally, developing member participation in the Union's standardization activities, never particularly strong, has continued to decline since the creation of the ITU-T. This is most likely a direct result of increased private sector influence that tends to be clustered in and allied with developed countries.

Allocation of radio frequency retained its position as one of the primary activities of the ITU under the Radiocommunication Sector (ITU-R).[129] The Union replaced the IFRB with the (similar but new) Radio Regulations Board (RRB), despite periodic proposals since 1965 to eliminate this function of the Union.[130] As Lyall notes, "to have done away with the Board would have been to eliminate something important if unacknowledged… [because] the root justification of the IFRB then (and now to an extent of the RRB) is the instilling and maintenance of confidence in the international radio regulatory system."[131] Since its inception, developing nations appreciated the IFRB (and now the RRB) as a potential ally in their struggle to achieve equality of access in telecommunications, because the Board consisted of elected delegates from various nations. Developing member-states consequently viewed it, accurately or not, as an objective committee receptive to the concerns of the developing world. Thus, aside from its actual responsibilities (addressing traditional broadcasting concerns—interference,

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[127] Patricia K. McCormick, "Private Sector Influence in the International Telecommunication Union," *Journal of Policy, Regulation and Strategy for Telecommunications, Information and Media Vol. 9 no. 4.* (2007): 9.
[128] See Anthony Rutkowski's harsh analysis of the ITU-T, "Privatizing the ITU-T: Back to the Future" at: http://www.circleid.com/posts/20120816_privatizing_the_itu_t_back_to_the_future/.
[129] Lyall, *International Communications*, 157.
[130] Ibid., 160.
[131] Ibid.

jamming, etc.—now extended to space communications) which are significant, the ITU-R performs a distinct political function as a fig leaf to the developing world, preserving at least the illusion of the sovereignty principle. This is further accentuated by the fact that the Plenipotentiary Conference (meaning government delegations) reserve exclusive right to revise radio regulations, although a significant portion of the technical studies and proposals are now performed by the private sector.[132]

The Development Sector (ITU-D) assumed the work of the Telecommunication Development Bureau, acknowledging the Union's increased emphasis on extending assistance, financial and technical advisement, and the facilitation of international investment in telecommunications.[133] Working through Telecommunication Development Conferences held every four years, the ITU-D explores the work of a number of regional study groups and conferences to adopt resolutions, decisions and recommendations that it deems viable. Many of the sector's information and advisement activities are noteworthy and productive efforts to disseminate the Union's collected data and experience on telecommunications projects around the world, and should be recognized as one of the most important responsibilities of the ITU.

The nature of these activities has shifted post-reconstruction, however, as neoliberal principles have gained traction in the ITU. Patricia McCormick notes that as government control of information waned in the 1980s and '90s, member-states began to look to the private sector for technical expertise and financial support traditionally supplied by federal programs.[134] Leaders in the Union suggested that increased international private investment would be beneficial for developed and developing

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[132] McCormick, "Private Sector Influence in the International Telecommunication Union," 9.
[133] Lyall, *International Communications*, 169.
[134] McCormick, "Private Sector Influence in the International Telecommunication Union," 9.

nations alike, since "[d]eveloping countries will enjoy increased connectivity and thus improved access to basic as well as enhanced telecommunications services and applications, while US firms will gain market share and earn a reasonable return on investment."[135] Rather than strive to find sustainable, regional solutions to "the digital divide," McCormick argues, the ITU-D's activities aim "at creating an enabling environment for private investment" that "may claim indirect benefits for citizens of developing countries, [but] should not be confused with development."[136]

With the finalization of the Union's restructuring in 1994, therefore, the ITU reasserted its position on the international stage by allying itself and its activities with those of private transnational industries that had emerged as strong contenders in the field. By 1991, private interests already accounted for eighty to ninety percent of U.S. involvement in the ITU.[137] Commercial concerns necessarily exerted a significant influence on the Union's proposals and recommendations. Traditional efforts to minimize negative network externalities, for instance, are no long simply political undertakings to ensure the efficiency and accuracy of international communications. Instead, they are economic considerations designed to ensure profitability and return on investment. In practice, this tendency has exacerbated the problem of rural telecommunications by reducing federal and organizational sources of investment.

It has also greatly strengthened alliances between the public and private sectors, leading to a nebulous political and legal environment where national agencies (such as the NSA) can bypass or violate constitutional law by exploiting metadata collected by telecommunications providers and transnational corporations. As we shall see, the

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[135] Quoted in McCormick, "Private Sector Influence in the International Telecommunication Union," 10.
[136] McCormick, "Private Sector Influence in the International Telecommunication Union," 10.
[137] Harris, "The New Telecommunications Development," 97.

conception of the World Wide Web, the largest commercial network ever created, brought many of these issues to the forefront of international debate.

4.   **The Modern ITU and the Internet**

Examining the history of the ITU reveals just how much the political, economic and social environment has changed with regard to communication and information technology. Whereas the ITU began as a European institution intended to facilitate the expansion of state-run telegraphy, it has come to be more closely identified with the interests of the private sector as embodied by the United States. Despite the reality of this shift of power away from the traditional nation-state, the Union's continued assertion of the sovereignty principle preempts international telecommunications debate, often creating points of contention and division.

In response to the open letter sent by the Internet Society and other civil society organizations criticizing the proposed 2012 ITRs, ITU representative Paul Conneally responded that "all ITU members, including Member States and organizations from private sector, academia and civil society, have access to all documents..."[138] Conneally also noted that the Union had decided to make the "Draft of future ITRs" publicly accessible on the ITU website with an associated comment space intended for public discussion of "the content of that document or any other matter related to WCIT." Additionally, in an attempt to "refocus the public debate" surrounding the Conference, Secretary General of the ITU, Dr. Hamadoun Touré, denied that WCIT '12 was about Internet governance at all. Touré asserted that Internet governance related chiefly to "domain names and addresses," which were not issues scheduled for discussion at the Conference.[139] He further noted that the ITRs are not a binding or mandatory treaty, so

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[138] Paul Conneally, Response to Open Letter Dated 17 May 2012, at https://www.cdt.org/files/pdfs/WCIT_CDT.pdf.
[139] Interview with Secretary General Hamadoun Touré, at http://www.bna.com/itus-toure-wcit-b17179869586/.

they could not extend the ITU's remit beyond what is established in the Constitution and Convention.

Touré's statements are only partially true, and the ITU's general response to recent criticism dismisses broader issues raised by the various civil society organizations that objected to the Conference. While it may be true that the proposed 2012 ITRs did not explicitly address issues of Internet governance or attempt to expand direct ITU authority over its related issues, the Treaty did include language relating to spam and network security that created *ambiguities* and divergence in international law. What Touré did not acknowledge in his response is that such ambiguities will *necessarily* influence national communication policies, regardless of whether the ITRs are a binding treaty or not.

Releasing the draft of the ITRs to the public, moreover, does not meet the demands for transparency or inclusiveness voiced by critics, since decisions continue to be made behind closed doors without significant input from nongovernmental and noncommercial parties. The ITU did not specify how public comments made on its website in reference to the proposed ITRs would be collected and circulated amongst its members, or how much weight (if any) they would be given during the ITR revision process. These responses highlight the Union's continued adherence to the sovereignty principle, despite increasing resistance from alternative, transnational sources of power.

A brief analysis of the history of the Internet will better illustrate the unique regulatory challenges that have emerged in the two decades since the ITU restructuring, further diminishing the Union's established authority. Specifically, *content regulation*, traditionally eschewed by the Union, raises serious questions about constitutional rights (on a national and international level) and the nature of international telecommunications.

There no longer exists a single organization tasked with studying and regulating the international flow of information, raising questions as to how to coordinate the efforts of numerous transnational organizations. As we are still in the constitutive period of determining Internet governance policies, it is vital first to determine if we have competent institutions capable of dealing with these problems in a transparent, inclusive manner.

<div align="center">The Internet</div>

In the background of the political and economic developments described above, a new type of decentralized information network was under development, initially as a project of the Advanced Research Projects Agency in the United States. The ARPANET project, which ultimately became the Internet, originated as a loose collaboration between the U.S. military and a small group of academics and engineers attempting to create a "distributed network" that would enable information—in the form of partial data "packets"—to flow from one point to another through a vast array of routing points, rather than along a predetermined path.[140] This flexible model allowed for continued, efficient flow of information even when significant portions of the network had been compromised or disabled. In the early 1970s, the U.S. military understood the potential military applications for such a network, and the academic research community saw the potential to expand access to the few "supercomputers" installed at premier universities around the world.

The early ARPANET was limited to the AT&T infrastructure, a closed system that had the potential to throttle communication and limit the variety of devices and networks integrated into the system. This changed by the 1980s as computing became

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[140] See: Janet Abbate, *Inventing the Internet* (Cambridge: MIT Press, 2000).

cheaper and faster at an astonishing rate and powerful personal computers became more commonplace in the United States. The second stage of Internet development expanded the ARPA system to include this broad base of individual users by imbuing the network with "net neutrality" using protocols known as TCP/IP. Vint Cerf and Robert Kahn developed a set of protocols that encapsulated data sent over the network (like putting a letter into an envelope), standardizing it so that it could be sent "on any infrastructure and carry any application."[141] These founding principles engendered an atmosphere of openness and interconnectivity on the Internet where users exchanged and adapted ideas and software freely and frequently, regardless of the user's equipment or physical location. This development challenged international regulatory norms as well, which had long focused on encouraging telecommunications centralization and standardization in order to minimize negative externalities. The Internet, intentionally designed to be a distributed and decentralized network, did not require such regulations.[142]

The Internet entered its third phase of development in 1993 with the establishment of the World Wide Web, characterized by broad-based attempts to commercialize many aspects of the public Internet and officially divorce it from governmental control.[143] While the "Web" is perhaps the most ubiquitous form of the Internet because it is publicly accessible and now incorporates most traditional media, there exists an important distinction between the commercial Web and the numerous private networks utilized by governments and corporations to coordinate and monitor high-level secure activities. Significantly for the purposes of this study, this distinction requires

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[141] Wu, *Master Switch*, 198.

[142] At least not for technical purposes; centralization by means of Internet Service Providers and private data services would later play an important role in enabling control of information on the Internet.

[143] Saskia Sassen, "The Impact of the Internet on Sovereignty: Unfounded and Real Worries," 197. On governmental control: Abbate, *Inventing the Internet*, 196.

telecommunications regulations to distinguish between public and private networks and to specify precisely which regulations apply to activities based in either realm. This has provoked new challenges for regulatory institutions such as the ITU.

<p align="center">Commercialization on the Web</p>

Commercialization on the World Wide Web has led to the convergence of many traditional aspects of telecommunications—such as personal communications and broadcasting—and a variety of entertainment media not typically associated with telecommunications prior to the Internet. This development has revealed a number of *latent ambiguities*, as Lawrence Lessig calls them, in which novel technologies create new contexts for threats to civil liberties that national laws do not precisely or adequately address.[144] Some of the chief problems relate to the protection of intellectual property on the World Wide Web, which represents "the most powerful mechanism in history for locating and retrieving information that you might want to copy, no matter how remote or obscure, and for facilitating the sharing of it with limitless others."[145]

A related problem concerns the recent advances made by private industry—often at the behest of the federal government—to monitor and filter content on the Web, in direct contradiction to the founding principles of the Internet. As Saskia Sassen noted as early as 1998, the majority of thinking and writing on the Internet focused too intently on the second stage of its development, ignoring the consequences of the commercialization of the third stage.[146] This trend has only begun to shift in the last ten years. In emphasizing only the "ungovernability" of the Internet, supposedly engrained in the network's infrastructure by TCP/IP, many failed to recognize the potential for content

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[144] Lawrence Lessig, *Code v2.0* (New York: Basic Books, 2006), 25, 155.
[145] Mueller, *Networks and States*, 131.
[146] Sassen, "Impact of Internet on Sovereignty," 198.

filtering enforced through the *code* itself, enabling regulations that are more strict and invasive than ever before.

On the World Wide Web, these methods of control originated in 2000, when the French government charged search-engine *Yahoo!* with violating a ban against the trafficking of Nazi paraphernalia.[147] Yahoo argued an "impossibility" defense, claiming that it could not prevent users from accessing banned content even if *Yahoo.fr* complied with French law because users could simply access its unfiltered American counterpart, *Yahoo.com*. Yahoo's argument relied on the notion of an "ungovernable Net," where it was not possible to determine where users were physically located. On May 22, 2000, the court ruled against Yahoo and ordered it take all measures to find a method of complying with the national ban.

In this initial instance, governmental authority played a large role in pushing the Web towards content filtering, but the general principle resonated with the growing needs of international "DotCom" companies to tailor content—including language, currency and consumer norms—to specific consumers around the world and to ensure that copyrighted content remained protected and therefore profitable.[148] Over the last decade, the private sector has developed a variety of methods to determine where data packets originate to accomplish these goals. These tracking methods, developed in response to commercial and legal requirements, are now commonly being employed by administrations, democratic and authoritarian alike, to monitor and filter content on the Internet for legal enforcement purposes, espionage and intelligence gathering.[149]

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[147] Jack Goldsmith, and Tim Wu, *Who Controls the Internet? Illusions of a Borderless World* (New York: Oxford University Press, 2008), 2.
[148] Ibid., 51.
[149] See Lessig, *Code v2.0* for an in-depth analysis of these issues.

As nations attempt to extend their territorial policies (often via private sector mechanisms) into the unbounded realm of the Internet, international conflicts inevitably arise that cannot be mitigated without acknowledging the inherent tension between the sovereignty principle and the U.N.'s stated objective of global freedom of communication.

<u>Government Regulation on the Web and Private Networks</u>

Concurrently with the development of the commercial World Wide Web, governments around the world have inexorably linked highly protected and valuable utilities and services (energy production, international finance and military activities, for instance) to secure private networks that are not accessible to the public. Although these private networks are essential to the efficiency and reliability of modern utilities, the very fact that they are networked presents unique "systemic risks" that threaten to disrupt vital operations or divulge sensitive information to questionable parties that could potentially gain access.[150] Interestingly, these threats have encouraged a global shift back towards telecommunications monopolies in recent years, as the alliance between the public and private sector grows stronger. The United States presents a particularly fascinating example because of its traditional aversion to governmental control of information before World War I.

Historically, the U.S. has reserved its regulatory powers to prevent "legacy" monopolies from expanding horizontally into new industries. As such, diversity of opinion characterized much early media in the U.S.; the same cannot be said of information networks since World War II. Following the developments of the Cold War, constitutive decisions regarding the U.S. communications industry, previously

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[150] Misa, *From Leonardo to the Internet*, 262.

characterized by democratic ideals and nation-building efforts, were increasingly tainted by federal efforts to regulate or control information exchange in order to serve what was perceived as the interests of national security.

Neoliberalism subsequently completed the American transition to a homogenous and increasingly centralized national media environment. A key step in this process was the centralization and privatization of the media, which has enormous influence on the political fluency of the masses and, therefore, on their level of democratic involvement.[151] This neoliberal impulse towards privatization and centralization, as Robert McChesney argues, has repressed public debate in the U.S. about the future of communications technologies by successfully cultivating the notion that "capitalist media are synonymous with democratic media and that democratic media are synonymous with American media... Therefore a threat to corporate rule is a threat to democracy."[152] As a result, the conglomeration of media, newspapers, radio and cable television has continued unimpeded and now threatens to engulf the Internet. The "common sense" argument professed by neoliberals and media moguls in response to critics of this trend is that the private media model is necessary to serve as a check on the government and to protect democracy.

In practice, however, the private sector has cultivated a strong alliance with the U.S. government, yielding to numerous requests for information and services that have allowed administrations or agencies to circumvent or break U.S. law. During the ongoing "war on terror," for instance, the U.S. government has utilized a number of measures to monitor and regulate information on the Internet in an attempt to prevent security leaks

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[151] Robert W. McChesney, "Public Broadcasting in the Age of Communication Revolution," *Monthly Review: An Independent Socialist Magazine Vol. 47 no. 7* (1995): 2.
[152] Ibid., 4.

and potential acts of terrorism. In light of these concerns, it is not surprising that the government allowed Bell to reacquire its throne atop the communications industry. In 2002, the Bush administration initiated a program of Internet surveillance on American citizens that utilized Bell's vast infrastructure to pass information about user activity to the government without a warrant.[153] Bell's willingness to cooperate in this federal surveillance program is reminiscent of its early efforts to associate its services with a patriotic cause in exchange for exemption from regulation—except in this case, the impetus was national security rather than nation-building. As Tim Wu notes, "It may be impossible to say for certain that the reconsolidation of AT&T fundamentally enabled the National Security Agency's surveillance program, but the need to involve so few companies in the conspiracy undoubtedly made things much easier."[154]

More recent legislation, such as the Cyber Information Sharing and Protection Act (CISPA), which passed in the House of Representatives on April 26, 2012, would similarly allow the government to gather personal information from companies like Google and Facebook without a federal warrant. With these actions, the government's emphasis on national security has superseded its emphasis on individual liberties such as free speech and privacy that had traditionally characterized American communications industries prior to World War I.

When national policies such as these—inspired by fear and the sovereignty principle—are applied to a borderless system such as the Internet, international confusion and conflict quickly arise. It becomes increasingly difficult to determine which national laws pertain to transnational corporations, or whether an incident is an "internal affair" or

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[153] Wu, *Master Switch,* 250.
[154] Ibid., 250.

a violation of international law. The resulting intensified focus on national security reflects the borderless world of the Internet and the increasingly globalized context in which governments must set domestic communications policy. In this environment, a traditional bureaucratic organization such as the ITU has very little power to settle international disputes.

<p style="text-align:center">International Consequences of Privatization and the Sovereignty Principle</p>

In "Global Governance and the Spread of Cyberspace Controls," Ronald J. Deibert and Masashi Crete-Nishihata present a loose research framework for the study of "global dynamics and mechanisms of the growth of cyberspace controls" that have become increasingly common over the past two decades.[155] They note that, as of 2012, more than thirty countries engage in some form of Internet filtering that does not seem to conform to the foundational principles of the Internet—openness, anonymity, freedom of access—and that many of those countries are democratic, not authoritarian, regimes.[156] The justifications for filtering vary widely among nations, ranging from copyright protection to slander laws, media regulation or pornography censorship, but the general trend seems to be toward increased governmental regulation via *information controls*, defined by Deibert and Crete-Nashihata as "actions conducted in and through cyberspace that seek to deny, disrupt, manipulate, and shape information and communications for strategic and political ends."[157]

Previous scholarship has focused on the effects of Internet filtering within a national context, but Deibert and Crete-Nishihata assert that more research is required on

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[155] Ronald J. Deibert and Masashi Crete-Nishihata, "Global Governance and the Spread of Cyberspace Controls," *Global Governance Vol. 18* (2012): 341.
[156] Ibid., 339.
[157] Ibid., 343.

the international consequences of such domestic filtering, and on the mechanisms by which these types of controls spread and evolve from nation to nation. As this study has attempted to argue, national telecommunications policies will *necessarily* influence international adoption, adaptation and transfer of technology as states compete to extend territorial controls to the borderless Internet. Deibert and Crete-Nishihata similarly note, "The policies that domestic governments implement may be picked up on by authoritarian regimes to legitimize their actions at home in ways considerably different than their original intent."[158] States may also act to update or improve telecommunications infrastructure in an attempt to compete with or protect itself against established powers, only to find themselves subject to intense political or financial pressure to employ certain technologies or companies, regardless of their technical, political or economic requirements. A recent article in the *Wall Street Journal* outlined U.S. efforts (via private meetings) to prevent Chinese telecom Huawei Technologies Co. from developing South Korea's advanced wireless network because of the potential security risks of integrating Chinese technology into the systems of close security partners.[159] National efforts such as these present further obstacles to development goals and to the efficiency of international communications. This is a direct result of the privatization of the telecommunications industry and the increasingly close bonds between the public and private sector.

More importantly, the ITU does not provide an adequate forum for addressing those instances in which administrations or private entities exert pressure in order to influence or control the development of telecommunications in developing countries. The

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[158] Ibid., 354.

[159] Adam Entous, "China Telecom Firm Drives New U.S. Worry," *Wall Street Journal* (December 4, 2013).

ITU-D provides some measure of advisement in the field, but many of its actions since the Union's restructuring in 1994 appear to be more focused on opening markets to foreign companies and on guaranteeing a return on investment than on developing a system that fits each country's specific economic, political and technical needs. This problem is augmented by the historical absence of what Don MacLean calls the "awakening giants" (China, India, Indonesia, Brazil and, to some extent since the breakup of the U.S.S.R, Russia) in ITU activities and reform debates.[160] These countries represent some of the largest telecommunication markets in the world, supplied by rapidly expanding telecom companies that are closely associated with their respective governments. As long as these countries remain unengaged with ITU activities and broader international debates about communication as a universal human right, conflicts will continue to arise as a result of the sovereignty principle.

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[160] MacLean, "Quest for Inclusive Governance," 10.

Conclusion: The Future of International Telecommunication Regulation

Milton Mueller, one of the founding members of the Internet Governance Project, has written one of the best books examining the Internet's role in challenging the traditional nation-state. In *Networks and States: The Global Politics of Internet Governance*, he argues that the solution to these seemingly intractable problems lies with a new concept of *denationalized liberalism*.[161] Mueller states, "Governance should emerge primarily as a byproduct of many unilateral and bilateral decisions by its members to exchange or negotiate with other members (or to refuse to do so)."[162] Rather than maintain the illusion of the sovereignty principle by adopting various international Treaties and "Memorandums of Understanding," this approach would facilitate more flexible arrangements that, in theory, would better address the specific needs and circumstances of a given region. Where the system requires a more collective governing body, Mueller advocates new transnational institutions that seek input from all users and providers, as well as from the public and private sectors.[163]

It is within this context that the ITU might be able to redefine its purpose and help bridge the widening political gaps in Internet governance. As the most inclusive international telecommunications governance forum, representing 193 member-states, the ITU is already well situated to disseminate collected information on a national level. If its mechanisms could be adapted to include meaningful input from regional sources, the Union could help facilitate Mueller's denationalized liberalism by aggregating data on various regional arrangements and publishing comprehensive reports contrasting the

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[161] Mueller, *Networks and States*, 268.
[162] Ibid., 269.
[163] Ibid., 270.

advantages and disadvantages of each approach. At the same time, it would provide an international forum for civil society participation and dialogue.

The details of such an endeavor are no doubt complex, and its implementation would require the careful considerations of many interested parties and experts. But the first step of the process must be the creation of a transparent, inclusive organization that allows for constructive dialogue from all relevant parties—including the public and private sectors as well as civil society organizations and even individuals or regional organizations. To achieve this first step, governments must realize that we are at what McChesney calls a *critical juncture*, in which the constitutive choices of Internet governance are being decided.[164] As history shows, the political, economic and social decisions made now will have lasting and unintended consequences in the future, significantly influencing the ways technology is developed, transferred and utilized around the world.

The Internet has the unique technical potential to facilitate the establishment of new global organizations based on transnational relationships and dialogue, but only if current administrations *choose* to abandon the sovereignty principle with respect to the global network. This is not a simple act, nor is it a necessary one since international organizations such as the ITU are "monopoly policy organization[s] with little transparency and measurability," and therefore little incentive to adjust their policies to improve efficiency or public approval.[165] The Internet's unique design, furthermore, introduces new challenges to national policies and laws that compel governments to

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[164] Robert McChesney, *Communication Revolution: Critical Junctures and the Future of Media* (New York: The New Press, 2007), 9.

[165] Dominique Lazanski, "Europe, the Internet and the ITU," *New Direction - The Foundation for European Reform* (Brussels, 2010): 27.

attempt to preserve the sovereignty principle, often by exploiting the new technology itself.

The borderless digital nature of the Internet creates potential for abuses of power and erases many of the physical and legal constraints traditionally imposed on authorities on the national and international level. In order to address such violations and their implications for U.S. constitutional law, Lawrence Lessig asserts that we must enable our judicial and legislative branches to translate the original meaning of the Constitution into current contexts created by new technologies.[166] *Translation* is an active process that requires a continued dialogue between authorities, code writers and the public to determine precisely what values we, as a global society, should choose to embed in our information systems.[167]

More broadly, governments and policymakers must also consider how these "constitutional" questions and concerns translate to an international or global arena. Constitutional rights that democratic societies take for granted—some of which happen to coincide with some of the basic principles of the Internet as described by its initial designers and advocates—may conflict with those of authoritarian regimes, or with "decency laws" that have become more common in democratic nations since the development of the Internet. As Deibert and Crete-Nishihata note, "States' policies are formed in interaction with other states in the international system and through interactions with transnational actors like civil society and the private sector."[168] National policies aimed at preserving the sovereignty principle will inevitably influence international policies and vice versa, by lending legitimacy to counterproductive

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[166] Lessig, *Code v2.0*, 167.
[167] Ibid., 324.
[168] Deibert and Crete-Nishihata, "Global Governance," 345.

strategies and administrative actions in foreign countries that might not otherwise be popular or legal. Therefore, organizations such as the ITU can foster genuine reforms only by first abandoning the sovereignty principle with respect to international telecommunication regulations.

In 1865, world leaders lauded telegraphy and the efforts of the nascent International Telegraph Union for their potential to reduce international *miscommunication*; perhaps a similar call is needed in this age of political conflict, rampant cyberespionage and "the digital divide." By taking the first steps towards transparency and inclusiveness, and away from the sovereignty principle, the ITU could reinvigorate international dialogue and perhaps provide real incentives for cooperation and shared development in telecommunications. Nearly five billion people lack access to the Internet today; a significant portion of that population is set to "log on" within the next few decades, regardless of what happens today.[169] The decisions we make now will determine how those users are welcomed, and how well our institutions will adapt to the contentious issues that will undoubtedly accompany such a vast and rapid expansion.

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[169] Eric Schmidt, and Jared Cohen, *The New Digital Age: Reshaping the Future of People, Nations and Business*, (New York: Knopf, 2013), 253.

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