

THE BIAS OF TRANSNATIONAL COMMUNICATIONS: THE WTO, WIRED CITIES AND LIMITED DEMOCRACY

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Abstract

This paper looks at the reconstruction of global communications policy during the 1990s around a set of three pillars: the WTO, new domestic regulators, and new systems of private authority. It analyses several WTO agreements adopted during the decade and argues that these agreements increased access to telecommunications services and the Internet, but tended to do so among high end users clustered in North America, Europe and Japan as well as a few business centres scattered across the "third world." The paper also analyses the rising influence of private-sector based policy alliances on the ITU and WTO as well as their power to set de facto policies for privacy, network access and Internet content regulation through self regulation and control over the design of communication technologies. Lastly, it argues that the problem with globalisation is that efforts to create global markets have been divorced from any parallel commitment to the globalisation of democracy.

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The 1990s saw dramatic changes in how telecommunications and new media such as the Internet are regulated globally. This article argues that a key outcome of such changes was not deregulation, but a new form of governance for telecommunications based on three pillars: new domestic regulators, new systems of private authority, and the WTO.

The article analyses several WTO agreements adopted during the 1990s and the growing influence of private sector-based policy alliances on the ITU and the WTO. The article indicates that WTO agreements did expand markets for telecommunications and online services, but that such developments were clustered in North America, Europe and Japan as well as a few business districts scattered across the “third world.” Drawing on Castells (1996) and Sassen (1999), I argue that the lines of inclusion and exclusion in cyberspace are being redrawn and that the “information revolution” is now often as much a part of the experience of some people living in, say, Bangkok, Shanghai and Sao Paulo as it is for citizens in North America, Europe and Japan. For all others, talk of a global information society remains fantastic. As such, I refer to a transnational communication system and wired cities rather than the idealistic illusion of a universal global media system.

The article also highlights the need to look beyond the ITU and the WTO to understand how self regulation and the communication industries’ ability to influence the design of communication technologies are shaping privacy policy, Internet content regulation and the overall evolution of telecommunications and new media. Finally, the paper considers how some of the WTO’s attempts to curb the regulation of telecommunications services, including the Internet, *could* be used to expand media freedoms. However, I argue that such prospects are limited by the fact that the WTO aims to promote free trade, not free speech, and because it has been used more to constrain *any* efforts to regulate information and media services that do not favour commercial interests.

In the end, I argue that the WTO is part of efforts to implement limited democracy, where governance means managing the technical and legal infrastructure of a global economy, not furthering the globalisation of democracy. This is evident in the absence of normative issues from the WTO’s telecommunications policy regime and the gulf between its narrow agenda and key human rights documents, i.e. the *Universal Declaration of Human Rights* (1948) and the *International Covenant on Civil and Political Liberties* (1966). Many countries party to the WTO’s telecommunications agreements have not signed these documents, while others continue to contravene their spirit. This leads me to conclude that the problem with globalisation is that it has not gone far enough, in terms of improving access to communication services, addressing key communication policy issues, or fostering a culture of democracy on a global scale.

The Globalisation of Telecommunications Reform

The mid-1980s withdrawal of the US, Britain and Singapore from Unesco transformed global telecommunications policy. As a result, the authority of Unesco and the ITU in such matters was diminished and debates over NWICO and the “free flow of information” were shunted off into the hinterlands. In the ensuing void, a new regime was put into place centred around the WTO, new domestic regulators, and a vastly augmented role for the private sector in the WTO, OECD, ITU,

and so on, as well as through a plethora of self-regulatory initiatives.

One of the most decisive events to transform global telecommunications policy was the break-up of AT&T in 1984. As a result, AT&T entered foreign markets and the Regional Bell Operating Companies, with the backing of the FCC and the State Department, sought to experiment with broadcasting, cable television and information services — something they had to pursue in other countries because they were prohibited from doing so in the US by the Modified Final Judgement. Equally momentous events followed in Britain: the privatisation of British Telecom and Cable & Wireless in 1984 and 1987, respectively, and the advent of competition between 1984 and 1991. Japan also adopted a similar approach, under a great deal of pressure coming from the US to sign a series of bilateral agreements that liberalised the supply of private networks, enhanced services and satellite services. The US, Britain and Japan represented 60% of the global telecommunications market and this, in conjunction with the fact that they hosted 14 of the 20 largest telecommunications operators in the world, gave them enormous leverage over global telecommunications policy (Cowhey 1990, 191; FCC 2000, Appendix 1).

The advent of competition in Australia, Canada, Finland, New Zealand, Sweden and the European Union over the next decade propelled these changes even further (US 1996, 12; OECD 1999, 47; ITU 1997, 32). Even several developing countries, such as Chile, Congo, Madagascar, Mexico, the Philippines and Uganda embraced competition during the 1990s, while Argentina, Bolivia, Brazil, Costa Rica, Eritrea, Kenya, Kuwait, Nigeria, Peru, Sudan and Venezuela announced plans to do the same by 2001 (ITU 1999a, 7).

Just as importantly, the US' and Britain's withdrawal from Unesco indicated that both countries were content to change the global communications policy regime unilaterally. Indeed, the ITU was afforded the same treatment as Unesco, as it was regularly criticised for pursuing a "development agenda" and for its one nation, one vote principle. The FCC and several American academics keenly joined the denunciation of the ITU, labelling it a crude vehicle for maintaining a world-wide cartel in telecommunications (US 1996, 17; Cowhey 1990, 181). As with Unesco, Britain and the US threatened to withdraw from the ITU if it did not support telecommunications liberalisation, a voting structure that paralleled the hierarchy of power in global telecommunications, and an expanded remit for GATT/WTO in telecommunications policy. In addition, the World Bank's structural adjustment policies, the debt crisis, and neoliberal ideology propelled sweeping changes in global telecommunications policy, as countries privatised their telecommunications operators, especially in Latin America and, to a lesser extent, embraced competition (Hills 1998; Gill 1997).

The WTO Telecommunication Agreements: Privatisation, Competition, and New Policies for New Media

A series of WTO agreements covering telecommunications were adopted within this context: the 1994 *Annex on Telecommunications*; a 1996 *Ministerial Declaration on Trade in Information Technology*, the 1997 *Agreement on Basic Telecommunications*; and a 1998 Global Electronic Task Force that embraced a moratorium on the taxation of goods and services in cyberspace. Many argue that these agreements served to globalise the US model of regulated competition, deepen privatisation and to secure the legal and regulatory underpinnings of the US-backed GII initiative

(Tarjanne 1999). Yet, it can also be argued that the agreements merely consolidated processes that were well under way, with the vital caveat that the WTO's enforcement powers would prevent countries from reversing course (Drake and Noam 1997). By entrenching the commercial model for telecommunications, and the information services that depend on these networks, the real power of the WTO lies in the fact that it commits governments, as well as existing and future forms of electronic media, to a market-driven vision of media evolution. The following pages assess the WTO agreements in relation to: privatisation, competition, universal service, Internet content regulation, and new policies for new media.

The WTO, Privatisation and New Forms of Governance

Between 1984 and 1999, there were 110 telecommunications privatisation, some full privatisations, such as BT, Telus (Canada) and Embratel (Brazil), others partial, as with Malaysia Telecom, Singapore Telecom and Telekom South Africa. The debt crisis in Latin America meant that privatisation was pursued there earliest and most aggressively. In Asia, in contrast, robust economies meant greater reliance on competition, rather than privatisation. In Africa, privatisations have been less extensive, due mainly to concerns with the neo-colonial overtones of returning state-owned telecommunications operators (PTOs) to foreign operators, especially since they had only been brought under domestic control with independence between 1960 and 1980. In general, privatisation has been uneven and less than global in its embrace, with around half of all PTOs in Asia, Europe and Latin America having been privatised, only about one-third in Africa and even fewer

While privatisation is far less all encompassing than commonly assumed, it is also true that many countries see privatisation and participation in the WTO as a key part of their efforts to attract foreign investment. The need for such investment is undeniable and it has often been the case that state-owned monopolies did poorly, with lengthy waiting lists and low availability of basic telephone service, let alone more advanced data and Internet services. These points are readily illustrated by the fact that 43 countries still have less than one telephone per 100 people and that nearly two-third's of households world-wide do not even have basic telephone service (ITU 1998a, 13-15; A8-A10). The figures for Internet use are even starker. Midway through 1999 23 countries had no connection to the Internet, three dozen countries had less than 1000 users, only 3% of the world's population had access to the Internet, and 90% of all Internet users lived in just 20 countries (Netwizards 1999). The distribution of Internet users is shown in the diagram below.

Table 1: Global Distribution of Internet Users (July 1999)

Region	Percent of users
Africa	0.9 %
Asia	6.0 %
Europe	35.0 %
Japan	11.0 %
Latin America	1.2 %
North America	45.0 %

Source: Netwizards 1999.

Some have estimated that over \$7 billion per year is needed in Africa alone to achieve one telephone line per 100 people, while others claim that up to \$200 billion was needed in the late 1990s to achieve modest levels of access to telecommunications services in Africa, Asia, Latin America and Central Europe (Wellenius and Stern 1994). Advocates claimed the WTO would address these needs by reducing foreign ownership limits, by advancing investment in new services, and by creating a “less politicised ... regulatory environment” (Thompson 1999, 1; Tarjanne 1999, 56).

Yet, the *Agreement on Basic Telecommunications* did not compel countries to sanction foreign ownership and indeed many did not, much to the consternation of the US (GIIC 1997). Consistent with existing trends, Latin American countries went the furthest with respect to eliminating foreign ownership restrictions, while Asian and African countries marginally raised the allowable level of foreign and private ownership in incumbent PTOs, while permitting greater investment in new telecommunications services (ITU 1998b, 10; GIIC 1997, 88-95).

The lack of commitment to privatisation reflects the fact that the process has only been a limited success. In many countries, especially in Latin America and Africa, privatisation has simply substituted a private monopoly for a state-owned one, with few discernible benefits for users (Melody 1999, 14). In fact, only a small portion of countries that have privatised a majority share in their PTOs improved access to basic telephone service faster than the world-wide average (ITU 1998a; 55, A8-A10). In contrast, successful privatisation's have relied on a clear policy framework that set targets for the extension of telecommunications services. This approach originated in Mexico and Argentina in the early 1990s as the new owners of TelMex and Entel, respectively, were required to achieve specific growth rates over a five-year period and to extend services to small villages. These conditions were met, even surpassed, only to decline as the terms lapsed (ITU 1998a, A10, A86). Similar measures subsequently accompanied the privatisation of PTOs in Ghana, Cote D'Ivoire and South Africa in 1996 and 1997, where the new operators were obligated to install 225,000, 300,000 and 2,500,000 lines, respectively, within five years (ITU 1998a, 71).

These developments reflected the eclipse of deregulation so prominent in the previous decade by the view that adequate governance and policy regimes are vital to improving telecommunications (Wallsten 1999, 3; Wellenius and Stern 1994, 11-24).¹ Reflecting these shifts, the number of regulators around the world expanded from 10 to 84 during the decade and approximately 150 countries adopted new telecommunications legislation (ITU 1999a, 5-6). In fact, a virtual industry in regulatory agency design arose in the 1990s through training programs offered by the CRTC, FCC, Ofcom, the US-based Telecommunications Training Institute and the World Bank. Indeed, British, Canadian and US regulatory frameworks were imported wholesale by Brazil, Kenya and Zambia, among others. As aid for telecommunications and media programmes fell, USAID, the World Bank and other agencies increased funding to foster new regulatory regimes in developing countries (OECD 1999, 237; Hills 1998, 462). The *Agreement on Basic Telecommunications* reflected this reality by setting out several principles — regulatory independence, competitive safeguards, interconnection rules, transparent universal service policies and fair allocation of scarce resources (numbering, radio spectrum, etc.) — in a *Regulatory Reference Paper* that was adopted by 55 countries (WTO 1997b).

New regulatory regimes are also dominated by industry groups. Two of the most crucial groups in this respect are the Global Business Dialogue on electronic commerce (GBDe) and the Global Information Infrastructure (GIIC), which bring together AOL/Time Warner, Bell Canada, Bertelsmann, BT, Disney, IBM, Korea Telecom, Microsoft, WorldCom, and a host of other major transnational communication firms. Throughout the 1990s, the GBDe and GIIC set the policy agenda on the GII and electronic commerce at meetings held by the G7, OECD, ITU and so on. The greater impact of industry groups is also apparent at the ITU, where the private sector gained formal voting rights for the first time in 1992 and there are now 450 private voting members alongside 187 governments, a World Telecommunications Advisory Council created to advise standards committees and the secretary-general, and privately funded colloquia on telecommunications policy adopted (Kleinwachter 1999; Tarjanne 1999, 60). The GBDe and GIIC, with the support of many governments and even Unesco, have also successfully promoted self-regulatory models for Internet content, privacy and the design of new ICTs — a point that will be discussed further below (GBDe 1999).

The command of the private sector has not been matched by attempts to enhance citizens' influence on communications policy, although a few organisations have gained observer status at the ITU and OECD. Indeed, attempts by Martin Bangemann, the European Union's director of information society policy, and Pekka Tarjanne, the former Secretary General of the ITU, to establish a formal set of citizens' communication rights at the global level have been rebuffed by the GBDe and other industry associations. As the former head of the GBDe, Bertelsmann's Chief Executive Officer Thomas Middlehoff explained, "we as entrepreneurs should be responsible for building the appropriate framework for electronic commerce" (quoted in Kleinwachter 1999, 10).

Middlehoff's comments aside, telecommunications reform depends, as one advocate of these processes, Ben Petrazinni (1997), regularly claims, on strong states capable of advancing change in the face of staunch opposition from citizens and labour unions. In fact, creating a new governance regime has relied on a kind of quasi-authoritarianism and collusive arrangements between states and private interests. The ITU euphemistically refers to these as "informal ties between governing parties and private sector companies [that] have created a unique competitive environment" (1998b, 11), but refuses to probe what this means for the idealist view of governance being advocated by itself, the World Bank, the WTO, academics and so on.

In contrast, Robert Cox (1992) and Stephen Gill (1997) see the combination of strong states, expanded markets and limited democracy as pillars of a "new constitutionalism." This "new constitutionalism" relies on a technocratic approach to managing markets, populations and technological change as well as a process whereby states assume the role of "adjusting national . . . policies to the perceived exigencies of the global economy" (Cox 1992, 30). With incredible candour, the ITU reveals how accurate this analysis is, as it explains how "[h]igh-level government officials have relied on [WTO] negotiations to dismantle domestic political opposition and to move forward with new market strategies that would have otherwise been impossible to implement" (1997, 102). Thus, new forms of governance extricate telecommunications policy from domestic politics and limit people's influence on the evolution of telecommunications and new media.

The *Annex on Telecommunications* (1994) and *Agreement on Basic Telecommunications* (1997) are two key efforts to create a new governance regime for telecommunications and new information services. The *Annex* promoted competition in enhanced services and permitted companies to establish private networks in the 58 countries that signed it. The 1997 *Agreement on Basic Telecommunications* enlarged this agenda to include the \$800 billion per year segment of basic telecommunications, which provides the platform for a range of services, from basic telephony, to the Internet and multimedia applications. The latter agreement covers 72 countries, requires network interconnection among telecommunications operators, and fosters independent regulatory regimes.

The *Agreement on Basic Telecommunications* aimed to further competition, although it did not demand that countries embrace competition. Ironically, the agreement actually entrenched monopolies in many countries, especially in the Caribbean region, for up to 15 years (GIIC 1997, 88-95). Only a few countries — Argentina, Norway, Peru, Singapore and Switzerland — expanded their commitment to competition, while others adopted modest reforms or locked their existing domestic arrangements into international law (GIIC 1997, 88-95; Drake and Noam 1997).

Nonetheless, the *Agreement on Basic Telecommunications* and regulatory liberalisation have triggered a rush to wire cities and the globe on an unprecedented scale (Staple 2000, Fig. 1; OECD 1999, 61-65; FCC 2000, 6-8). The key questions are by whom and where have these investments been made? In the OECD countries as well as developing countries, much of the new investment has been by new competitors and in developing countries investment between 1995 and 1998 was triple that of the entire previous decade (OECD 1999, 61-65; World Bank 2000). Competition now exists in two-thirds of cellular markets and three-quarters of Internet markets and has helped to increase access and reduce prices for both services. In general, telecommunications systems in developing countries have expanded two to three times as fast in countries where competition has been introduced in comparison to those where it has not, although many exceptions exist, such as Botswana, China, Costa Rica, Hungary, Iran and Thailand (ITU 1998a, A8-A10; ITU 1999a, 7-8; OECD 1999, 65; UNCTAD 2000, 86-96).

As a result, the global telecommunications system grew from half a billion telephone subscribers in 1989 to an estimated 2 billion in 2000 (Staple 2000, Fig. 1). Moreover, in a remarkably short span of time, the Internet grew from a couple of million users to about 190 million by the turn-of-the-century. The number of countries connected to the Internet also rose from 90 to 200 during the decade (Netwizards 1999). Consequently, the gap between developed and developing countries' access to telecommunications services narrowed appreciably, although stark divisions between the "information rich" and "information poor" persisted, and in some cases were magnified, along urban and rural lines, relative to new ICTs, and between regions of the world connected to the thickening web of local and global networks and those for whom all such developments are remote from daily experience (ITU 1998a, 13-14; UNDP 1999, 25-37). Indeed, while there were some improvements in access to telecommunications services throughout Africa, Asia and Latin America during the 1990s, a small handful of countries — Argen-

tina, Brazil, China, Columbia, Korea, Singapore and South Africa — accounted for the vast majority of new telephone subscribers and three quarters of all new Internet users in these regions (Netwizards 1999; ITU 1998a, 15).

Despite unprecedented competition, a handful of consortia are sharing the cost and risk of creating a global information infrastructure. The cartel-like consortia building these global networks revolve around a mixture of new and incumbent telecommunication operators — the Fibre Link Around the Globe (FLAG),² the Japan-US Cable Network,³ and the China-US Cable Network,⁴ on the one hand, and an array of new competitors, cable companies and Microsoft, on the other (FCC 1999a; FCC 1999b). With respect to the latter, Global Crossing has emerged as a major force in global cable communications and as a provider of broadband networks in dozens of cities. Global Crossing is also backed by Microsoft, Softbank (Japan) and the Canadian Imperial Bank of Commerce. Through Microsoft's stakes in numerous telecommunications and cable systems, Global Crossing is also tied to new companies wiring up cities around the world, such as Pan European Networks, NTL, Telewest, Rogers, Hong Kong Telecom, Globo Cabo and Qwest (Global Crossing 1999; Microsoft 1999a; 1999b; 1999c).

Much of the new investment in telecommunications has occurred in the laying of fibre optic cables across the Atlantic between Europe and North America and spanning the Pacific between the US, Japan, China, Hong Kong, and Singapore. While these cables traverse the globe, they terminate in local networks concentrated in 150 to 200 cities world-wide and mainly serve corporate users, governments and 1 — 10 % of the population living in these wired cities. In fact, as BT and AT&T acknowledge, the real goal is not to build a GII at all, but to wire about 40-60,000 buildings worldwide that house the affluent corporate and government users with sophisticated and costly communication needs (BT 2000a; AT&T 2000; France Telecom 1999).

As major cities, specific buildings and residential suburbs in Europe, North America, Japan and a few business centres scattered throughout the world are wired up, entire swathes of the globe are being virtually eliminated from cyberspace. This is most observable with respect to Africa, where many countries have fewer than .5 telephone lines per 100 people, only 100,000 Internet accounts exist for a population of 750 million (outside of South Africa), and projects announced in the early 1990s as part of the GII languish. Indeed, AT&T's proposal to lay a fibre optic cable around the continent — Africa One — has been transferred to Global Crossing and deferred until at least 2002 (UNCTAD 2000, 88-92). Connections to and within Africa are so sparse that there is not even enough bandwidth to accommodate what little Internet traffic there is and information flows between countries on the continent are routinely routed through the former colonial metropolises. This reinforces the paths of colonial communication laid down in the late 19th century as well as to the enormous price of Internet access in Africa — ranging from \$150 per year in Botswana to \$1,700 per year in Angola and Kenya (UNCTAD, 2000, 94-103; ITU 1999b, 6).

Africa's almost complete excommunication from the "global information society" is not representative of conditions in the "third world" as a whole, though. Indeed, as mentioned above, there are a few countries where access to basic telephone service and the Internet grew at an impressive rate throughout the 1990s. Moreover, many of the advanced fibre optic telecommunications networks and

ICTs deployed in North America, Europe and Japan are also being implemented in the business districts and affluent suburbs of Latin America, Asia and Africa (BT 2000; FCC 2000, 7; WorldCom 1999).

AT&T, for instance, gained millions of cable system subscribers in Latin America and Asia through its acquisition of TCI (AT&T 2000, 47-50). Microsoft has also done the same through alliances and ownership stakes in Globo Cabo, Brazil's largest multimedia conglomerate, Global Crossing and Hong Kong Telecom (Microsoft 1999a; 1999b; 1999c). As Microsoft and Globo Cabo note, their efforts are aimed at "accelerating the deployment of advanced broadband and Internet services to millions of Brazilians" (Microsoft 1999b, 2), although their own promotional materials belie the fact that the project only applies to 10 % of the elite living in Sao Paulo, Rio de Janeiro and Belo Horizonte. For the vast majority of Brazilians, access to basic telephone services, computers and the Internet remains far out of reach — a reminder that wealth and living conditions in the country are among the most polarised in the world (ITU 1998a, A7, A78; Netwizards 1999).

Beyond Brazil, Microsoft has also joined with Global Crossing to create a global network that not only links Europe, North America and Japan, but which also connects up with Global Crossing's local networks in the major business centres of Asia.

The focus on wiring urban commercial districts also maps onto the contours of inclusion and exclusion in cyberspace. Although 80% of all Internet users live in just 10 countries (Netwizards 1999),⁵ a recent study indicates that Internet use is as much, and sometimes even more, a part of daily life for people in Sao Paulo, Mexico City, Beijing, Shanghai, Kuala Lumpur, and Bangkok, for example, as it is for citizens in the OECD countries (Angus Reid 2000).⁶ The study did not show the stark divisions between these few "wired cities" and Internet access in these countries as a whole, however, although this can be accomplished by drawing on additional sources — as shown in Table 2 below.

Table 2: Wired Cities and Disconnected Countries in the "Global Information Society"

	% of People in Largest City with Internet Access (2000)	% of People in Country with Internet Access (1999)	Teledensity in Largest City (1996)	Rest of Country Teledensity (1996)
Brazil	21	.65	16.5	8.7
Mexico	28	.8	N/A	9.5
China	12	.5	19.0	4.3
Malaysia	23	2.5	22.4	14.2
Thailand	22	.42	33.1	7.0
OECD (Gen. Avg.)		13.5		49.0

Sources: Netwizards 1999; Angus Reid 2000; ITU 1998, A28-A30; OECD 1999, 74, 86.

Thus, the nodal points on the global communications grid are places such as Sao Paulo, Hong Kong, Shanghai, Singapore, Johannesburg, Toronto, New York, London, Brussels, Paris, Amsterdam, and so on and, as WorldCom and AT&T note, the 40-60,000 buildings worldwide that house the affluent users of the new global information infrastructure. These patterns of inclusion and exclusion challenge our thinking about the geography and political economy of communication. We can no longer adequately refer to first and third worlds, north and south, and so

on, but to regions that are hardwired to networks and information flows, and thus “switched on,” and to the vast disconnected, or “switched off,” regions of the world (Castells 1996). Or, as Saskia Sassen (1999) puts it, we need to think about the dialectical relationship between integration and centralisation, on the one hand, and marginalisation, on the other.

These observations illustrate that rather than witnessing the emergence of all inclusive communicative spaces, the boundaries of cyberspace are mapped by differences between those using available technologies to produce and receive flows of communication and the rest of the populations cut off from such means, and thus rooted in more local forms of culture. In the nascent transnational communication system there is simultaneously a homogenisation of a deterritorialised core of wired places and affluent users, *and* a heterogeneity of cultural experience in the dispersed peripheries.

Of course, it could be objected that an analysis of the Internet and broadband networks couldn't be used to support conclusions about the “global media.” However, the same links between spaces of centrality and places of marginality also apply to the “old media.” Despite talk of a global media system, the linchpins of this system — AOL/Time Warner, AT&T, BT, Bertelsmann, Disney/ABC, Microsoft, Viacom, and so on — only receive 20 — 30 % of their revenues from foreign markets and even then, three-quarters is from just five countries beyond North America: Britain, France, Germany, Japan and Italy (AT&T 2000; Disney 2000, 34; Time Warner 1999, 27; Viacom 1999). Moreover, even though global channels such as CNN, the BBC, ESPN, and MTV are available in 130 or more countries, few households outside North America subscribe to them. In Asia, for example, only 1.4 % of households receive CNN and only about one per cent to the BBC, and ESPN (Maherzi 1997, 187).

In the end, the vision of a global media system should be discarded in favour of the idea of a transnational communication system. This transnational communication system integrates particular places and classes and transforms the “information revolution” into reality for some, namely those living in North America, Japan and Europe as well as an elite class of users living in a few cities scattered throughout the “third world.” For the rest of the world, the idea of a global information society remains fantastic, indeed.

The WTO and New Policies for New Media: Universal Service, Regulating the Internet and Media Convergence

The fragmented geography of the transnational communications systems clashes with the vision of the GII promoted in the 1990s, a vision that gave as much weight to universal service as to private investment, competition and flexible regulation (G7 1995). Many of these principles are included in the WTO's agreements, but did the agreements cover universal service? The short answer is yes. On the one hand, the *Agreement on Basic Telecommunications* allows “[a]ny member ... to define the kind of universal service obligation it wishes to maintain ... provided they are administered in a transparent, non-discriminatory, and competitively neutral manner and are not more burdensome than necessary” (WTO 1997b, sec. 3). On the other hand, however, the WTO does not contemplate universal service policies for an expansive array of “luxury services,” but as a narrowly tailored approach to telephone service (Fredebeul-Krein and Freytag 1997, 478; McLarty 1998, 56).

In fact, the *Annex on Telecommunications* prevents the adoption of universal service policies for enhanced services,⁷ such as electronic data bases, the Internet, and so on (WTO 1994b, Article 5). The NAFTA, upon which the telecommunications annex is modelled, also makes this point, as it declares that governments cannot require enhanced service providers to “(a) provide ... services to the public generally; (b) cost justify its rates; (c) file a tariff; (d) interconnect its networks with any particular customer or network; or (e) conform to any ... standard or technical regulation for interconnection other than for interconnection to a public telecommunications ... network” (NAFTA 1992, Article 1303(2)). In the face of these restrictions, it is not surprising that there have been no attempts to update universal service in light of the Internet, broadband networks and other new media, except for narrowly tailored programmes to connect schools, public libraries, hospitals, and so on to the Internet. This not only reflects the increasing faith in markets, but also the constraints contained in the WTO agreements that prevent universal service policies from being expanded commensurate with the availability of new ICTs as well as citizens’ needs in an “information society” (Winseck 1998, 225-227).

At the same time that the distinction between basic and enhanced services constrains governments and works against democracy, it is also possible that such constraints could be used to enlarge the scope of media freedoms. As is well known, many countries have attempted to regulate Internet content. Although some of these efforts have been thwarted by the courts, as in the US and France, or as an impediment to the growth of the Internet, as in Canada, efforts to regulate the Internet persist. China requires users to register with police and prohibits people from accessing and spreading “state secrets,” Singapore limits the number of ISPs and requires them to block a proscribed list of URLs, and numerous other countries curtail freedom of expression on the Internet in a myriad of ways. While the Internet is often seen as immune to such efforts, ongoing attempts to license ISPs, restrict access to “objectionable content,” and censor information published online likely have a chilling effect on freedom of expression (GILC 1998, 3; Reuters 2000).

The *Annex on Telecommunications* is interesting in this respect insofar as it prevents the regulation of enhanced services and permits the free “movement of information within and across borders” (WTO 1994b, Article 5(c)(e)). In doing so, the WTO codifies the free flow of information principle and could be used to curtail governments’ attempts to regulate information flowing through telecommunications networks, thus helping to expand electronic media freedoms worldwide. For this reason, Human Rights Watch (1999), for instance, lauds China’s entry into the WTO, not just as a means of opening its telecommunications system to competition, but as a way of allowing Chinese citizens access to information beyond the reach of government control and censorship.

At the same time, however, the WTO aims to promote global markets, not human rights. This point was illustrated during interviews with the Broadcasting Authority of Singapore in 1996, at which time it was acknowledged that Singapore’s commitments to the *Annex on Telecommunications* could restrict its efforts to regulate Internet content. However, this was seen as unlikely because trade ministers would be reluctant to pursue a “free speech” agenda through the WTO (also see Samarajiva and Hadley 1996, 16; Drake and Nicholaidis 1999, 40). Attempts to pursue freedom of expression through the WTO could also be limited by provisions that allow countries to adopt measures “necessary to protect public morals or

to maintain public order,” although this exemption can only be invoked “where a ... serious threat is posed to one of the fundamental interests of society” (WTO 1994a, Article XIV).

While the *Annex on Telecommunications* might restrict governments’ attempts to regulate Internet content, the same cannot be said with respect to private systems of censorship. Major commercial Internet providers, governments and some multilateral organisations, such as Unesco, are advocating rating systems and content filtering software as a key pillar of the nascent governance regime for telecommunications and new media and as an alternative to government regulation. This is occurring mainly in response to concerns that the Internet has made it too easy for children to access pornography, hate literature, violent content, and so on. The most notable measure in this respect is the “voluntary” international rating system — the Internet Content Rating Association (ICRA) — being adopted by members of the GBDe: AOL/Time Warner, Disney/ABC, Bertelsmann, Microsoft, IBM, British Telecom, Bell Canada, among others (ICRA 1999).

Content filters are also being adopted by ISPs and other segments of the Internet further upstream without users’ knowledge. The fact that sponsors of the ICRA-based standards are also major suppliers of browsers, such as Netscape (AOL/Time Warner) and Explorer (Microsoft), and Internet access providers, allows them to assume a pivotal role as online gatekeepers, influencing who gains access to the desktops of users and who does not. In tandem with the consolidation of ISPs and portals around companies associated with the GBDe — AOL/Time Warner, Bertelsmann, BT, Disney/ABC, France Telecom, Microsoft, WorldCom, Telefonica, Vivendi, and so on — rating systems extend these companies’ control over the evolution of the Internet (ICRA 1999; Lessig 1999).

As censorship capabilities are embedded deeper into the architecture of the Internet, it will become easier for governments to compel their use, further turning the ICRA schemes into a state-backed system of private censorship. The fact that this has already been the case in Australia and discussed within the US, as well as embraced by the CRTC in Canada as an alternative to government regulation, and advocated by France and Unesco as a form of coregulation, underlines these concerns (GILC 1999; Lessig 1999).

The WTO, Media Convergence and Communication Policy in an Online World

The idea that the telecommunications agreements have a bearing on universal service and Internet content regulation suggests that the WTO has more influence on communication and cultural policy issues than commonly thought. While broadcasting and cable media are excluded from the telecommunications agreements, countries *can* include television programming and film as goods and services covered by the WTO. Indeed, 19 countries have done so for television programming and another 25 made commitments covering global news agencies (WTO 1998, 7). Moreover, there is immense pressure to include the “cultural industries,” although some countries want the WTO to adopt a “special instrument” that would identify measures that can be used to promote the cultural industries (e.g. Canada) while others seek to continue excluding this area from the WTO altogether — France’s position (Canada 1999).

Regardless of the outcomes of these debates, the distinctions drawn by the WTO between basic and enhanced services as well as between those services formally covered by the agreement — telecommunications and information services — and those that are not, i.e. the “cultural industries,” are dissolving in the face of media convergence and as all information is translated into digital form and sent across the same networks. These processes are also furthered as governments relax restrictions on cross-ownership and eliminate policies that prevented telecommunications companies from influencing content flowing through their networks (Winseck 1998; ITU 1999a, 6-7). Media convergence is also being propelled by ownership changes that have created enormous transnational multimedia conglomerates, as with, for example, the AOL/Time Warner merger, AT&T’s emergence as a dominant cable system operator and provider of high speed Internet services through its acquisitions of TCI and MediaOne, Microsoft’s stakes in telecommunications and cable systems, set-top boxes, WebTV, and online services, as well as telecommunications companies’ advent as dominant Internet access providers (OECD 1999, 49). As these companies distribute telecommunications, video, computer and Internet services over the same broadband infrastructure, how can narrow distinctions drawn by the WTO between telecommunications and cultural industries, and between basic and enhanced services, be maintained?

The absorption of all new media into the catch-all category of “enhanced services” could restrict the application of *any* communication and cultural policies to the new media. Canada, for instance, has extended cultural policies to Video on Demand (VOD) by defining it as a broadcasting service. As such, these services are required to contribute to content production funds and to ensure the availability of specified amounts of Canadian programming (CRTC 1994a, 47; CRTC 1994b). The CRTC has even held out the prospect of doing the same for the Internet once it is widely used for the distribution of broadcast programming (CRTC 1999b). Putting questions regarding the Internet aside for a moment, even within Canada, some telecommunications operators argue that since VOD is delivered over telecommunications networks on a point-to-point basis they are not broadcasting, but enhanced services. As such, they argue that VOD should be exempt from the cultural policy aims of the *Broadcasting Act* (1991) (Cohen 1993). While these challenges to the extension of cultural policies to new media in Canada failed, similar ventures pursued through the WTO are likely to be more successful.

Although such issues were set aside during WTO negotiations to avoid a confrontation that might scuttle the *Agreement on Basic Telecommunications*, the US made it clear that programming delivered over telecommunications networks will be treated as enhanced services (GIIC 1997, 9, 33). In addition, the WTO’s evolving and boundless framework for electronic commerce will further erode distinctions between areas of the electronic media covered by the WTO and those currently beyond its reach, erasing any lines between data, commerce and culture (Drake and Nicolaidis 1999). In the end, the emerging expansive definition of ecommerce, broadcast programming on the Internet, and fibre optic cables capable of carrying 100 hours of video a second to and from the numerous “wired cities” connected to the transnational communications grid means that cultural policy could be rendered redundant altogether or, perversely, maintained only for the disenfranchised masses living on the margins of the “global information society.”

Rather than celebrating or lamenting the future of cultural policy, however, it needs to be recognised that such prospects are somewhat speculative and only apply to a third of the world's countries that have assented to the WTO's policy regime for telecommunications and new media. In addition, the idea that convergence will dissolve the foundations of communications policy for the new media will likely only be used selectively to prevent the adoption of *any* policies that threaten commercial interests but ignored with respect to measures that further ends jointly sought by the governments and the communication industries, such as approaches to Internet rating and filtering systems. Finally, there *is* a need for new policies that reinforce open media systems and advance communicative rights and freedoms.

I want to conclude by arguing that new policies are needed to ensure that new media platforms remain open. Threats to open media systems are coming as much from the communication industries as from any policy initiatives by governments. As the ITU (1999b) notes, "the Internet ... is not immune from the tendencies towards oligopoly that exist in all industries" (p. 17). Moreover, it is clear that telecommunications and cable companies' forays onto the Internet have been followed by efforts to privilege their own Internet access providers and content over unaffiliated ISPs and content sources. In fact, the dominant high speed Internet service in North America — @Home⁸ — limits the amount of information subscribers can send over the Internet as well as the amount of video they can download from non-affiliated sources (Bar et al 1999, 18-20). These attempts to transform the Internet into a closed media system have erupted into several regulatory and legal skirmishes. Thus far, local courts in the United States have supported open access mandates imposed on AT&T by some cities, such as Portland, Oregon, despite opposition from AT&T and the FCC (AT&T, et. al. vs. Portland, Oregon, et. al 1999; FCC 1999c). In Canada, in contrast, the CRTC (1999a) has forced cable companies and telecommunications companies to open their networks to unaffiliated ISPs, despite protestations from both sets of interests.⁹

Questions about open media access and the future of the Internet are also being decided at the level of technological design (Lessig 1999). The communication industries are making technological design an adjunct of their monopolisation strategies, according to Mytelka and Delappiere (1999), in order to "control the evolution of technology, reduce the shocks of radical change, and maintain ... position within ... shifting hierarchies" (p. 135). These dynamics are illustrated by a recent paper by Cisco (1999). According to Cisco, a leading provider of broadband Internet Protocol-based networks, the company's network designs give network operators the ability to prioritise content from their own or affiliated sources, while assigning lower priority and less bandwidth, or restricting access altogether, to unaffiliated content sources.

This ability to manage access to and use of networks is facilitated by features that permit cable system operators to "isolate traffic by the type of application, even down to specific brands, by the interface used, by the user type and individual user identification, or by the site address" (Cisco 1999, 3). This fine-grained management of information flows gives cable system operators unprecedented knowledge about users, a feature that raises many questions about privacy but one which, more to the point, allows operators to narrowly segment audiences

and target “express” services to premium customers ready to pay for superior network performance (p. 8). These network design decisions, thus, further the commercialisation of the Internet and superimpose another layer of online gatekeepers that can restrict incoming content “as well as subscribers’ outgoing access to information” (p. 5). The aim, as Cisco makes clear, is to allow cable system operators to “offer [their] own or partner’s services with full-speed features to encourage the adoption of your services” while restricting access to services and content provided by others (p. 5). Thus, rather than enhancing the open and democratic qualities of the Internet, networks are being designed as systems of control that further the commercialisation of cyberspace and discrimination between content sources and the types of network environment that will be allocated to different classes of users (CME 1999, 14; Bar et al 1999, 26-30).

In the face of such efforts, policies are needed to prevent the creation of closed access to *networks, operating systems* and *content*. Indeed, maintaining openness at each of these levels should be the main focus of all new policies for new media. Decisions taken now will decide whether the Internet evolves as an “open network,” as decisions by the CRTC in Canada support, or as a “closed network,” as in the approach adopted by the FCC, AT&T and AOL/Time Warner in the US (Bar et al 1999; CRTC 1999a).

The transnational reach of AT&T, AOL/Time Warner, Cisco and Microsoft, and so on, means that current North American debates about open systems design are also relevant to the politics of cyberspace elsewhere. However, the WTO telecommunications policy regime’s emphasis on expanding markets, weak principles regarding market power and prohibitions against regulating enhanced services limit prospects that appropriate policies can be developed to impede the advent of closed media systems at the global level. As Francois Bar et al (1999) note, while the FCC presents its refusal to enforce open access as a “hands off” approach to the Internet, it misinterprets thirty years of regulatory history and confuses the principle of “doing no harm” with “doing nothing.” The same point applies equally to policies for telecommunications and new media at the global level.

Conclusion

Analysing the governance of telecommunications and new media is complicated by the fact that old explanatory frameworks rooted in debates over the NWICO and free flow of information, and their various theoretical props (modernisation, dependency or cultural imperialism), no longer offer sturdy guideposts. This is not because there are no parallels between the past and the present. There are; three or four of which stand out.

The potential for all electronic media to form a global communications system since the mid-19th century comes quickly to mind, as do parallels between the monopolies granted to the global cable operators of that time throughout Latin America, Africa and Asia and the exclusive concessions granted to France Telecom, Cable & Wireless, Telefonica, SBC, and so on, during the recent privatisation of PTOs in the same regions. One can also point to affinities between the cartel-like organisations among cable companies, global news agencies and the domestic press in the late 19th century and the “strategic alliances” today between, for instance, Global Crossing, Microsoft, AT&T, and regional media conglomerates. Lastly, the

subordination of communicative values and human rights to “free trade” and mercantilist state policies designed to create global champions and to hastily usher in the newest modes of electronic media are also common features of the “global media” in the late-19th and on the cusp of the 21st century.

Several other issues should guide analysis of telecommunications and new media in a global context today. First, privatisation and competition have been neither as disastrous as many critics anticipated nor as beneficial as their defenders claim. Second, these changes have done little to curb attempts to control the evolution of telecommunications and new media. Third, the ambitious notions of a GII and “global information society” have been eclipsed by a system of transnational communications and wired cities that serve the few rather than the many. The idea of a global media system is hardly plausible when 97 % of the world’s population has no access to the Internet and nearly two-thirds do not even have access to a 120 year old technology: the telephone. Once again, it is not yet the age of the global media.

Lastly, telecommunications reform involves a technocratic approach to governance. The nascent governance regime limits citizens’ role in the policy process and *a priori* excludes new media from the purview of universal service and cultural policies while dissociating them from communicative and human rights in the process. This point is vital because information/communication have always been associated with media freedoms and democracy. However, the new governance regime avoids references to freedom of expression, privacy, diversity, and so on. Consequently, information/communication are being conceptually stripped of their unique qualities in order to forcefit them into a “free trade” framework. The disassociation of communication and trade from communication and rights is further highlighted by the fact that many countries which signed the WTO’s telecommunications agreements have not signed the *Universal Declaration of Human Rights* (1948) or the *International Covenant on Civil and Political Liberties* (1966).¹⁰

In this context, the WTO needs to address the unique qualities of communication and to reconcile the globalisation of trade with the globalisation of human rights. This can be accomplished by drawing a closer alliance between the WTO and the broader body of UN-based human rights law as well as by requiring all who sign the telecommunications agreements to adopt basic human rights documents. From this point of view, the problem with globalisation is that it has not gone far enough!

Notes:

1. Governance was embraced in the mid-1990s as a response to the success of the Asian economic model, the failure of unregulated capitalism in the former Soviet Union, the contribution of neoliberal economic reforms to the collapse or fragile condition of states in Latin America, Eastern Europe and, to a lesser degree, Asia (i.e. Indonesia) and internal politics within the World Bank and IMF between Japan and the US over the proper role of the state (Hills 1998; Gill 1997).

2. FLAG is 37 % owned by Bell Atlantic and includes AT&T, Dallah Al Baraka (Saudi Arabia), General Electric, Marubeni Corporation (Japan), Telecom Holding Company (Thailand), Asian Infrastructure Fund (Hong Kong) (FLAG 2000).

3. Consortia includes: AT&T, PSINet, Com Tech, Frontier, GTE HTI, GTE INS, IXnet, Level 3, PRIMUS, Qwest, RSL, SBC, Teleglobe, Viatel, WorldCom, PGE, PCI, Sprint, BT, C&W, CHT-I, DDI,

Global One, IDC, JT, KDD, KPN, NTT, SingTel, TM, Telstra, and VSNL (FCC 1999a).

4. Consortia includes: AT&T, China Telecom, Chunghwa Telecom, Hongkong Telecom, KDD, Korea Telecom, WorldCom, NTT, SingTel, Sprint, Teleglobe, Telekom Malaysia and Telstra (FCC 1999b).

5. The ten countries are: the US (70.5m users); Japan (19.6m); Britain (11.9m); Germany (10.6m); Canada (10.2m); Australia (6.5m); France (4.9m); Finland (4.3m); Netherlands (4.8m); Taiwan (4m).

6. The study focused on entire countries when looking at Internet use in Europe, North America and Japan but, unexplainably, only looked at major cities when focusing on Brazil, China, Mexico, Thailand, etc.

7. Enhanced services are "services offered over common carrier transmission facilities ... which employ computer processing applications that: i) act on the format, content code, protocol or similar aspects of the subscriber's transmitted information; or ii) provide the subscriber additional, different, or restructured information; or iii) involve subscriber interaction with stored information" (US Schedule of Commitments to the *Annex on Telecommunications* 1994, quoted in McLarty 1998, 9; this definition is replicated in NAFTA 1992, Chapter 13, Article 1310). This definition is so broad as to bring any service delivered over telecommunications networks within its scope, a point returned to below.

8. @Home is offered by all of the dominant North American cable system operators, such as AT&T, Comcast, AOL/Time Warner, Rogers, Shaw, and so on.

9. Cable companies in Canada have refused to implement the CRTC's decision pending a court challenge.

10. These include Antigua and Barbuda, Bangladesh, Brunei, Ghana, Indonesia, Malaysia, Pakistan, Papua New Guinea, Turkey, and, if it is ultimately included, which now appears to be almost certain, China (UNDP 1999, 2442-245).

References:

- Angus Reid Research. 2000. Faces of the Web. Available at: www.angusreid.com.
- AT&T. 2000. Annual Report 1999. Available at: www.att.com/ir/pdf/99my.pdf.
- AT&T et al. v. City of Portland and Multnomah County, United States District Court for the District of Oregon. 1999, cv 99-65-PA.
- Bar, Francois, Steve Cohen, Peter Cowhey, Brad DeLong, Michael Kleeman, and John Zysman. 1999. Defending the Internet Revolution in the Broadband Era. Berkley Roundtable on the International Economy (BRIE) E-economy Working Paper 12.
- BT. 2000. Annual Report 1999. Available at: www.bt.com.
- Canada. 1999. Canadian Culture in a Global World. Available online at: www.infoexport.gc.ca/trade-culture.
- Canadian Radio-Television and Telecommunications Commission. 1999a. Application Concerning Access by Internet service Providers to Incumbent Cable Carriers' Telecommunications Facilities (Dec. 99-11). Ottawa: Ministry of Supply and Services.
- Canadian Radio-Television and Telecommunications Commission. 1999b. New Media. Ottawa: Ministry of Supply and Services.
- Canadian Radio-Television and Telecommunications Commission. 1994a. Review of Regulatory Framework (Dec. 94-19). Ottawa: Ministry of Supply and Services.
- Canadian Radio-Television and Telecommunications Commission. 1994b. Exemption Order Respecting Experimental Video on Demand Programming Undertakings (Dec. 94-118). Ottawa: Ministry of Supply and Services.
- Castells, Manuel. 1996. *The Information Age*. Malden, MA: Blackwell.
- Center for Media Education. 1999. Consumer and Public Interest Groups Tell FCC Chairman that the Internet's Future Is Jeopardized by the Cable Industry's Broadband Plans. Washington, D.C.: Centre for Media Education.
- Cisco Systems. 1999. *Controlling Your Network — A Must for Cable Operators*. San Jose, CA: Cisco Systems.
- Cohen, Alex. 1993, October 8. Correspondence with J. C. Meldrum, vice president and corporate

- counsel, SaskTel. Unpublished letter on file with author.
- Cox, Robert. 1992. Global Perestroika. In R. Milliband and L. Panitch (eds.), *New World Order?* 30-43. New York: New Left Review.
- Cowhey, Peter. 1990. The International Telecommunications Regime. *International Organization* 44, 2, 169-199.
- Disney. 1999. Annual Report. Available at: www.disney.com.
- Drake, William and Kalypso Nicolaidis. 1999. Global Electronic Commerce and the General Agreement on Trade in Services. Paper presented to the World Services Congress Conference, November 1-3, Atlanta, USA.
- Drake, William and Eli Noam. 1997. The WTO Deal on Basic Telecommunications. *Telecommunications Policy* 21, 9-10, 799-818.
- Federal Communications Commission. 2000. Report on International Telecommunications Markets. Available at: www.fcc.gov.org.
- Federal Communications Commission. 1999a. Cable Landing License. Available at: www.fcc.gov.org.
- Federal Communications Commission. 1999b. Undersea Cables Public Forum. Available at: www.fcc.gov.org.
- FLAG. 2000. Organizational Structure. Available at: www.flagltd.com
- Fredebeul-Krein, Markus and Andreas Freytag. 1997. Telecommunications and the WTO Discipline. *Telecommunications Policy* 21, 6, 477-491.
- Gill, Stephen. 1997. *Globalization, Democratization and Multilateralism*. New York: St. Martin's Press.
- Global Business Dialogue on Electronic Commerce. 1999. Organizational Structure. Available at: www.gbde.org/structure/bsc.html.
- Global Crossing. 1999. Global Crossing, Softbank and Microsoft Establish Joint Venture to Build Telecom Network Providing Advanced Services Throughout Asia. Available at: www.globalcrossing.bm.
- Global Information Infrastructure Commission. 1997. The WTO Telecoms Agreement. Washington, D.C.: Centre for Strategic and International Studies.
- Global Internet Liberty Campaign. 1999. GILC Statement on International Ratings and Filters Submitted to the Internet Content Summit. Available at: www.eff.org/pub/Censorship/Ratin...990907_gilc_intl_rating.statement.html.
- Global Internet Liberty Campaign. 1998. Regardless of Frontiers. Available at: www.gilc.org.
- Group of 7. 1995. G7 Ministerial Conference on the Global Information Society. Brussels: Group of 7.
- Hills, Jill. 1998. Liberalization, Regulation and Development. *Gazette* 60, 6, 459-476.
- Human Rights Watch. 1999. Human Rights Watch Envisions Possible Press Freedom Gains in Wake of WTO Deal. Available at: www.ifex.org
- International Telecommunications Union. 1999a. Trends in Telecommunication Reform 1999. Available at: www.itu.org.
- International Telecommunications Union. 1999b. Challenges to the Network. Available at: www.itu.org.
- International Telecommunications Union. 1998a. World Telecommunications Development Report. Geneva: International Telecommunication Union.
- International Telecommunications Union. 1998b. General Trends in Telecommunication Reform, 1998 — World (vol. 1). Geneva: International Telecommunication Union.
- International Telecommunications Union. 1997. World Telecommunications Development Report. Geneva: International Telecommunication Union.
- Internet Content Ratings Association. 1999. An Invitation to Membership. Available at: www.icra.org.
- Kleinwachter, Wolfgang. 1999. Transnational Management of TAP Projects and New Challenges to the International Regulatory Framework. Paper prepared for the European Commission's Telematics Applications Programme.
- Lessig, Lawrence. 1999. *Code and Other Laws of Cyberspace*. New York: Basic Books.

- Maherzi, Lofti. 1997. *World Communication Report*. Paris: Unesco.
- Mansell, Robin. 1999. New Media Competition and Access. *New Media & Society* 1, 2, 155-182.
- McLarty, Taunya. 1998. Liberalized Telecommunications Trade in the WTO. *Federal Communications Law Journal* 51, 1, 1-59.
- Melody, William. 1999. Telecom Reform. *Telecommunications Policy* 25, 7-34.
- Microsoft. 1999a. Annual Report 1999. Available at: www.microsoft.com.
- Microsoft. 1999b. Globo and Microsoft Announce Strategic Agreements and Investments to Develop New Internet Services in Brazil. Available at: www.microsoft.com.
- Microsoft. 1999c. Microsoft Partners with Softbank and Global Crossing to Increase Broadband Connectivity in Asia. Available at: www.microsoft.com.
- Netwizards. 1999. Internet User Survey (July 1999). Available at: www.netwizards.org.
- Organization for Economic Cooperation and Development. 1999. Communications Outlook. Paris: OECD.
- Petrazinni, Ben. 1997. Regulating Communication Services in Developing Countries. In W. Melody (ed.), *Telecoms Reform*. Lyngby, Denmark: Technical University of Denmark.
- Reuters. 2000. Chinese Government Tightens Hold on Net Content. *Cnet News.com*, Jan. 26. Available at: news.cnet.com.
- Samarajiva, Rohan and Patrick Hadley. 1996. Online Content Regulation. Paper presented at the International Association of Mass Communication Research, Sydney, Australia, August 18-22.
- Sassen, Saskia. 1999. *Globalization and Its Discontents*. New York: The New Press.
- Staple, Gregory. 2000. The Soft Network. Available at: www.telegeography.com/Publications/tg00_intro.
- Tarjanne, Pekka. 1999. Preparing for the Next Revolution in Telecommunications. *Telecommunications Policy* 25, 51-63.
- Thompson, Brian. 1999. Investing in the Global Information Infrastructure. Speech presented to the Global Information Infrastructure Commission Conference, Geneva, Switzerland, October 11. Available at: www.giic.org/events/991011HBT.html.
- Time Warner. 1999. Annual Report 1998. Available at: www.timewarner.com.
- United Nations Conference on Trade and Development. 2000. Building Confidence. Geneva: United Nations.
- United Nations Development Program. 1999. Human Development Report. Geneva: United Nations.
- United States International Trade Commission. 1996. General Agreement on Trade in Services (GATS) (Investigation No. 332-358). Lexis Nexis Database.
- United States. 1996. Future of International Telecommunications Trade Issues. Washington, D.C.: US Government Printing Office.
- Viacom. 1999. Annual Report 1998. Available at: www.viacom.com.
- Wallsten, Scott. 1999. *An Empirical Analysis of Competition, Privatization and Regulation in Africa and Latin America*. Washington, D.C.: World Bank.
- Wellenius, Bjorn and Peter Stern. 1994. *Implementing Reforms in the Telecommunications Sector*. Washington, D.C.: World Bank.
- Winseck, Dwayne. 1998. *Reconvergence*. Cresskill, NJ: Hampton.
- World Bank. 2000. Telecom Projects with Private Participation (1984-1998) (PPI Database). Washington, D.C.: World Bank.
- World Trade Organization. 1998. Audiovisual Services (s/c/w/40). Geneva: World Trade Organization.
- World Trade Organization. 1997a. Fourth Protocol to the General Agreement on Trade in Services. Available at: www.wto.org.
- World Trade Organization. 1997b. Regulatory Reference Paper. Available at: www.wto.org.
- World Trade Organization. 1994a. General Agreement on Trade in Services. Available at: www.wto.org.
- World Trade Organization. 1994b. Annex on Telecommunications. Available at: www.wto.org.