Designing a Coherent Framework for the Regulation of Internet Content

Mira Burri

Abstract

Against the backdrop of transforming patterns of content production, dissemination and use, as well as the changed governance landscape in the Internet age, this paper seeks to emphasize the point that media can no longer be taken as a self-contained policy domain reserved for the nation state. It raises awareness of the necessity for a broader understanding of the relevant societal and governance processes and sketches the new challenge to ensure a coherent regulatory framework for Internet content. In this sense, the paper seeks to address the question of appropriate forms of regulating Internet content and pleads for a recalibrated action in the domain of global media law and policy, in particular with regard to network neutrality and Internet filtering.

Keywords | content, media law and policy, freedom of speech, Internet, Internet filtering, network neutrality, regulation through code and technology

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The regulation of content: Introductory remarks

The regulation of content, understood here as a term encompassing film, video, audio and television - or "audiovisual services" in the parlance of the World Trade Organization (WTO),[1] - used to be entrusted to national media law and policy. A number of concerns have traditionally motivated state intervention, related to the specific nature of the media and media markets and to the specific function that they are entrusted to play in society. Next to various public interest concerns, such as those regarding children and other "vulnerable" individuals,[2] the fundamental role of the media has been to sustain the freedom of expression – in both its passive and active dimensions. Thus, in the West European tradition, the media has been given a particular structural function and is meant to contribute to a vibrant public sphere with diversity of ideas and viewpoints.[3]

Reflecting these rationales of public interest intervention in the media space, states have, over the years, developed different toolkits for regulating content. Some of the instruments in this toolbox have been *structural* (directed at the structure of media organizations and markets) such as media ownership regulation; others have been *behavioural* (directed at the behaviour of media outlets) such as restrictions on violence, sexuality and adult language, as well as positive prescriptions for certain types of content with different culture-specific paternalistic nuances.[4]

The present paper does not question these public interest rationales; rather it argues that in the contemporary media environment it has become essential to *recalibrate* content regulation – on the one hand, so as to take into account the changing methods for creating, distributing and accessing content associated with the Internet; on the other hand, so as to reflect the changed governance landscape.

As a starting point for this call for a policy update, it should not be forgotten that media regulation originated from a particular time period. That was a time marked by analogue communications, spectrum scarcity, high-entry costs and very few media outlets – all conditions that have now been changed. An essential characteristic of this "older" system to be borne in mind is that it permitted centralized oversight and control through a single point of entry. This control was the prerogative of the state. It was embedded in the democratic mechanisms of the nation state and secured through a complex network of institutions, which balanced the free flow of information against the protection of other essential values and interests – such as privacy, national security and public order.[5]

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1 The WTO Services Sectoral Classification List (Doc.MTN.GNS/W/120, 1991) includes under the sector "audiovisual services" the sub-sectors: motion picture and video tape production and distribution services; motion picture projection services; radio and television services; radio and television transmission services; sound recording and others.

2 For a full taxonomy, see e.g. Terry Flew, "New Media Policies," in Managing Media Work, ed. Mark Deuze (London: Sage, 2011), 63.

3 See Nicholas Garnham, "Public Service versus the Market," Screen 24 (1983): 6–27. In the US, while the system is profoundly different than in Europe and it has been the concept of the "marketplace the ideas," rather than the Habermasian "public sphere" that motivate state intervention, the US Supreme Court has long identified speech diversity as a "basic tenet of national communications policy" and stressed that "the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public." See Turner Broad. Sys., Inc. v. FCC, 512 U.S. 622, 663–664 (1994) (quoting United States v. Midwest Video Corp., 406 U.S. 649, 668 n. 27 (1072) (quoting Associated Press v. United States, 326 U.S. 1, 20 (1945)).

4 See Philip M. Napoli, "Global Deregulation and Media Corporations," in Managing Media Work, ed. Mark Deuze (London: Sage, 2011), 73–85.

5 See Perry Keller, European and International Media Law: Liberal Democracy, Trade, and the New Media (Oxford: Oxford University Press, 2011).

It is also important to stress from the outset that the international regimes related to content, as formulated during the analogue/offline age, were nominal. They included, on the one hand, soft law under the United Nations Educational, Scientific and Cultural Organization (UNESCO) that endorsed some cultural rights and freedoms as well as the sovereign right of states to define their content policies. On the other hand, we had the "harder" rules on economic globalization epitomized by the Agreements under the World Trade Organization (WTO) which, while liberalizing trade in goods and services, *carved out policy space for the nation state* to regulate on essentially all aspects of content.[6] While international human rights law addresses important aspects of content regulation, the margin of appreciation given to states to formulate their policies according to national specificities has been large, save in cases of clear individual rights' violation - and even then this only applies to the European region, where the European Court of Human Rights (ECtHR) has been equipped with more power and enforceability of its decisions.[7] The important exception of this absence of international harmonization was in the field of intellectual property (IP) protection with the WTO Agreement on Trade-related Intellectual Property Rights (TRIPS) and the suite of treaties under the framework of the World Intellectual Property Organization (WIPO)[8]. However these rules were only of marginal importance to the regulation of content and have been rarely (perhaps wrongfully so[9]) considered in content governance strategies.

While the role of these major international organizations is still critical, it is also evident that the global governance landscape has been profoundly changed in the last two to three decades with the emergence of a great number of new actors on the international scene and international regime complexes that address a set of topics in a non-hierarchical and often contentious manner.[10] The global governance of the Internet can be said to be a vivid illustration of these developments that engage not only states and international organizations as classic subjects of international law but also many multi-stakeholder forums that create soft, or even informal, law.[11]

Against this backdrop, the paper seeks to emphasize the evident point that media can no longer be taken as a self-contained policy domain reserved for the nation state and there is a need for a broader understanding of the relevant societal and governance processes. Many other domains have now become relevant, in more or less immediate ways. The linkages have only grown stronger as media consumption has moved from old to new media and the Internet has become deeply integrated in everyday economic, political, cultural and social life. This has triggered a new challenge for regulators striving to ensure a coherent regulatory framework for Internet content.

Alongside the usual difficulties for regulators grappling with new technologies, the governance challenge here stems from the often strikingly different regulatory histories,

6 See Mira Burri, "Trade versus Culture in the Digital Environment: An Old Conflict in Need of a New Definition," Journal of International Economic Law 12 (2009): 17–62.
7 See e.g. Helen Keller and Alec Stone Sweet (eds), A Europe of Rights: the Impact of the ECHR on National Legal Systems (Oxford: Oxford University Press, 2008).
8 See e.g. Graham Dutfield and Uma Suthersanen, Global Intellectual Property Law (Cheltenham: Edward Elgar, 2008).
9 See e.g. Mira Burri, "The Global Digital Divide as Impeded Access to Content," in Trade Governance in the Digital Age, eds. Mira Burri and Thomas Cottier (Cambridge: Cambridge University Press, 2012), 396–420.
10 Kal Raustiala and David G. Victor, "The Regime Complex for Plant Genetic Resources," International Organization 58 (2004): 277–309; Scott Burris, Michael Kempa, and Clifford Shearing, "Changes in Governance: A Cross-Disciplinary Review of Current Scholarship," Akron Law Review 41 (2008): 1–66; Karen J. Alter and Sophie Meunier, "The Politics of International Regime Complexity," Perspectives on Politics 7 (2009): 13–24.
11 Joost Pauwelyn, Ramses A. Wessel and Jan Wouters (eds) Informal International Lawmaking (Oxford: Oxford University Press, 2012).

rationales for intervention and institutional structures of the previously separated policy domains. This renders it extremely complex to achieve regulatory design appropriate for the achievement of core public policy objectives.[12] A related phenomenon that can be observed is the growing "messiness" of regulation, as it not only draws together horizontally different domains but is also unevenly vertically spread along a multi-layered structure that mobilizes various actors at the local, national, regional and international levels.

This paper seeks to address the question of appropriate forms of regulating Internet content, at least from a bird's eye view, and sketches a few salient issues that call for recalibrated action in the domain of global media law and policy.

Enter the web: Features of the new media landscape

Although television is still the number one media outlet for the average citizen on this globe, very few would dispute that the media landscape has been utterly transformed by the Internet. While the effects are not equally distributed across nations, generations and classes,[13] the patterns of media use have been profoundly modified.[14] Overall, we are faced with a decidedly different information and communication environment.[15]

As broader lines of change, one can identify the following features of the new media space:

1. *Unlimited "shelf-space", abundance of content and its different organization*. In the digital space, the notion of scarcity has been modified and rendered virtually obsolete. Blogs, social networking sites, virtual worlds and many other forms of information and communication made available over the Internet have proliferated and turned into viable media outlets. These co-exist next to traditional ones, offering a new way of accessing information and/or entirely new information. The sheer amount of information that is available at all times from any point connected to the Internet is simply mind-blowing. There is, indeed, scarcity of attention. What is also worth noting - and is often forgotten when describing the new digital media space - is the different way information is organized in it. The fact that any type of data can be expressed in digital format has completely changed the rules for organizing information.[16] Whereas the Dewey decimal classification was used for organizing libraries, alphabetical order for name registers and genre categories in CD shops, the digital environment enables an encompassing, dynamic and interlinked information archive that can be searched through a single entry point according to unlimited criteria.

2. *New ways of distributing, accessing and consuming content*. Enabled through multiple devices over the almost ubiquitous Internet, the patterns of handling information have changed. Instantaneous distribution to millions of people, pulling content instead of

12 See Ian Brown and Christopher T. Marsden, Regulating Code: Good Governance and Better Regulation in the Information Age (Cambridge, MA: MIT Press, 2013).
13 See John Palfrey and Urs Gasser, Born Digital: Understanding the First Generation of Digital Natives (New York: Basic Books, 2008); Burri, "The Global Digital Divide as Impeded Access to Content."
14 See John Naughton, "Our Changing Media Ecosystem," in Communications: The Next Decade, eds. Ed Richards, Robin Foster, and Tom Kiedrowski (London: Ofcom, 2006), 41–50.
15 See Yochai Benkler, The Wealth of Networks: How Social Production Transforms Markets and Freedom (New Haven, CT: Yale University Press, 2006); Manuel Castells, Communication Power (Oxford: Oxford University Press, 2009).
16 David Weinberger, Everything Is Miscellaneous: The Power of the New Digital Disorder (New York: Henry Holt, 2007).

passively receiving it, simultaneous consumption from many sources are but few of the (distinct from TV) features of contemporary online communication. Naturally, these have serious repercussions for users, businesses and for the entire market for information goods and services. They have also changed the transparency of cultural symbols and the way they circulate in global and local contexts.[17]

3. *New modes of content production, where the user is not merely a consumer but also an active creator*. Reduced thresholds to participation, as well as the (ever greater) affordances of digital technologies, have allowed individuals and groups of individuals to create new content and to play around and remix existing content.[18] This type of creativity, interactivity and co-operation is unique to digital media and is a radical departure from the conventional image of massive and passive audiences, only slightly empowered by their TV remote-controls.

One may reasonably wonder whether these, often truly transformative, changes of the media environment have inspired changes in the media policy toolkit too. Surprisingly, the answer to this question is negative: indeed, national media law and policy have only slightly and not very innovatively adjusted to the opportunities afforded by the Internet and the societal implications brought about with them.[19] Neither has there been a conclusive and evidence-based analysis of the economic, cultural, social and political repercussions of the new modes of content creation, distribution, access and consumption. In this regard, we are still unsure whether the Internet and the changes it triggers contribute to the intrinsic media policy objectives, such as pluralism of ideas and opinions, or actually obstruct their attainment.

After the original strong beliefs in the naturally generated diversity (also known as the "long tail" theory[20]) and in the democratizing power of the Internet,[21] current practices seem to be much more nuanced. As for the long tail, as Napoli summarizes: "it does indeed seem to be unclear at this point whether a media environment of unprecedented choice and sophisticated tools for identifying and accessing relevant content genuinely helps or hurts the prospects for content that has not traditionally resided in the 'head'."[22] As global media corporations merge, both horizontally and vertically, in the pursuit of better utilization of all available channels and platforms, diversity may in fact be lost. While the positivism for user creativity is still strong and its long-term effects on legal modeling may be far-reaching,[23] in the narrower sense of grassroots content production and its impact on democratic discourse, sceptics have stressed the dangers of fragmentation of the public discourse.[24] The question of

17 Benkler, The Wealth of Networks
18 Benkler, The Wealth of Networks; Henry Jenkins, Convergence Culture: Where Old and New Media Collide (New York: New York University Press, 2008).
19 Mira Burri, "The New Audiovisual Media Services Directive: Television without Frontiers, Television without Cultural Diversity," Common Market Law Review 44 (2007): 1689–1725; Mira Burri, Public Service Broadcasting 3.0: Legal Design for the Digital Present (Abingdon: Routledge, 2015).
20 Chris Anderson, The Long Tail: Why the Future of Business Is Selling Less of More (New York: Hyperion, 2006); Marshall Van Alstyne and Erik Brynjolfsson, "Global Village or Cyber-balkans? Modeling and Measuring the Integration of Electronic Communities," Management Science 51 (2004): 851–68.
21 See Ellen P. Goodman, "Media Policy Out of the Box: Content Abundance, Attention Scarcity, and the Failures of Digital Markets," Berkeley Technology Law Journal 19 (2004): 1389–472; Benkler, The Wealth of Networks, 59–90.
22 See Philip M. Napoli, "Persistent and Emergent Diversity Policy Concerns in an Evolving Media Environment: Toward a Reflective Research Agenda," in Transnational Culture in the Internet Age, eds. Adam Candeub and Sean Pager (Cheltenham: Edward Elgar, 2012), 165–81.
23 See Benkler, The Wealth of Networks; Yochai Benkler, The Penguin and the Leviathan: How Cooperation Triumphs over Self-interest (New York: Crown Business, 2011).
24 See Van Alstyne and Brynjolfsson, "Global Village or Cyber-balkans?"; Cass Sunstein, Republic.com 2.0 Princeton (NJ: Princeton University Press, 2007).

diversity exposure, especially in automated content generation spaces,[25] is also vexed, as it appears that citizens' real consumption remains limited to a handful of mainstream online sources that are, as a rule, professionally produced by white, educated males.[26]

It is in this sense essential that a more careful, finer-grained assessment emerges and research has a critical role to play in this regard.[27] Policy adaptation needs to be evidence-driven as it may be that in some cases, digital media hint at opportunities for better, more efficient and flexible accommodation of public policy goals. However in other cases, they may equally be viewed as challenges, perhaps calling for additional regulatory intervention.[28] To be sure, this adaptation, whatever its direction and form, is likely to unfold in national regulatory domains.

Despite this, the point this paper seeks to make is that content regulation under the conditions of the ubiquitous Internet can no longer be confined to national media law and policy and one needs to contemplate a design that reflects and matches global arrangements. This is because, due to digitization and the convergence of the media, telecommunications and the Information Technology (IT) sectors, one ought to consider all layers of the communications model.[29]

In this sense, the content layer cannot be viewed in isolation, as very often regulatory decisions taken at the physical or logical layers matter for content. In addition, it should be underscored that digital technologies have had profound impact on governance forms, which depart from the conventional notion of law and shift towards more complex, heterogeneous and uncoordinated mechanisms. One area that seems particularly important is the increasingly critical role of technology as a means of control, existing on top of law or beyond law's scope. It is important to raise awareness of these new tools of content control and understand how they operate, so as to be able to recognize the barriers to the free flow of information and find ways to tackle them. To support these arguments, we examine in turn two specific cases: net neutrality and Internet filtering.

Net neutrality

A brief introduction

The neutrality principle has been intrinsic to the functioning of the Internet. In essence it holds that the network should be neutral to the content being passed through it and that the intelligence is located at the edges of the network.[30] The best-effort Internet has thus not discriminated between a video game, a live-streamed football match or peer-to-peer music

25 Mira Burri, "Contemplating a Public Service Navigator: In Search of New (and Better) Functioning Public Service Media", International Journal of Communication 9 (2015): 1341–1359.
26 See Matthew Hindman, The Myth of Digital Democracy (Princeton: Princeton University Press, 2009).
27 Burri, Public Service Broadcasting 3.0.
28 Neil W. Netanel, "Cyberspace Self-governance: A Skeptical View from Liberal Democratic Theory," California Law Review 88 (2000): 397–498; Napoli, "Persistent and Emergent Diversity Policy Concerns."
29 The layered communications model is well established in the communications policy literature (e.g. Yochai Benkler, "From Consumers to Users: Shifting the Deeper Structures of Regulation toward Sustainable Commons and User Access," Federal Communications Law Journal 52 (2000): 561–79; Kevin Werbach, "A Layered Model for Internet Policy," Journal of Telecommunications and High Technology Law 1 (2002): 37–67; Ellen P. Goodman and Anne H. Chen, "Modelling Policy for New Public Service Media," Harvard Journal of Law and Technology 24 (2010): 111–70, although different interpretations exist. The paper uses the three-layered model, which consists of physical (the network plus the hardware attached); the logical (software, applications, protocols) and the content layers.
30 Tim Wu, "Network Neutrality, Broadband Discrimination", Journal of Telecommunications and High Technology Law 2 (2003): 141–78; Christopher T. Marsden, Net Neutrality (London: Bloomsbury Academics, 2010); Jasper P.J.B. Sluijs, Network Neutrality and European Law (Nijmegen: Wolf Legal Publishers, 2012).

downloads – it has simply treated them as bits of data flowing over the network that need to be assembled at their destination. Of course, over the years and as earlier mentioned, the amount of data has exponentially increased[31] – due to the increased opportunities afforded by technology as well as the emergence of exciting new services like YouTube, Whatsapp, and other applications offered "over-the-top" of the network.[32] The behaviour of the users has changed and migrated towards more real-time data consumption, in particular video.[33] The demands on the network have accordingly increased.

On the one hand, this has led to some innovation, such as the emergence of content delivery networks (CDNs). CDNs, like Akamai, Level 3 and Limelight, are paid by big content providers - such as Google, Netflix, Hulu or the BBC - to improve the quality of experience in a best-effort Internet. They achieve this by building additional infrastructure that bypasses congested routes on the public Internet and by caching frequently downloaded content closer to respective customer access networks.[34]

On the other hand (and despite CDNs), strong dependence on network remains and broadband and wireless access providers have the potential to act as gatekeepers for digital content distribution. There have been cases where Internet Service Providers (ISPs) have abused their power and exercised discriminatory control over the flow of information delivered over their network.[35] This is clear evidence as to the existing interdependence between the infrastructure and the content layers; to the precarious balance between them and to the perils of spillovers of dominance.

The arguments underlying the network neutrality debate go much beyond mere traffic management and possible anti-competitive behaviour. The net neutrality proponents argue that this is a basic design principle of the Internet that facilitates innovation at the edges of the network and assures the free flow of information. "The idea is that a maximally useful public information network aspires to treat all content, sites, and platforms equally. This allows the network to carry every form of information and support every kind of application."[36] A number of scholars, as well as many Internet providers,[37] have argued to the contrary and against regulation, as there is thriving competition on the market.[38] Yet, overall, there seems

31 Viktor Mayer-Schönberger and Kenneth Cukier, Big Data: A Revolution That Will Transform How We Live, Work, and Think (New York: Eamon Dolan/Houghton Mifflin Harcourt, 2013).
32 Pieter Nooren, Andra Leurdijk, and Nico van Eijk, "Net Neutrality and the Value Chain for Video," info 14 (2012): 45–58; Mira Burri, Over-the-top Services: Market Development and Regulatory Issues, GSR Discussion Paper (Geneva: ITU, 2015).
33 Between 2008 and 2011 users shifted from a "download now, use later" method of viewing video to on-demand viewing. This shift has caused the peak traffic period, generally 9:00 p.m. to 11:00 p.m. The heaviest 1% of downstream users account for 21.3% of the overall amount of downstream capacity used. Sandvine reports that real-time entertainment is gaining 4–5% percent share of total Internet traffic on North American fixed access networks every six months. Netflix's share of peak hour downstream traffic was 32.9%, YouTube's share was 13.8%. See FCC, Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 15th Report, MB Docket No 12-203 (2013), 126–127, referring to Sandvine, Global Internet Phenomena Report, 2012.
34 Jan Krämer, Lukas Wiewiorra, and Christof Weinhardt, "Net Neutrality: A Progress Report," Telecommunications Policy 37 (2013): 794–813.
35 The Comcast case is perhaps the most widely known, where Comcast was throttling certain content. See Comcast Corp. v. FCC, 600 F.3d 642, 2010.
36 See Tim Wu, Net Neutrality: FAQ, also with references to the key literature on all sides of the debate, accessed October 6, 2015, http://www.timwu.org/network_neutrality.html.
37 It is true that in many situations the case is not one of black-and-white discrimination, as traffic management is often needed to enhance the efficiency of network utilization and to enhance reliability for critical services. See e.g. Krämer et al., "Net Neutrality: A Progress Report."
38 See Wu, Net Neutrality: FAQ, in particular the articles by Christopher Yoo; e.g. Christopher Yoo, "Network Neutrality or Internet Innovation?," Regulation 33 (2010), 22–29.

to be a growing acknowledgment that the principle of network neutrality needs to be safeguarded.

Net neutrality policies

A network neutrality principle would avert any possible discrimination on the network, so that all communication passing through would be treated equally regardless of its content, application, service, device, sender or receiver address.[39] In this context, network neutrality rules would prevent Internet providers from blocking, degrading or imposing tolls on unaffiliated providers.

While net neutrality is very present in the debates of OTTs and Internet traffic, as well as broadly speaking in the context of Internet innovation, not all – and in fact very few – countries have fully fledged net neutrality policy packages in place. Some countries have refined the existing rules but rather light-handedly, with changes to the existing regulatory regime governing communications services, but not going so far as to prohibit certain behaviours. The has been the EU's initial stance, adopting merely some recommendations for EU Member States to take steps to indirectly address net neutrality through measures including: improved transparency in traffic management policies, lowering switching barriers to make it easier for subscribers to switch ISPs and minimum quality of service requirements. Meanwhile, as we explain below, the European Commission has moved towards a more interventionist approach and joined the countries pursuing active reform. Countries such as the United States, France, the Netherlands and Chile have been amongst the more proactive states. The most far-reaching case, briefly discussed next, is that of the US.

Net neutrality in the US

On 26 February 2015, after lingering uncertainties and heated debates in policy, industry and academic circles, the US Federal Communications Commission ruled in favour of net neutrality by reclassifying broadband Internet access as a telecommunications service and thus applying Title II (common carrier) of the Communications Act of 1934 to Internet service providers.[40] On 13 April 2015, the FCC published the final rules of its Open Internet Order.[41]

The essential provisions are the following: Blocking,[42] throttling[43] and paid prioritization[44] are forbidden. This is valid for broadband as well as for mobile operators. The Order establishes further that ISPs cannot "unreasonably interfere with or unreasonably disadvantage" the ability of consumers to select, access and use the lawful content, applications, services, or devices of their choosing; or of edge providers to make lawful content, applications, services, or devices available to consumers. The FCC will have authority to address questionable practices on a case-by-case basis. The Order further recognizes the critical role of

39 See Body of European Regulators for Electronic Communications (BEREC), BEREC Guidelines on Net Neutrality and Transparency: Best Practices and Recommended Approaches, BoR (11) 44, 2011.
40 Despite this reclassification, the FCC has sought to adopt a light-touch approach and forbears from certain provisions of the Communications Act that are not in the public interest, such as rate regulation or universal service contributions. FCC, "FCC Adopts Strong, Sustainable Rule to Protect the Open Internet", FCC News Media Information, 26 February 2015.
41 Federal Communications Commission, Protecting and Promoting the Open Internet, 47 CFR Parts 1, 8, and 20, [GN Docket No. 14–28, FCC 15–24], Federal Register, Vol. 80, No 70, 13 April 2015.
42 No blocking means that broadband providers may not block access to legal content, applications, services, or non-harmful devices.
43 No throttling means that broadband providers may not impair or degrade lawful Internet traffic on the basis of content, applications, services or non-harmful devices.
44 No paid prioritization means that broadband providers may not favour some lawful Internet traffic over other lawful traffic in exchange for consideration of any kind (no "fast lanes").

transparency. It requires that broadband providers disclose, in a consistent format, promotional rates, fees, surcharges and data caps. Disclosures must also include packet loss as a measure of network performance and provide notice of network management practices that can affect service.

Reasonable network management is still permitted. However, the network practice must be primarily used for and tailored to achieving a legitimate network management – and not business – purpose. For example, a provider cannot cite reasonable network management to justify reneging on its promise to supply a customer with "unlimited" data.
For the first time, the FCC can also address issues that may arise in the exchange of traffic between mass-market broadband providers and other networks and services. The FCC can hear complaints and take appropriate enforcement action if it determines that the interconnection activities of ISPs are not just and reasonable. Overall, this is a very strong policy signal that prioritizes network neutrality and ensures it protection.

Net neutrality in the EU

The net neutrality debate in the European Union has broadly followed the one in the US but has been much more fragmented because of a more complex decision-making process that involves a number of EU institutions and the often different opinions of Member States. After extended political deliberations, the EU reached an agreement on net neutrality on 30 June 2015,[45] the final vote of the EU Parliament was cast in October 2015.[46]

The new EU rules prohibit any blocking, throttling, degradation or discrimination of Internet traffic by Internet service providers and ensure an open Internet, where users are free to access the content of their choice, irrespective of the end-user's or provider's location or the location, origin or destination of the service, information or content. This general prohibition is only subject to a limited number of exceptions that include: (i) the need to implement a court order; (ii) the need to preserve the integrity and security of the network; and (iii) to prevent or mitigate the effects of temporary and exceptional network congestion provided that equivalent types of traffic are treated equally.[47]
The EU rules will nonetheless allow the prioritization of some "specialised"[48] services on condition that they do not harm the open Internet access. These are services that require an improvement and/or guarantee of quality, such as IPTV, high-definition video-conferencing or healthcare services like tele-surgery. The EU version of the "open Internet" is also not definitively banning "zero-rating"[49] – i.e. the practice of sponsored connectivity, whereby some providers of Internet access, especially mobile operators, do not charge for the data volume of particular applications or services in limited or metered data plans.

45 European Commission, "Commission welcomes agreement to end roaming charges and to guarantee an open Internet", EU Press Release, Brussels, 30 June 2015.
46 European Parliament legislative resolution of 3 April 2014 on the proposal for a Regulation of the European Parliament and of the Council laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, and amending Directives 2002/20/EC, 2002/21/EC, 2002/22/EC, and Regulations (EC) No 1211/2009 and (EU) No 531/2012 (COM(2013)0627 – C7-0267/2013 – 2013/0309(COD)), 27 October 2015.
47 Article 23 of the European Parliament legislative resolution, ibid.
48 "Specialised service" means an electronic communications service optimised for specific content, applications or services, or a combination thereof, provided over logically distinct capacity, relying on strict admission control, offering functionality requiring enhanced quality from end to end, and that is not marketed or usable as a substitute for internet access service. Article 2, ibid.
49 The Commission notes that zero rating may be an opportunity for price-sensitive users and encourage them to use digital services. Zero rating however is to be subject to closer monitoring to ensure compliance with the rules.

The EU net neutrality measures are part of an ambitious overhaul of EU telecoms rules, which will come into place in 2016. This reform is part of the Commission's plan for a Digital Single Market that foresees a new horizontal approach to the digital media space.[50] It is fair to note that the "two-speed" Internet possibility is still a deviation from the US net neutrality approach and will surely remain a contentious topic – in particularly, in view of the ongoing negotiations of the Transatlantic Trade and Investment Partnership Agreement (TTIP) between the US and the EU.[51]

In the next section, we look at the possibilities to exert control through technologies that the digital space has permitted.

Technologies of control

Internet filtering

Internet filtering is the most commonly discussed technologically enabled form of control. Although it has existed for quite some time now, it has evolved significantly in terms of its scope and the extent of intervention, targets and methods. It is now the reality that, despite all the talk about the Internet's ability to "route around" censorship, many governments (not just undemocratic ones) have proven adept at extending state control into cyberspace for a variety of reasons, such as public morality, cultural integrity and political control.[52]

The manner of exercising control varies in practice. As Palfrey[53] explains, "[s]ometimes the law bans citizens from performing a particular activity online, such as accessing or publishing certain material. Sometimes the state takes control into its own hands by erecting technological or other barriers within the state's confines to stop the flow of bits from one recipient to another. Increasingly however,, the state is turning to private parties to carry out the online control. Often, those private parties are corporations chartered locally or individual citizens who live in that jurisdiction." As Palfrey further explains, it is now commonly the case that the state "requires private parties – often intermediaries whose services connect one online actor to another – to participate in online censorship and surveillance as a cost of doing business in that state."[54]

The evolutionary trajectory of Internet filtering is evident, moving towards more and more sophisticated control mechanisms: from "open net" (from the Internet's birth to 2000) through "access denied" (2000–2005), where crude filters and blocks were installed, towards "access controlled" (2005–2010), where mechanisms are multiple and varied, entering at different points of control to limit access to knowledge and information.[55] Before long, we have entered a fourth phase of "access contested", which is characterized by more diversified and

50 European Commission, A Digital Single Market Strategy for Europe, COM(2015) 192 final, 6 May 2015.
51 See updates at http://ec.europa.eu/trade/policy/in-focus/ttip/index_en.htm
52 See Ronald Deibert, John Palfrey, Rafal Rohozinski, and Jonathan Zittrain, eds., Access Denied: The Practice and Policy of Global Internet Filtering (Cambridge, MA: MIT Press, 2008); Ronald Deibert, John Palfrey, Rafal Rohozinski, and Jonathan Zittrain, eds., Access Controlled: The Shaping of Power, Rights, and Rule in Cyberspace (Cambridge, MA: MIT Press, 2010); Ronald Deibert, John Palfrey, Rafal Rohozinski, and Jonathan Zittrain, eds., Access Contested: Security, Identity, and Resistance in Asian Cyberspace (Cambridge, MA: MIT Press, 2011).
53 John Palfrey, "Reluctant Gatekeepers: Corporate Ethics on a Filtered Internet," in Global Information Technology Report, ed. World Economic Forum (Geneva: World Economic Forum, 2007), 70.
54 Ibid.
55 John Palfrey, "Four Phases of Internet Regulation," Berkman Center for Internet and Society Research Publication 9 (2010): 1–22; Ronald Deibert, John Palfrey, Rafal Rohozinski and Jonathan Zittrain, eds., "Access Contested: Toward the Fourth Phase of Cyberspace Controls," in Access Contested, eds. Ronald Deibert, John Palfrey, Rafal Rohozinski and Jonathan Zittrain (Cambridge, MA: MIT Press, 2011), 6–15.

deeper controls but also by a "pushback against some of these controls from civil society, supported in many instances by the resources of major governments, like the United States and the European Union."[56]

The repercussions of these "technologies of disconnection"[57] are enormous for freedom of expression worldwide and put the democratizing potential of the Internet - the "technologies of freedom"[58] - in doubt. The "Great Firewall of China" is the infamous example but we have also observed the developments of the Arab spring, which more dynamically show the battles over the Internet as a critical space for political action.[59] The Snowden revelations have been the latest instance of exposing the breadth and depth of intervention and the use made by states with advanced democracies.[60]

In contrast to conventional tools of regulating media, Internet filtering as a powerful method of exercising control is neither transparent, nor subject to mechanisms securing legitimacy and accountability.[61] It is even different from standard surveillance methods, as applied by police enforcement, as Internet filtering is out of the judiciary control that may safeguard the rights of citizens from violations of privacy, freedom of speech or association. The trend of "outsourcing" the enforcement to private entities, often as a precondition for doing business, is particularly worrisome.

Digital rights management systems

Another mechanism to ensure perfect enforcement through technology is found in the so-called digital rights management systems (DRM). While Internet filtering is a practice that can be done in many diverse ways (partial or full sites shutdown, distributed denial of service, content filtering, cyber-attacks, etc.[62]), DRM is a *means* that can be employed for different practices. DRM have mostly been discussed in the field of copyright enforcement, but they may be utilized for many other purposes as generic, embedded forms for controlling access and the use of digital content and devices.

Although DRM are plainly technical applications, they are problematic in the field of media policy as they may unduly restrict access to, and use of, digital content. This has firstly to do with the way copyright functions and secondly with the way DRM can automatically enforce it. As to the former, copyright and other types of IP protection are intended to foster innovation by granting authors a temporary monopoly over their creations. Copyright has built-in mechanisms, such as fair use, to ensure balance between the individual rights of the authors and the public interest.[63] This balance becomes very fragile in the digital media environment, as companies seek perfect control over "their property" through DRM, under

56 Deibert et al., "Fourth Phase", 14.
57 William H. Dutton, Anna Dopatka, Michael Hills, Ginette Law, and Victoria Nash, Freedom of Connection, Freedom of Expression: The Changing Legal and Regulatory Ecology Shaping the Internet (Paris: UNESCO Publishing, 2011), 34.
58 Ithiel De Sola Pool, Technologies of Freedom: Of Free Speech in an Electronic Age (Cambridge, MA: Harvard University Press, 1983).
59 See Hal Roberts, Ethan Zuckerman, Robert Faris, Jillian York, and John Palfrey, The Evolving Landscape of Internet Control (Cambridge, MA: Berkman Center for Internet and Society, 2011); Hal Roberts, Ethan Zuckerman, Robert Faris, Jillian York, and John Palfrey, "International Bloggers and Internet Control," Berkman Center Research Publication 6 (2011).
60 See e.g. Ian Brown and Douwe Korff, "Foreign Surveillance: Law and Practice in a Global Digital Environment," European Human Rights Law Review 3 (2014): 243–51.
61 See Thomas J. McIntyre and Colin Scott, "Internet Filtering: Rhetoric, Legitimacy, Accountability and Responsibility," in Regulating Technologies, eds. Roger Brownsword and Karen Yeung (Oxford: Hart, 2008), 109–24.
62 See Deibert et al., "Fourth Phase"; Roberts et al., The Evolving Landscape.
63 See Laurence R. Helfer and Graeme W. Austin, Human Rights and Intellectual Property: Mapping the Global Interface (Cambridge: Cambridge University Press, 2011).

the guise of protecting digital content from unlawful distribution and use. In practice, such efforts have eroded some fundamental rights of consumers and restricted usages traditionally allowed under analogue/offline copyright.[64] In addition, DRM may in many situations deter the full realization of digital content production and distribution by rendering it illegal or simply by banning it - possibly severely chilling creativity.[65]

In terms of regulation and its evolution, it must be stressed that the content industries have been very successful in their efforts to expand the scope and extend the duration of copyright. Through race-to-the-top strategies, this augmented protection has been emancipated to the international level in the framework of the TRIPS Agreement and in the even further-reaching free trade agreements (FTAs).[66] Despite grassroots activism, IP issues have remained only marginal in key efforts aimed at securing public goods at the international level.[67] For instance, they do not appear in any meaningful way in the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions,[68] nor do they figure in the World Summit on the Information Society (WSIS) agenda[69] or in the recent NetMundial documents.[70] At the same time, the circumvention of technical protection measures, such as DRM, has been prohibited in most jurisdictions, as well as internationally through the WIPO Internet Treaties.[71] The proposed SOPA/PIPA legislation,[72] which in essence aimed to expand the ability of US law enforcement to fight online trafficking, also beyond the US national jurisdiction, was one of the recent instances of desired expansion of state control. The anticipated dangers of silencing of speech and chilling innovation on the Internet, as well as the danger for the Internet itself, need to be clearly acknowledged.[73]

64 See Nicola Lucchi, "Countering the Unfair Play of DRM Technologies," Texas Intellectual Property Law Journal 16, no. 1 (2007): 91–124.
65 See Julie E. Cohen, "Creativity and Culture in Copyright Theory," UC Davis Law Review 40 (2007): 1151–1205; Siva Vaidhyanathan, "The Googlization of Everything and the Future of Copyright," UC Davis Law Review 40 (2007): 1207–31.
66 See Netanel, "Cyberspace Self-governance"; William Patry, Moral Panics and the Copyright Wars (Oxford: Oxford University Press, 2009).
67 See Helfer and Austin, Human Rights and Intellectual Property.
68 See Mira Burri, "Cultural Diversity as a Concept of Global Law: Origins, Evolution and Prospects," Diversity 2 (2010): 1059–84; Mira Burri "Trade versus Culture in the Digital Environment: An Old Conflict in Need of a New Definition," Journal of International Economic Law 12 (2009): 17–62
69 See Monika Ermert, "Intellectual Property Issues Kept off WSIS Agenda," Intellectual Property Watch, 30 November 2005, http://www.ip-watch.org/2005/11/30/intellectual-property-issues-kept-off-wsis-agenda/
70 "Net Mundial Stakeholder Statement," Net Mundial, accessed October 6, 2015, http://netmundial.br/netmundial-multistakeholder-statement/.
71 In the US, anti-circumvention is banned by the Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified as amended in scattered sections of 17 U.S.C.); in the EU, the relevant act is Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, OJ L 167/10, 22 June 2001. On DRM, see, e.g., Peter K. Yu, "Anticircumvention and Anti-anticircumvention," Denver University Law Review 84, no. 1 (2006): 13–77; Christopher T. Wheatley, "Overreaching Technological Measures for Protection of Copyright: Identifying the Limits of Copyright in Works in Digital Form in the United States and the United Kingdom," Washington University Global Studies Law Review 7 (2008): 353–71. The WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) were concluded in 1996 and entered into force in 2002.
72 Stop Online Piracy Act (SOPA), H.R. 3261 and Protect IP Act (Preventing Real Online Threats to Economic Creativity and Theft of Intellectual Property Act, or PIPA), S. 968. An essential difference between the two is that PIPA targets domain name system providers, financial companies and advertising networks, but not companies that provide Internet connectivity. After strong opposition by academics, corporations and civil society representatives (see e.g. "Sopa/Pipa: Internet Blacklist Legislation," Electronic Frontier Foundation, accessed October 6, 2015, https://www.eff.org/issues/coica-internet-censorship-and-copyright-bill), both bills were dropped.
73 See Mark A. Lemley, David S. Levine, and David G. Post, "Don't Break the Internet," Stanford Law Review 64 (2012): 34–8.

DRM have repercussions beyond copyright and its problematic interface with citizens' rights. The DRM mechanisms are not transparent and, in fact, may allow for any type of interference, impacting on the privacy of the person reading an e-book, or watching a film on iTunes; they may deprive the individual from making choices between products or services[74] or influence future commercial offers, turning (to put it symbolically) the user into a product. Ultimately, DRM-like systems can enforce any rule that content or device producers want,[75] such as making access conditional on a payment. Such developments are aligned with the broader trend of the privatization of content[76] rather than its democratization. Privileged access to scientific data and knowledge, entertainment, news and archives creates a deep divide, with various implications, between those who can afford to pay and those who cannot. In the discussions of net neutrality[77] and search engines[78], one can also see elements of a creation of a two-tier environment, where in exchange for additional payment, one gets either faster access to data and traffic, or becomes more visible on the web. These different modalities are enabled by the different type of architecture in cyberspace.

Technology as regulation

The above cases fit into Lawrence Lessig's broader narrative of "code is law." Lessig argued that in cyberspace, code is overtaking the functions of law.[79] In contrast to real-space, where architecture is more or less given, in cyberspace, it is "plastic" and open to change.[80] Designing cyberspace through code thus becomes a very powerful regulatory activity.[81] This code, which Lessig calls "West Coast Code" (because of the proximity to Silicon Valley), is starkly different from the "East Coast Code" (so-named because of the proximity to Washington, DC)[82]. The latter encompasses laws as a product of the conventional legislative processes, which in a democratic state involve highly formalized and complex mechanisms and are subject to a system of checks and balances. Traditional media law-making, both in terms of the rules and the institutions that are created, is precisely the product of such a deliberative process; these rules are also transparent and may be discussed, criticized, opposed and, perhaps, modified as a result. The US First Amendment case law, for instance, is strong proof of the practice of testing new media and the ways to regulate it against the high principle of freedom of speech.[83]

"West Coast Code," by contrast, is simply built into the hardware or the software; it is cheaper and faster to create but also opaque for citizens. In comparison to conventional law, it is also self-enforceable, without executive or judicial oversight.[84] West Coast Code may well be an appropriate (and more economical) mechanism to address the pertinent specific and highly technical questions as it "industrializes" content surveillance, classification, and

74 See Lawrence Lessig, Code and Other Laws of Cyberspace (New York: Basic Books, 1999).
75 See Jonathan L. Zittrain, "Perfect Enforcement on Tomorrow's Internet," in Regulating Technologies, eds. Roger Brownsword and Karen Yeung (Oxford: Hart, 2008), 125–56.
76 See Peter Drahos and John Braithwaite, Information Feudalism (London: Earthscan, 2002).
77 See Christopher T. Marsden, Net Neutrality (London: Bloomsbury Academics, 2010).
78 See Vaidhyanathan, "The Googlization."
79 See Lessig, Code and Other Laws; Lawrence Lessig, Code: Version 2.0 (New York: Basic Books, 2006).
80 Lessig, "Code: Version 2.0", 20.
81 Ibid., 32.
82 Ibid., 72.
83 See, e.g., Home Box Office, Inc. v. FCC, 567 F.2d 9, 68 (D.C. Cir. 1977), where the Court found that "important differences between cable and broadcast television and 'differences in the characteristics of new media justify differences in the First Amendment standards applied to them'" (citing Red Lion Broadcasting Co. v. FCC, 395 U.S. 367, 386, 389 (1969), which upheld the fairness doctrine on grounds that it implemented the First Amendment). See also Monroe E. Price, "The Newness of New Technology," Cardozo Law Review 22 (2001): 1885–913.
84 See Zittrain, "Perfect Enforcement."

management.[85] But it lacks the legitimacy and accountability of conventional law-making.[86] In addition, while such code can cater for some narrow policy goals, such as protecting against unlawful use of copyrighted works, it cannot address broader and much more complex objectives that involve a balance between different private and public interests.

The experience gained over the last 15 years, when the first edition of *Code and Other Laws of Cyberspace* was published, has confirmed Lessig's theory and the move from law towards code in creating mechanisms of control in cyberspace. The situation has, in many aspects, only worsened.[87] Indeed, we have seen the deterioration of some principles that initially allowed innovation over the network and have been enshrined in law. One such key principle existing in most telecommunications laws immunized the carriers, whether broadband companies or ISPs, for objectionable material that flows through their channels.[88] This rule permitted media access by ordinary individuals and as Balkin argues, "… in terms of its practical effects, it may be even more important than many aspects of First Amendment doctrine"[89]. The new generation of Information Society laws, such as the DMCA in the US and the Information Society Directive in the EU, limited the liability of ISPs for copyright infringements, asking them to react only *ex post*.[90] Although the safe harbor rule as privately administered enforcement may have had some chilling effects on Internet speech,[91] it may have had a positive impact too as it shielded intermediaries. Balkin believes that, "[w]ithout these safe harbor provisions, many features of current Internet practice – including the development of Web 2.0 applications that leverage the content contributions of many people—would be legally risky. Indeed, were it not for statutory safe harbors and other limits on copyright liability, the basic practices of search engines, and indeed much of the traffic on the Internet, might be illegal"[92].

Over time, however, some of these important foundational principles have deteriorated in practice. For example, most industrialized countries have severely limited safe harbors and reconsidered intermediaries' responsibilities in copyright enforcement demanding their active involvement *ex ante* in order to escape liability.[93] One can observe a shift from "passive-reactive to active-preventive schemes for communication intermediaries"[94] and to a new type of content filtering enabled through the "deep packet inspection" technology, which may

85 See Milton L. Mueller, Networks and States: The Global Politics of Internet Governance (Cambridge, MA: MIT Press, 2010), 188.
86 See Bert-Jaap Koops, "Criteria for Normative Technology: The Acceptability of 'Code as Law' in Light of Democratic and Constitutional Values," in Regulating Technologies, eds. Roger Brownsword and Karen Yeung (Oxford: Hart, 2008).
87 See Lessig, Code: Version 2.0; Jonathan L. Zittrain, The Future of the Internet – and How to Stop It (New Haven, CT: Yale University Press, 2008).
88 Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.).
89 Jack M. Balkin, "Media access: A Question of Design," George Washington Law Review 76, no. 4 (2008): 101–18, 111.
90 ISPs taking care of traffic only were not responsible for copyright violations over their communication channels, as long as the ISPs terminated repeat infringers (17 USC § 512(a) (2000)). Intermediaries that hosted content had more responsibility, and were safe only if they acted swiftly to take down infringing material once they were notified of the infringement.
91 See Wendy Seltzer, "Free Speech Unmoored in Copyright's Safe Harbor: Chilling Effects of the DMCA on the First Amendment," Harvard Journal of Law and Technology 24, no. 1 (2010): 171–232.
92 Balkin, "Media access: A Question of Design," 111.
93 See Jeremy De Beer and Christopher D. Clemmer, "Global Trends in Online Copyright Enforcement: A Non-neutral Role for Network Intermediaries?," The Journal of Law, Science and Technology 49 (2009): 375–409. The countries examined in this study were Australia, Canada, China, the EU, France, Germany, Japan, New Zealand, Singapore, South Korea, the United Kingdom and the United States.
94 See De Beer and Clemmer, "Global Trends," 404.

further erode important users' rights.[95] The "right to be forgotten," as recently formulated and endorsed by the Court of Justice of the European Union, puts an additional burden upon search engines to delist links to personal data upon request, in an effort to balance the right to privacy against the public's right to access to information.[96] While this interference may be justified for certain purposes, it is to be practiced with extreme caution, since even in seemingly technical decision-making, essential rights and values, such as freedom of expression, fairness, equality of opportunity and justice are affected.[97]

Concluding remarks

In presenting the above trends, the paper's prime aim was to illustrate that in the new media space there are multiple and increasing points of control outside formal legal institutions and outside the conventional scope of media policy. The complex and highly fragmented nature of governance, which often mobilizes intermediaries,[98] threatens free speech and in general makes the pursuit of public objectives difficult.

On the one hand, we highlighted the importance of net neutrality as a principle that ensures that the flow of content is not controlled. We also stressed the increasing role of technologically-enabled control. We showed that it can effectively (and efficiently) influence the production and the flow of information, access to information, its consumption and reuse. Technology strongly influences both the interactions within the media environment that are to be regulated (that is, the subject of regulation), and its *regulability* (that is, the possibilities and conditions of regulation). Technological design can in itself "be more or less free speech friendly, and more or less participatory"[99] – the current trends show the constraining rather than the enabling opportunities.

The perils of technologically-based regulation are all the greater if we bear in mind that there is still so much uncertainty as to the effects of the digital media environment on the intrinsic goals of media policy and how it affects the "ecology of freedom of expression"[100]. This uncertainty is not fully acknowledged and regulators do not hesitate to intervene, mostly in the IP field but also in others, such as notably data protection. They often ignore the multidirectional effects of their action, having lost the caution and the lightness of touch of the early Internet days. The overall danger of unintended consequences is augmented by increased policy interdependence and the prevalent messy governance structures. In fact, digital media only accentuate globalness and interdependence, as local decisions have global impact and vice versa.

Recommendations for apt design for the regulation of internet content

95 See Sonya K. Katyal, "Filtering, Piracy, Surveillance and Disobedience," The Columbia Journal of Law and the Arts 32, no. 4 (2009): 401–26; Ralf Bendrath and Milton L. Mueller, "The End of the Net as we Know It? Deep Packet Inspection and Internet Governance," New Media and Society 13, no. 7 (2011): 1142–60.
96 C- 131/12 Google Spain SL, Google Inc. v Agencia Española de Protección de Datos, Mario Costeja González, judgment of 13 May 2014; also Jonathan Zittrain, "Don't Force Google to 'Forget'", The New York Times, 14 May 2014.
97 See e.g. Keller, European and International Media Law; Burri, Public Service Broadcasting 3.0.
98 Stefaan Verhulst, "The Regulation of Digital Content," in The Handbook of New Media, eds. Leah A. Lievrouw and Sonia Livingstone (London: Sage, 2006), 329–49; Mueller, Networks and States, 205.
99 Balkin, "Media Access," 110.
100 See Dutton et al., "Freedom," 5.

Against the backdrop of the above analysis and despite its "bird's eye" approach (or partly because of it), we would like to put forward a few recommendations that address issues critical for the evolving design of Internet content regulation.

While the freedom of expression, both as a passive and an active right, is protected under public international law,[101] as earlier noted there are *no* commonly agreed international standards as to its implementation and state practice varies. At the same time, as the paper showed, the Internet both accentuates the importance of local decisions as well as enabling the state to mobilize newer forms of controlling content, in particular through intermediaries and technological design.

In this sense, while we do not envision a globally harmonized system of content regulation, we deem it crucial that at least two governance elements are addressed as a matter of global action – (i) constraining the practice of content filtering and (ii) commitment to the net neutrality principle.

With regard to the former, while it is important that Internet filtering is done as fairly as possible,[102] as Mueller points out our underlying wish should not be to optimize filtering but rather to resist it[103]. Whereas (as clarified at the paper's outset) there are valid concerns that may justify state intervention, the nation state should exercise restraint in content policing and when necessary, base it on clear, transparent criteria and due process. The dangers of outsourcing content regulation to private actors and/or embedding it in code should be clearly acknowledged and the practice equally restrained.[104] States should strive to rely on notice and takedown as an *ex post* method of addressing illegal content and do this exclusively within the parameters of their own jurisdiction – abstaining from extra-territorial action, which may interfere with the operation of the network.[105] Furthermore, "[t]he governance of the Internet needs to explicitly recognize and embrace the principle that there are limits to national sovereignty over the flow of information. This claim is based on the truth that there are many transnational communities or policies, created by global electronic communications, whose individual members have their own intrinsic rights to communicate among themselves."[106]

With regard to net neutrality, while there is increasingly an acknowledgement of its centrality as an architectural foundation and its impact on innovation and the free flow of content, the international community has not done much. It could, for instance, reach consensus on the principle and enshrine it in the NetMundial Multistakeholder Documents.[107] So, the international community and civil society too should strive to enshrine this principle, as broadly conceived,[108] as a global norm, at least in a soft law form. A network that is neutral has so far permitted an incredible amount of creativity and innovation and does, in effect, eliminate gatekeepers and diverse barriers to access: "A neutral network maximizes access to the public and minimizes the ability of an intermediary to substitute its own judgments for those of end users."[109] States should not only rhetorically commit to net neutrality but

101 Art. 19 of the Universal Declaration of Human Rights; art. 19 of the International Covenant on Civil and Political Rights, as well as art. 10 of the European Convention for the Protection of Human Rights and Fundamental Freedoms.
102 See Derek E. Bambauer, "Cybersieves," Duke Law Journal 59, no. 3 (2009): 377–446.
103 See Mueller, Networks and States, 207.
104 Ibid., 211.
105 Ibid., 207.
106 Ibid., 209.
107 "Net Mundial Stakeholder Statement," Net Mundial, http://netmundial.br/netmundial-multistakeholder-statement/.
108 Marsden, Net Neutrality.
109 Mueller, Networks and States, 210.

implement it in effect, as the US did. They should also try to *mainstream* it and this may affect a number of policies and overall regulatory design, such as those elaborated in multilateral and regional trade venues, which at first sight appear less directly linked to content regulation.[110]

Overall, states should strive to adhere to the deferential principle of respecting the functional integrity of the Internet and combine this with appropriate institutional and organizational implements, which can ultimately "help ensure that any potential regulation of Internet-based activities enables, rather than hinders, tangible and intangible benefits for end users."[111] To be sure, the design of this distributed governance architecture in a "shared environment"[112] is hard to pinpoint and there is a need for more research that maps existing models in different regimes seeking apt solutions, as well as mapping power relations in different institutional settings, which are ultimately important for the feasibility of any proposed design.
Finally, while states grapple with formulating their coherent roles in the broad Internet governance landscape, they should subscribe to the "do no harm" principle. In this sense, policy-makers should not adopt regulations that violate the Internet's modular, end-to-end, interconnected and agnostic nature and give way to the comparative wisdom and efficacy of polycentric processes and outcomes.[113]

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110 Mira Burri, "Should There Be New Multilateral Rules for Digital Trade?," Think piece for the E15 Expert Group on Trade and Innovation (2013); Mira Burri, "The International Economic Law Framework for Digital Trade," Zeitschrift für Schweizerisches Recht 135 (2015): 10–72.
111 Richard S. Whitt, "A Deference to Protocol: Fashioning a Three-dimensional Public Policy Framework for the Internet Age," Cardozo Arts and Entertainment Law Journal 31 (2013): 689–768, 689.
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113 Whitt, "A Deference," 766–7.

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