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Introduction

Asymmetries of power within the communication network environment and among stakeholders are inevitably present, not the least because technologies are 'never innocent' (Escobar, 1995). Annual global traffic on networks using the Internet Protocol is forecast to pass the zettabyte threshold at the end of 2017 (CISCO, 2013). In the face of this growth projection, it is increasingly being acknowledged that the complexity of the internet and other components of the communication network pose significant challenges for policy makers. This is partly because internet traffic moves through interconnected networks based upon agreements among internet service providers. It is also because companies 'do not just route traffic in the Internet, they also route money' (Clark, et al., 2011: 1). The governance arrangements that are put in place have multiple implications for the norms and practices that influence citizens' access to networks, their opportunities to express themselves freely and their individual privacy.

Research on internet governance is the focus of much scholarly work with attention turning to issues such as network neutrality, the commercial agreements among the market players, and the role of the state in surveillance, along with many other issues (Marsden, 2011; Mueller, 2010). In this paper I suggest that the governance research agenda could be strengthened through a renewed effort to systematically examine emerging forms of collective action in practice. I summarize several sets of ideas that typically are invoked in the highly polarized debates about internet governance. This discussion is followed by a consideration an analytical framework that could be applied to yield greater insight into the norms and practices associated with emerging approaches to governance in this increasingly contested context.

Governance Ideals and Governance Practice

Communication network governance involves a variety of forms of collective action because of the need for coordination among a great variety of stakeholders – commercial, state and civil society. Hess and Ostrom (Hess and Ostrom, 2007: 13) observed that there can be different approaches to managing collective action problems. In addition, whatever the approach, it can be expected to give rise to positive or negative outcomes, or outcomes that are 'somewhere in between'. It is not self-evident, therefore, that a given institutional arrangement for communication network governance will yield a particular outcome in terms of inclusiveness or consensus about action. This is especially so when asymmetries of power are present. Garnham (Garnham, 1990) recommended that in such contexts, an examination of the prevailing sets of ideas is called for. He also argued that there is 'no necessary coincidence between the effects of the capitalist process proper and the ideological needs of the dominant class' (Garnham, 1986: 23). Thus, the outcomes of governance arrangements for communication networks, including the internet, cannot be read easily from idealized or abstract claims that may be made about whether they are likely to yield positive outcomes, however, or by whomever, such claims are made. An empirical priority for research must be to systematically examine contending 'sets of ideas' about communication network governance alongside the norms and practices that being employed to underpin collective action.

There is remarkably little common ground at present between those proposing 'top down', as distinct from 'bottom up', institutional arrangements for governing communication networks. Proposals for such governance arrangements are being suggested in an effort to better balance the often conflicting interests of corporate, state and civil society stakeholders. For example, there are calls for 'globalizing' the institutional arrangements of existing internet 'technical organisations',[1] and there are frequent contests over the appropriate authoritative roles of the state, corporate, and civil society stakeholders (Mueller, 2014b). Some of these proposals

come from the scholarly community, for instance, Mueller and Kuebris's (Mueller and Kuebris, 2014) proposal for governance reform which aims to forestall states from introducing 'top down' institutional arrangements. Despite proposals of this kind that are based on research and engagement with existing governance institutions, much of popular, and in some cases, scholarly discourse about the arrangements for the governance of communication networks proceeds from assumptions informed by one of several prevailing and competing sets of ideas.

Each of these sets of ideas privileges a different view of the appropriate locus of governance authority (Mansell, 2012). One set of ideas suggests that the locus of authority should reside principally in the dynamic of the marketplace. In this discourse, it typically is asserted that globalizing markets for communication services are, or should be, free and unfettered and that they thrive best in unregulated markets, thereby boosting innovation (Yoo, 2010). This is said to be consistent with achieving economic prosperity and democracy. The emphasis in this set of ideas is on governance 'by the market' to ensure the optimal pre-processing, mining, and post-processing of data. In this discourse, the market is assumed to maximize the welfare of all and civil society is often characterized as the empowered consumer. The institutional arrangements deemed appropriate for governance in this context tend to rely on industry self-regulation, and intervention by the state is regarded as a problem.

A second set of ideas is that the institutions of the state need to intervene in the marketplace to enhance citizen welfare. For proponents of this set of ideas, markets are neither free nor safe. Thus, the regulatory state should intervene to ensure that communication networks are equitably available to all and that the principle of the common or neutral carriage of traffic on networks is respected to protect the public interest (Noam, 2010). Citizen's rights to freedom of expression and privacy should only be abridged according to proponents of this set of ideas when the interests of the state are invoked to claim that the state is justified in treating digital networks as tools for intelligence gathering (Guzik, 2009).

Yet another set of ideas privileges the role of civil society. Non-market collaborative participation, combined with the generative good will of technical communities, are proposed as the best arrangements for governing networks through multi-stakeholder arrangements (Mueller, et al., 2007; Zittrain, 2008). This perspective eschews both market-led governance and intervention by the regulatory and/or military state. Linked to ideas about openness and participatory 'bottom up' action, for instance, Tim Berners-Lee, co-inventor of the World Wide Web, envisages an online constitution for the internet that will protect privacy and freedom of expression (Kiss, 2014). For some proponents of this set of ideas, multistakeholder participation and the design of software code are expected to secure an open internet. This set of ideas values globally dispersed online participation and is aligned with the peer-to-peer commons based production model (Benkler and Nissenbaum, 2006).

Proponents of the first and the third of these sets of ideas see the second set of ideas (intervention by the regulatory or military state) as problematic because the second suggests a 'top down' locus of authority. The first ideally relies on individual choice in a free (or relatively free) market and the third on widely distributed collaboration to make decisions. There is a strong polarisation among the proponents of the institutional arrangements that seem to be consistent with these sets of ideas. Little is known, however, about the actual practices of governance that align with each set of ideas and what the outcomes for different stakeholders are likely to be, an observation confirmed by van Eeten and Mueller (van Eeten and Mueller, 2013: 721) who note that the term 'Internet governance' is 'not normally applied to studies of many real- world activities that actually shape and regulate the way the Internet works'. Central to understanding the claims made by proponents of these sets of ideas is the locus of authority for decision making and how it works in practice.

In the next section I introduce an analytical framework that could be employed to

examine claims made about the merits and consequences of alternative approaches to governing communication networks, including the internet, and how they either converge or diverge in practice.

Governance and the Problem of Authority

Research on the specific forms of governance arrangements that are likely to ensure that communication networks develop in ways that are fair for all stakeholders needs to start from the premise that 'the technology of the internet is not static' (David, 2001: 1). In other words, there is no *a priori* reason to expect the internet's end-to-end architecture to retain its performance characteristics in a way that is consistent with public good outcomes. Additionally, governance arrangements, whether the locus of authority is 'below' or 'above', have never 'been eternal or immune to change' (Smythe, 1963: 470). In this context, it is reasonable to ask whether the asymmetrical power relationships among state, market and civil society stakeholders might be giving rise to novel institutional arrangements that are more likely to foster mutually beneficial collective action than the arrangements that are presently in place.

Stakeholders with an interest in the future of the communication network are struggling over how to achieve the outcomes they value and the appropriate locus of authority is unsurprisingly contested. In this environment, governance arrangements are likely to involve a variety of norms and practice that combine in different ways to sustain coordinated or collective action (Hess and Ostrom, 2007). For example, there is likely to be a continuum of norms and practices that is institutionalised to sustain communication network governance. At one end of the continuum there are likely to be various forms of *constituted authority*, that is, formal norms and procedures for decision making (Mansell, 2013). The norms and practices associated with this type of authority are likely to be preferred by state and corporate stakeholders. In the case of governance through *constituted authority,* there typically is explicit reference to historically constituted formal norms and

practices. By contrast, at the other end of this continuum, the preferred norms and practices associated with authoritative decision making are likely to be informal and relatively fluid. These can be designated as *adaptive authority* (Mansell, 2013). This form of authority typically is favoured by civil society stakeholders, with decisions being based on informal discussion, rather than on criteria set by formal institutions. The hallmark is 'collaboration among large groups of individuals, sometimes in the order of tens or even hundreds of thousands, who cooperate effectively' (Benkler and Nissenbaum, 2006: 394).

Institutionalised patterns of interaction that lead to coordinated or collective action additionally have been found to involve norms and rules that 'come to be regarded by the relevant social group as standard in a context' (Nelson and Sampat, 2001: 40). These norms and rules influence the ways in which 'actors get things done … by making certain kinds of transactions, or interactions more generally attractive or easy, and others difficult or costly' (Nelson and Sampat, 2001: 39-40). It is likely, therefore, that norms and routines associated with institutionalised forms of constituted and adaptive authority, and combinations thereof, will 'limit choices regarding how to do things' (Nelson and Sampat, 2001: 44). The empirical question in a given context, is what choices are being limited and with what consequences.

With respect to the future of internet governance and, indeed, the governance of all aspects of the communication network, there is a need for systematic analysis of how alternative governance arrangements, those favouring constituted and those favouring adaptive, authority are limiting choices about 'how to do things'. What novel forms of collective action are emerging? Is there latent potential for collaboration between those with a preference for constituted or adaptive ways of institutionalising authority? The governance of the communication network environment offers a living laboratory within which to systematically examine differences in institutional design and the incentives that are giving rise to collective action. Empirical evidence would help us to discern which arrangements are better

aligned with the interests of civil society stakeholders, since it is unlikely that the idealised arrangements exist in practice.

Such an examination would be very timely. Mueller writes for instance about a 'scary polarity' in internet governance. As he puts it, 'either the information infrastructure becomes militarized or at least fully securitized, ICTs are regulated as if they were weapons, and we live in a 24/7 national security state; or unspecified innovations take place in the institutionalized production of security' (Mueller, 2014a: np). In this context, empirical analysis is needed that focuses on the institutionalisation of authority to manage the resolution of conflicts arising out of the asymmetrical power relations among the stakeholders. Systematic, comparative, empirical research could focus directly on the actual norms and practices being employed under different institutional arrangements. This implies a range of qualitative methods ranging from in-depth interviews to participant observation.

On the continuum of constituted and adaptive authority, at the ends of the continuum undoubtedly are 'ideal type' sets of ideas about practice. The actual norms and practices are likely to be variegated and differentiated, but not necessarily consistent with the ideals. Some analysts suggest that there are few possibilities for productive interaction between proponents of different means of institutionalising authority because when 'bottom up', open, consensual decision making is privileged over hierarchical, 'top down' decision making (Shirky, 2010), there is no pathway towards resolving differences. Others suggest, however, that when socio-technical controversies as, for instance, in the case of the future of the 'open' internet', become prominent, incompatibilities between stakeholder norms and practices start to diminish. Stakeholders 'faced with the exceptional', and without a pre-existing consensus about the 'standard' norms for conferring authority, may find novel ways of overcoming their differences (Callon, 2003: 40).

In the current febrile context of disputes over the future of internet governance, there is likely to be considerable flux in the norms and practices of stakeholders

favouring constituted or adaptive authority. This is suggested by Klimburg et al.'s (Klimburg, et al., 2014: np) analysis of the discourse on governance when they observe that 'the status of the affected stakeholders is anything but clear. Increasingly, however, there is a strong tendency away from the assumption that all stakeholders possess an equal standing'. Relatively little is known about the actual decision making norms and practices employed by these parties of unequal standing. This observation applies, for example, to the practices of network operators when they serve as network gatekeepers (Sluijs, 2010) and to practices which are leading to the bifurcation of public and private network (Brown and Marsden, 2013: xv; Nooren, et al., 2012). It is clear that what is regarded as 'standard' decision making practice in the handling of digital information is very much in flux.

High-level commissions are being constituted to address urgent internet governance issues such as the Swedish-led Bildt Commission**.** In the United States, the District of Columbia Appeals Court decision in Verizon v. Federal Communication Commission (United States, 2014) has ruled against constituted authority interventions (largely for constitutional reasons), while the European Parliament has voted favourably to introduce the 'Connected Continent' legislative package in early 2014 (European Commission, 2013). All of these developments and future decisions are fostering new combinations of, as yet, unspecified norms and practices of constituted authority. Inevitably they will intersect with the norms and practices of adaptive authority, that is, those favoured by civil society stakeholders. There is an urgent need for empirical evidence to examine these developments and their consequences. It is likely that the future will see novel governance norms and practices and that these will be institutionalised as 'authoritative' procedures that, in turn, will reflect accommodations to the respective norms and practices favoured by all the involved stakeholders. These will give rise to outcomes for communication networks and their users that may be positive, negative or in between.

The scholarly community in the communication field should be at the forefront of critically assessing this dynamic process. Research focusing on emerging 'standard' practices of authoritative decision making is essential if we want to avoid the repetition of a discourse organised around the three stylised sets of ideas outlined at the beginning of this paper. These involve claims about the benefits and harms associated with the institutionalisation of authority by proponents of market-led, state-led or civil society-led governance. It is unsafe simply to assume, even if the internet's end-to-end architecture is preserved by legislative or regulatory intervention, that the objectives of fostering innovation and of protecting citizen's privacy and freedom of expression will have been secured. The practices and outcomes need to be empirically verified.

Novel arrangements for governance are emerging at the regional and national levels as well as internationally. These will reflect pragmatic choices about 'standard' practices with respect to authority in the context of collective action. Empirical research on these developments is one way in which the accommodations among the proponents of different practices and their likely outcomes can be brought to light. There are many scholars working on issues raised in the contested terrain of internet and communication network governance (DeNardis, 2014; Hamelink, 2004; Marsden, 2013; McChesney, 2008; Padovani and Nordenstreng, 2005; Wu and Yoo, 2007). I suggest the need for a research programme to extend this work by employing an analytical framework that can reveal how authority is being constituted in the name of collective action through assessments of the strengths and weaknesses of alternative institutional designs.

Conclusion

If the scholarly community is to be well-positioned to comment on emerging communication network governance arrangements and their outcomes – positive, negative or in between –, there is a need for systematic empirical analysis of what is being done in practice under the labels of alternative approaches to governance.

The framework provided by the constructs of constituted and adaptive authority, combined with attention to their respective 'standard' practices, offers a basis for a forward looking comparative research agenda. Without research in this area, the evidence base for assessing claims and counterclaims about the virtues of alternative forms of communication network governance will be relatively weak. Without systematic study of how governance is being constituted in practice, we have recourse only to the polarized discourses predicated on prevailing and competing sets of ideas. This leaves us with the prospect that the discourse on communication network governance, including internet governance, serves mainly as 'a cover story for modern industrialism in motion' (Smythe, 1985: 436).

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[1] These are The Internet Society, Internet Corporation for Assigned Names and Numbers (ICANN), Internet Architecture Board (IAB)/Internet Engineering Task Force (IETF), Internet Assigned Numbers Authority (IANA), five regional Internet Registries, and W3C, the standards organization.