The true stakes of internet governance

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Governance of the Internet is currently in turmoil, to some extent nationally, but to a greater extent in the international arena where the US and its allies work to prevent many of its crucial aspects from being meaningfully discussed in multilateral forums, notably at the UN. This situation has significant impacts on social justice and economic equity, which will only increase in the future.

Our increasing reliance on Information and Communication Technologies (ICTs), which include the use of transnational networks to interconnect personal computers and business computer systems, has important consequences for governments[1] and all lines of commerce, in particular finance. The current information revolution is far more significant than the previous changes induced by telegraphy or telephony.[2] While policy-makers worldwide grasp this, most do not fully see the power implications. In contrast, US policy-makers understand the importance of networks such as the Internet in promoting their country's geo-economic and geo-political goals.[3]

Many aspects of the Internet continue to be governed by ad hoc entities dominated by US economic interests (or at least those of developed countries), in ways that are almost entirely beyond the control of existing institutions such as the UN's specialised ICT agency, the International Telecommunication Union (ITU), and beyond the control of any national government except the US.

The US is deliberately structuring Internet governance to ensure unrestricted corporate freedom and to favour its own surveillance apparatus to support its foreign policy, under the guise of "combating terrorism". By the same token, it largely denies that certain services should be public services (or public

goods); and rejects any government role in supervising, much less regulating, the Internet.

The power implications of this situation are evident: the US and the private companies it backs have far more say regarding the global Internet than anybody else. And they use this power for political ends (e.g. mass surveillance) and for economic ends (e.g. the very high profits reaped by companies such as Google).[4] For sure the US accepts some international discussions, but only in forums which it expects to dominate, and only to the extent that the discussions conform to its expectations. Indeed the US openly uses its political power in the forums where these matters are discussed, attempting to impose trade and investment policies that will favour its private companies, blatant examples being discussions within the World Trade Organisation, and, allegedly, the Trans-Pacific Partnership and the Transatlantic Investment and Trade Partnership.

And it uses a human rights discourse, in particular freedom of speech and the spectre of other governments attempting to control the Internet for censorship reasons or to stifle innovation, to mask its own human rights violations, in particular the denial of democratic governance, the imposition of US laws on the citizens of foreign countries and mass surveillance. Moreover the trade deals that the US is using to further corporate interests stymie aspirations for transnational economic equity.

Despite much rhetoric about openness, participation, accountability and democracy, the current governance model (called "the multi-stakeholder model") is largely undemocratic, because it is dominated by a professional coterie of representatives of commercial and political interests.[5] And it has been unable to address key Internet issues such as security and affordability of access in developing countries. Meanwhile the rest of the world sits on the sidelines, unaware of the stakes or unable to weigh into the debate. After all, why would anybody be concerned about this power imbalance as long as access to the Internet continues to expand; email and the Web remain apparently open; social media is deployed in ever more creative ways; and innovative "free" services become increasingly available?

This paper tries to answer this question, arguing that recent events show clearly why power matters[6] when it comes to the Internet and who benefits from the current imbalance.[7] Few would accept a similar level of US domination, say, in electrical power distribution, or water delivery. Concerns are reinforced by possible future uses of the surveillance techniques deployed by the US and other countries,[8] which could affect the operation of any devices connected to the Internet: cars, home appliances, etc.

This paper also outlines alternatives for greater social justice, from relatively arcane and technical measures to broad political transformations to achieve democratic Internet governance. As the deficiencies of the current arrangements become more and more evident, these alternatives will hopefully gain traction.

Unilateral cyber-power

Great powers have historically used communication systems (transport routes, telecommunications networks) to further their economic and strategic interests. This is certainly the case with the Internet: its origins can be traced back to US military-funded research in the 1960s, and subsequent deployment by

the military and other government-funded academic programmes.

It is important to note that the term "the Internet" is used, in practice, to refer to very different things. At times it is used to refer to the network itself, at times it is used to refer to the very broad collection of products and services that are made available using networks based on the TCP/IP protocol, and at times it is used as a paradigm for free and open communications.[9] In this paper we use the latter broad definition that includes not just the network properly speaking, but also the services and applications offered on top of the network (such as search engines, email, social networks, etc.).

As does any network, the Internet requires some central coordination, in particular with respect to allocation and use of identification resources (names and addresses) as well as protocols. The names most commonly used in the Internet are "domain names" and the addresses most commonly used are "IP addresses". Access to naming and addressing resources is essential for telecommunications (for telephony, the "names" are the familiar telephone numbers, and the "addresses" are lesser known numbers, for example a number embedded in a mobile phone's SIM card) and has typically been managed by national regulatory authorities and by the ITU at the international level, because it is a matter of public policy to ensure that such resources (often called critical resources) are made available to all players in an equitable manner.[10]

However, for the Internet, the naming and addressing resources have not been managed by traditional regulatory authorities. During the early years, when the Internet was a small academic network, management of names and addresses was provided by an individual (John Postel, University of Southern California), funded by the US government. As the network grew, it became apparent that the central coordination function (called the Internet Assigned Numbers Authority, IANA) could not be handled by a single person, and that more sophisticated procedures and processes would have to be developed and implemented.

Consequently, various concerned organisations led by the Internet Society, a US-based non-profit organisation of individuals and private companies supplying Internet-related goods and services, facilitated a process that resulted in recommendations that would have led to an internationalisation of the management of Internet domain names and addresses. However, the US government unilaterally rejected those recommendations and in 1998 proposed the creation of the Internet Corporation for Assigned Names and Numbers (ICANN). According to one analyst the creation of ICANN "reflected a behind-the-scenes agreement that IANA-ISOC and their corporate allies would be the ones in control of the new organisation and that a specific program acceptable to the trademark lobby, the US Commerce Department and the Europeans would be executed."[11] Unsurprisingly, this arrangement attracted criticism from other governments, in particular in the developing world.

In 2014, the US government announced that it would consider relinquishing its unilateral oversight role of the critical resources (names and addresses) required to use, operate, and offer services on the Internet, however, it would not accept any alternative that replaced its role with a government-led or an inter-governmental organisation solution. It requested ICANN to convene a consultation process to develop a transition proposal: those consultations are currently taking place.

Today these critical resources continue to be controlled by private sector entities which, because of the transnational nature of their organisation and activities, largely escape any supervision by national authorities. Those entities (ICANN and the Regional Internet Registries) are non-profit, but their constituencies[12] are profit-making companies directly affected by their decisions; many are US-based private companies and most are from developed countries. As a consequence, those resources are obtained and exploited either by the first comers, or by those who have the connections or the financial means to obtain them later.

Control by the private sector goes beyond names and addresses and includes the backbone physical infrastructure that carries Internet traffic and the most widely used services and applications (search engines, social networks, video and music downloading, etc.).

Does it matter?

Cyber-activists have been raising awareness of the importance of the nitty gritty of the Internet for social justice and its relevance to global power relations:

> "Internet governance, i.e. how we develop and implement the standards, rules and decision-making processes that shape the evolution of the Internet, is fundamental to how and whether that space encourages or discourages creativity, innovation, sharing, equality, privacy, freedom of expression; and whether everyone, no matter who or where they are, can access the space and its tools in a fair and equitable manner. In short, Internet governance determines in whose interests ultimately this new and evolving communication space will operate."[13]

Indeed, naming and addressing as well as infrastructure and routing shape the very structure and topology of the network. A largely transnational network biased in favour of big corporations makes it difficult for national authorities to control other more significant aspects, such as billing and accounting arrangements, flow of funds for services offered by the network, taxation of value-added services offered on the network, legal restrictions on what the network is used for (such as types of goods and services, political speech, etc.). The inability to control flow of funds and taxation makes it difficult for states to raise funds for new infrastructure, which is consequently deployed primarily to generate profits for private companies. Yet infrastructure has traditionally been viewed as a public good, and states have traditionally had the responsibility for providing access to communications infrastructure, whether roads, physical mail, or telephones. As noted above, the impact of the Internet is likely greater than those traditional communications infrastructure, so the inability of states to affect its rollout and use can affect development choices for years to come.

The current transnational arrangements mainly serve to facilitate the worldwide deployment of services, many of which are developed and first deployed in the US, which, until recently, was one of the largest markets. Many of the services benefit from economies of scale: unit costs decrease as the number of users increases. And many benefit from network effects: the value of the service increases non-linearly as the number of users increases. Under those circumstances, many services turn out to be natural

monopolies: there is room for only one player, and the first company to acquire a significant market share will become dominant.

Who benefits?

The Internet is often seen as a generous gift to the world's people, promoting free speech, free markets, and democratic values, helping to end oppression and poverty. Useful services and applications such as search engines, email and social networks are considered to be "free" services.

But in fact nothing is free: the so-called free services are paid for by valuable personal information that is provided by users. That information is stored and processed, and used to determine to whom to send particular advertising messages. The business of using the Internet to send targeted advertising is highly profitable, and the value of the information provided by users far exceeds the cost of providing the services. Thus, those services are actually methods for extracting profits from users who do not realise that their personal information is valuable.[14]

More fundamentally, ICTs in general, and the Internet in particular, have facilitated the development of transnational corporations. Such corporations increasingly dominate more and more areas of economic activity, largely escaping the control of national governments, including in key activities such as banking and finance. Today, the organisations that further their interests such as the World Economic Forum argue that national governments, and multilateral forums such as the UN and its specialised agencies, offer inadequate governance mechanisms in the globalisation era: private companies should have a greater say in finding policy solutions.

A greater role for transnational corporations in policy-making is blatantly undemocratic. It cannot result in solutions that are in the public interest because, by definition, the role of private companies is to maximise their profits. In a competitive market, striving to maximise profits may maximise public welfare for the goods and services in question. But some markets are not competitive and lead to monopoly rents and profits, to the detriment of public welfare.

As explained above, many telecommunication markets are natural monopolies, and so are the services offered on top of telecommunication networks. This has long been recognised, and is the reason why states generally regulate telecommunications at the national level, and coordinate at the international level (within the ITU).

Despite evidence to the contrary, the US takes the view that the Internet is different: it can be a competitive market and therefore should not be regulated nationally, and much less internationally.[15] But the Internet is now dominated by a handful of mostly US-based companies (Apple, Amazon, Google, Facebook, etc), with the exception of the Chinese market where comparable home-grown companies (such as Alibaba, Baidu, Tencent) dominate domestically.

Nor is infrastructure a competitive market, hence the discussions in the US and elsewhere on network neutrality: that is, on regulations to prevent dominant infrastructure providers from abusing their position, for example by degrading the bandwidth available for certain services.

Further, as shown in recent scholarly work,[16] the Internet favours the emergence of dominant companies also in other spheres of economic activity, whether manufacturing or services such as banking.

For the past few decades, income inequality has been increasing, both at the national level, and across nations. Surely it is not a coincidence that, in relative terms, the rich have been getting richer and the poor poorer while ICTs and the Internet have been expanding: indeed, the growth of ICTs and the Internet is symbiotic with the increasing influence and importance of transnational companies and transnational capitalism.[17]

The US has developed a vast mass surveillance apparatus in the wake of the expansion of the Internet. Indeed, the tools and techniques used by the US surveillance establishment are similar to those used by the private companies that monetise personal data: collect everything you can, store it forever, and develop algorithms to sift through that data to find particular patterns. The task of figuring out that it is worthwhile to send me an advertisement for product X because I mentioned something related to that product in a private email is akin to the task of figuring out where a suspect might be, so that he or she may be arrested or put under close conventional surveillance or targeted by a drone strike.

Status quo narratives

Various narratives are put forward to defend the current (undemocratic) governance arrangements, which are referred to as the successful "multi-stakeholder model" that has allowed the Internet to thrive.[18]

Freedom of speech?

The reduced ability of national governments to control the Internet is often seen as positive, because it is said to make it difficult for authoritarian regimes to impose censorship: the Internet is perceived as promoting freedom of expression. But in reality the present governance arrangements do not significantly hinder national censorship, as proven by China and others. Of course vast resources are required in order to implement effective national censorship, but that is equally true for other communication technologies such as physical mail or telephony. Nor do present governance arrangements hinder private companies from blocking whatever material they consider inappropriate, or in violation of copyright. On the contrary, the Internet allows dominant content providers to decide what gets published or not (although few would refer to that as censorship).

In some versions of this narrative it is said that increasing the mandate of the UN or the ITU over the Internet would give states undue control over how people access and use the Internet. This is absurd, because many states have already implemented controls on Internet access and have not waited on any permission from such multilateral agencies. On the contrary, the role of multilateral agencies would be to negotiate and agree on reductions of national sovereignty: for example the ITU treaties have provisions

(albeit weak ones) on the secrecy of telecommunications. If one really wished to export a certain version of freedom of speech to other countries, then one would seek to modify current treaties along those lines.

An efficient governance model?

Another narrative put forward by the US is that it is important to protect "the unique multi-stakeholder model" that has been so successful to date. But in fact the Internet has grown more slowly than has the mobile phone network and is becoming increasingly centralised and dominated by powerful quasi-monopolies.

It is sometimes said that in the "multi-stakeholder model" all players should have equal rights, in particular private companies should participate in decision-making on an "equal footing" with governments. This in effect gives veto power to private companies. How could network neutrality regulations ever be agreed to in such a setup?

The current governance model has been plagued by the same issues for the past 20 years: asymmetric role of the US government compared to other governments, complaints about the financial flows (in particular the relatively higher cost in developing countries), and lack of security (leading to spam, etc.). The multi-stakeholder model has not successfully addressed those issues.

North-South inequalities

Take the issue of connectivity costs. The price of connecting to the Internet for users in developing countries is, in relative terms, much higher than the price for users in developed countries,[19] whereas that is generally not the case for mobile telephony.

Could these relatively higher prices for Internet access be explained by the differences between its governance arrangements and that of other telecommunication technologies? This remains an open question. There is little data available regarding Internet connectivity costs and prices at the wholesale level, because this business is mostly conducted as a barter economy, under informal "no charge" arrangements (large Internet service providers interconnect with each other and exchange their traffic at no cost). Thus, it is difficult to establish whether lack of competition at the national level, or abuse of dominant positions by large international operators, or some combination of both, contribute to the relatively high costs in developing countries.

A persisent narrative used by the US government is that there should be "freedom to connect". Note that this is not a "right to connect", which would imply guaranteeing affordable connection costs. So the real goal is to allow more and more people to provide more and more data. That data can then be used, on the one hand, to generate more and more targeted advertising and thus more and more profit for the dominant players. And it can be used, on the other hand, to conduct more and more pervasive surveillance.

Security

Regarding security on the Web, the situation is only getting worse, with more and more spam, more and more phishing attacks, etc.[20] There is also increased mass surveillance, whether by governments or by private companies (in which case it is called data mining, big data or targeted advertising). Data mining

uses computer algorithms to search through data in order to find patterns (e.g. demographic), while big data consists in the collection, storage and analysis of vast quantities of data from different sources. Targeted advertising, Google's core business, consists in analysing data about people in order to determine what advertising they are most likely to be interested in, and then displaying that advertising on their computer or smartphone.

So, in reality, for the most part the narratives used to defend current governance arrangements are about maintaining the geo-political and geo-economic dominance of the present incumbents, that is, of the US and its powerful private companies. This creates a vicious circle in which the US uses its existing economic and political power to maintain and promote its own vision of Internet governance in various forums, including the Transatlantic Trade and Investment Partnership and the Trans-Pacific Partnership.

What are the alternatives?

It is tempting for civil society to focus on denouncing the role of governments in regulating the Internet, and in particular authoritarian governments that use it to censor dissent. And it is important to do this, and to do it vigorously. But civil society must also denounce the complicities between governments and private companies in the North, whose abuses go largely unchecked. There is also a need for concrete proposals for more democratic governance arrangements that will prevent monopoly profits and monopoly rents.

Social and economic rights are as important as democracy and freedom of speech. Human rights are indivisible and all human rights must be defended.[21] The Internet must be used as a means to enable social justice and economic equity, and not just as a means to enable criticism of authoritarian governments or as a means to allow a few individuals to become extremely rich.

Internet governance must be democratic, which means that private companies cannot have equal decision-making rights with respect to democratically elected representatives of the people. That is, multi-stakeholder processes must be embedded in democratic processes that recognise that no one state should have a dominant role.[22]

The importance of data privacy and the economic value of personal data must be recognised. Users must be protected from contracts of adhesion that mean losing all control over their personal data, and the profits arising from the use of such data must be fairly redistributed. This will require international agreements on data privacy and taxation and a fundamental rethinking of current governance arrangements.[23]

The dominant position of existing entities can be challenged through initiatives that favour the development and deployment of free and open source software.[24] And through the use of alternatives to the domain name system maintained by ICANN, for example by alternative domain name databases.[25] And through the implementation of network neutrality regulations to ensure that users decide what priority gets assigned to their communications.

Mass surveillance can be stamped out through legal means,[26] and technical means (pervasive use of improved encryption). Steps to prevent data to cross national borders (or at least to discourage transnational flows) may also help. When such steps are mentioned, they are often criticised as leading to "fragmentation" or even "balkanisation" of the Internet. But international connectivity and interoperability are achieved if data is transmitted internationally when the sender or recipient are abroad; there is no need for data to cross national borders if both the sender and the recipient are in the same country. That is, there is no obvious reason (apart from economies of scale) why a person's private emails or photographs should be stored in some "cloud server" located in the US rather than in a computer centre in the user's own country.[27]

As a first step, it is important to recognise that power matters when it comes to the Internet, and to recognise that it is highly concentrated at present. Perhaps the time has come for users to "occupy the Internet", to ensure that it evolves into a medium that will empower individuals and to avoid it becoming a medium that merely empowers a few dominant private companies and a few dominant surveillance states.

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Endnotes

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involved in it, see for example the bibliography in: Radu, R., Chenou, J.-M. and Weber, R. H. (eds) (2014). The evolution of Internet governance: Principles and policies in the making. Zurich and Berlin: Springer/Schulthess.

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17 Schiller (2014), op.cit.

18 This section is taken from a policy statement I delivered at the WSIS+10 High Level Event: APIG Policy Statement, Geneva, Switzerland, June 9, 2014. http://www.itu.int/wsis/implementation/2014/forum/inc/ps/doc/PolicyStatementsSessionOne-B/Dr.Richard.Hill_APIG.doc

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