Conflicts of laws
about the Internet and "legal interoperability"

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Abstract:
International law is based on a limited number of national, geographically defined jurisdictions. This setup was adapted to a world with few crossborder interactions, but is now strained since such interactions have become normal. Given the Internet's crossborder technical architecture, a nongeographical digital commons now has to be managed. This calls for a shift of paradigms that, taking account of the Internet's architecture, is based on a hypergraph structure of human society and an interoperability between systems of governance.

The *Global Status Report* published in November 2019 by the Internet and Jurisdiction Policy Network drew a troubling conclusion (SVANTESSON 2019). Out of the experts in the survey, 95% foresaw that problems related to crossborder legal challenges on the Internet would become increasingly acute in the next three years. Worse yet, 80% thought that international cooperation would be inadequate to address this problem; and only 15% thought that the right institutions for taking up these challenges already existed.[1]

The international legal system is based on a limited number of national, geographically defined jurisdictions. This was adapted to a world with few interactions across borders. Since such interactions have become usual, this system has come under pressure, especially once a nongeographical digital commons emerged. This commons has to be managed, as is the case on account of the Internet's crossborder technical architecture. A paradigm shift is needed, one patterned on this architecture, based on the hypergraph structure of human society and the notion of interoperability between systems of governance.

An arms race in the field of law

The strict separation of sovereignties and the principle of noninterference too often hamper cooperation, which is more necessary than ever for managing a digital commons and fighting against a criminality that knows no borders.

Given the lack of international legal arrangements, various governments are, without coordination and in emergency situations, adopting unilateral measures. Their authority increasingly has an extraterritorial extension, evidence of ths being the US Cloud Act and the EU General Data Protection Regulation (GDPR), not to mention the coming EU regulations about e-evidence or digital services. This trend violates the principle of state immunity (*par in parem imperium non habet*:: "*equals have no sovereignty over each other*"). Moreover, it leads to a dangerous arms race in the field of the law, a race to find the legal arrangements that apply to users on this transnational network. As a consequence, the risks of conflicts of laws between jurisdictions have considerably increased. The ensuing legal uncertainty with its unforeseeable long-term consequences might eventually threaten the advantages derived from the worldwide Internet.

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[1] The views expressed herein are the author's own and do not reflect the official policy or position of the Policy Network Internet and Jurisdiction or its secretariat. This article has been translated from French by Noal Mellott (Omaha Beach, France). The translation into English has, with the editor's approval, completed a few bibliographical references. All websites were consulted in January 2021.

A plurality of legal rules and standards

A growing plurality of legal rules and standards characterizes our world. Not just public authorities but also private actors are laying down, applying and enforcing their own rules and standards.

The rules — general conditions of use — drawn up by the big online platforms govern transnational communities of millions, even billions, of users (more than the population of most countries). These platforms are "bodies of governance" that draft rules following their own institutional processes and procedures. Facebook has even added to its system of governance an Oversight Board for appeals of its decisions about moderating contents. Pundits, including this platform's founder, have called this the supreme court. Some observers have interpreted this trend as the rise of "big powers" that, private and digital, concentrate legislative powers for setting rules, executive powers for moderating contents and, now, judicial powers (the Oversight Board).

I lack the concepts and tools for discussing potential conflicts at the global level between various sources of law. However the solution cannot simply be a reinforcement of the distributed global network thanks to the reestablishment of territorial criteria. As Kofi Annan prophesied in 2004, "*In managing, promoting and protecting [the Internet's] presence in our lives, we need to be no less creative than those who invented it.*"

The need for a paradigm shift

The history of institutions evinces humanity's ongoing efforts to organize itself in ever larger communities (families, tribes, empires, nations-states) and set rules for interactions. Organizing the coexistence of billions of people connected via the Internet is a challenge for civilization. Vint Cerf, co-inventor of the Internet Protocols, did not hesitate to write, "*Managing the way that a large number of separate legal frameworks apply to the Internet is one of the big policy challenges of our time and is more complex even than building the Internet.*" It requires an innovative approach on par with the digital revolution now under way.

Thomas Kuhn (1962) described how Galileo's telescope revealed the inadequacies of the Ptolemaic system of astronomy. The ensuing crisis opened the quest to find a new scientific paradigm, which Copernic, Kepler and then Newton would undertake. Likewise, the Internet, given its crossborder structure, has made it necessary to overhaul the political and legal paradigm of international cooperation. This overhaul has to be based on a better understanding of how our societies are actually structured.

Human society is a hypergraph

For the first time, applications can be used to depict online social relations as complex graphs. They illustrate and map the lush network of our individual connections and the diversity of our affiliations: by nationality, age-group, gender, place of residence, family, field of interests and the firm where (or with which) we work as well as our political, cultural and religious preferences. These networks of social affiliations reflect the many heterogeneous groups of all sizes and structures, for various purposes and with their own means of governance (whether formal or informal, public or private), whereby human beings are organized. An estimated 600-700 million groups are registered on Facebook alone.

This structure of the human community, this jumble of countless groups of affiliation, is what mathematics calls a hypergraph?[2] Paving the Earth's surface with at least 190 distinct nation-states simply reduces to a single or at most two dimensions (nationality and eventually geography) the reality of human society. Though still widely accepted, this reductionist projection does not suffice to take account of affiliations and interests, and even less to conciliate them. This inadequacy is a fundamental cause of the blockage of international cooperation and, too, of citizens tending to turn away from representative democracy, even in prosperous societies.

Our digitally interconnected world urgently needs an institutional approach that clearly realizes that human society is a multidimensional hypergraph. This approach would reach beyond the bunkers that now restrict action.

Toward a multistakeholder, issue-based governance of the Internet

To enable all stakeholders (public authorities, private firms, NGOs) to take up this joint challenge, the distrust must be overcome that has long existed between governments and the nongovernmental actors who now carry more weight. New neutral spaces of interaction are needed for these stakeholders to communicate, coordinate their actions and work out joint policies and standards about the uses and abuses of the Internet. Purely intergovernmental procedures, in which governments monopolize citizen representation, no longer suffice, regardless of how legitimately the representatives are selected.

Governance in cyberspace can only be constituted issue by issue. This issue-based governance will bring together the parties concerned by any given issue to work on a common agenda. It will enable all stakeholders to work on solutions and construct a system of governance. Only in this way will the mutual trust gradually arise that is indispensable for implementing solutions.

This is the spirit that guided the pioneers of the Internet when they designed the "technological governance" of the Internet. Let us draw a few lessons from them.

Lessons to draw from the "technological governance" of the Internet

For the governance of the Internet's infrastructure, several structures gradually developed: the Internet Engineering Task Force (IETF) and World Wide Web Consortium (W3C) for making technical standards, the five Regional Internet Registries (RIRs) for the distribution of IP addresses, the thirteen root server operators who jointly manage the Internet's root zone, and, above all, the innovative multistakeholder organization that coordinates the naming system: the Internet Corporation for Assigned Names and Numbers (ICANN). This distributed institutional ecosystem has filled its duties and borne up under the test of time. Thanks to it, this unique creation of humanity, this network of networks, now serves more than half the world's population.

Unfortunately, as already pointed out, similar efforts to those made for this technological governance *of* the Internet have not made to develop a governance *on* the Internet, *i.e.*, to develop the tools necessary for drafting policies that oversee uses of the Internet and lessen, in conformity with human rights, the abuses that it has made possible.

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[2] For any population of individuals and entities, the collection of all groups (or subpopulations) connecting their members is called the hypergraph of this population. *Cf.*: the article "Hypergraph" on Wikipedia.

An objective: Legal interoperability

The hypergraph structure of society and the plurality of legal rules and standards lead us to reformulate the problem of international cooperation during the digital era. Digitization has affected nearly all human activities. Given that every human group, public or private, sets up its own "framework of governance" and lays down the rules that it intends to apply to its members, the following questions can be asked. How to see to the coexistence of a diversity of stakeholders, procedures and rules, without any obvious hierarchical ties between them? How to manage these interactions and potential conflicts?

A source of thought on this topic is the approach adopted for the interoperability that, as we know, underlies the Internet's distributed infrastructure. Thanks to the TCP/IP and HTML/HTTP protocols respectively, the Internet and World Wide Web have emerged out of interconnections between a variety of networks and distributed databases. In like manner, protocols of governance could be designed so that various frameworks of governance, whether public or private, become interoperable. This concept of "legal interoperability" could help make various policies consistent with each other. It could also give a form to the increasingly direct means of interaction between parties across borders. In this context, I would like to emphasize that the concept of national sovereignty remains unchanged insofar as it applies exclusively within geographical borders. However the new approach would have to be taken into account once an effect reaches beyond such a border.

This idea is not as original as it seems. We are familiar with something similar in physics. Newtonian physics is fully applicable under ordinary conditions, whereas the theory of relativity is needed under conditions of high velocity, as in outer space. Each of these theories has its zone of validity. The need to foster this legal interoperability was underscored at the Third Global Conference organized by the Internet and Jurisdiction Policy Network in a partnership with the German government (in Berlin in 2019).[3]

Three textbook cases

The Internet and Jurisdiction Policy Network groups stakeholders from more than 300 entities and 50 countries: governments, online platforms, operators, NGOs, academia and international organizations. Its focus on the tensions between the crossborder nature of the Internet and the patchwork of national laws has led participants to explore how the concept of interoperability could be applied to three typical transnational problems:

● moderating and restricting contents on big Internet platforms (terrorism, hateful speech, harassment, disinformation, etc.);

● the discovery of electronic evidence during crossborder criminal investigations; and

● defining actions that, acceptable at the level of the Domain Name System, would limit abuses on the Internet.

Based on their work conducted over the course of several years, multistakeholder contact groups released reports in 2018-2019 on "operational approaches" to each of these three problem areas. These reports propose criteria, standards and voluntary practical procedures for organizing mutual responsibilities and relations between various categories of stakeholders.[4] Stakeholders may test the results of the proposed policy-making processes either by themselves or through new procedures of cooperation, such as the "mutual affirmation of commitments". The concrete results of this joint effort demonstrate the advantages of neutral spheres devoted to these issues and of innovative procedures for making commitments in order to collectively respond to transnational problems related to the Internet.

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[3] https://conference2019.internetjurisdiction.net

[4] https://www.internetjurisdiction.net/news/operational-approaches-documents-with-concrete-proposals-for-norms-criteria-and-mechanisms-released

Conclusion

An approach to legal interoperability based on a protocol of governance for this hypergraph of human society can relieve the tensions now accumulating. It can foster "permissionless policy initiatives" (in an analogy with the principle of "permissionless innovation" typical of Internet services). This approach alone is capable of stimulating the urgently needed emergence of a distributed institutional ecosystem for governance *on* the Internet. This novel methodology could eventually be duplicated in order to foster the gradual development of an architecture of worldwide governance that would be as transnational and distributed as the Internet itself.

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