GLOBAL SOLUTION NETWORKS

The Internet Governance Network
Transcript of Interview with Bertrand de la Chapelle

Guest:

Bertrand de la Chapelle has actively promoted multi-stakeholder governance processes since 2001, building on wide-ranging experience as a diplomat, an entrepreneur and a civil society actor. He actively participated in the World Summit on the Information Society (WSIS) process between 2002 and 2005.

From 2006 to 2010, he served as France's Thematic Ambassador and Special Envoy for the Information Society, where he monitored all WSIS follow-up activities and Internet governance processes. Betrand served on the Board of the Internet Corporation for Assigned Names and Numbers (ICANN) from 2010 to 2013.

Interviewers:

Don Tapscott, Executive Director of Global Solution Networks and one of the world's leading authorities on innovation, media and the economic and social impact of technology. He is CEO of the think tank *The Tapscott Group* and has authored 14 widely read books. In 2013, the Thinkers50 organization named him the 4th most important living business thinker.
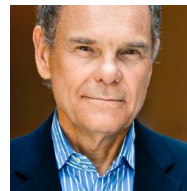
Steve Caswell, principal researcher, Global Solution Networks. An early pioneer of the digital age, he was founding editor of the Electronic Mail and Message Systems (EMMS) newsletter in 1977, author of the seminal book *Email* in 1988, and a principal architect of the AutoSkill Parts Locating Network. Steve teaches business and technology.

The Interview:

Tapscott: Can you take a few minutes to share your perspective on how ICANN operates, how decisions get made and what, in your view makes it effective?

de la Chapelle: ICANN is unique. As far as I know, in the Internet space it is the only organization that is able to not only develop policy in a completely open manner with the participation of all the different actors, but also to establish contracts and enforce those contracts.

In many respects, it is multi stakeholder like the other Internet governance entities, such as the IGF, the World Wide Web Consortium or the RIRs. But ICANN also has an enforcement capacity. When we talk about governance, any governance mechanism deals with five stages. First is the agenda setting and issue framing; the second is drafting and development of recommendations or proposals of regimes; the third stage is the actual validation and endorsement of those regimes; fourth is implementation; and the fifth is enforcement.

ICANN covers all five dimensions. The IGF for instance mostly covers the first one. The standards bodies do the first one and the second ones, but the third one, validation, is achieved just through voluntary adoption by a certain number of other actors. So, it is a remarkable achievement that in 15 years of existence ICANN has established an organization that is non-governmental but that has the whole five dimensions of governance. This is irrespective of the comments or criticisms that people may have in one direction or the other regarding the new GTLD programme: some say it is not liberal enough and others say it is much too liberal.

Notwithstanding those comments, the fact that it was possible to develop a whole policy regarding the management of a global common resource - the domain name space – is remarkable. It should be noted that it meant not only to develop the rules for a completely new market and the management of those resources, but also to handle the process of receiving the applications, processing them and doing the delegation and so on.

A key element is the notion of stewardship and responsibility and service for the general community. So basically ICANN is a global public interest organization that ensures the domain name system and the whole addressing mechanisms function correctly. It's a narrow remit, but it is a deep stewardship responsibility in the public interest.

It is challenging to get the right balance. The organization is relatively complex. The topic is relatively complex, and it may be hard to penetrate for people who are just arriving. It is also covering both technical and policy issues. ICANN is a bit too siloed, which means that it is mostly constructed around the notion of constituencies.

This is probably the only way that a set of representative mechanisms could allow taking decisions and implementing them. But the fact that the organization and most of its processes are very much constituency-based leads to a lot of separations between the different stakeholder groups. So a major objective I would see in the future of ICANN is to strengthen the cross-community nature of the debate and the processes to make sure that it functions not only on a constituency-based architecture, but also on issue-based processes.

We have working groups in ICANN, and whenever a topic emerges, it is very important that all the different actors, and not only some of them, participate in the discussion of the working group. The other thing is that the role of governments is very particular in ICANN because normally governments take decisions and are advised or assisted by business, civil society and citizens. But in ICANN, the community and the operators and the civil society on the Board are taking the decisions, and the governments are supposed to be in an advisory role only.

That being said, the evolution of the role of governments within ICANN has been considerable in the last three or four years, and we now have an environment that is much more balanced among the different stakeholders. Even if the GAC is still called the governmental "advisory" committee, the reality is that in the late stage of a new GTLD programme, the GAC has taken a growing role. Here again some people say it is taking too big a role and others are saying that the role is not sufficient. So, sometimes when you have criticism on both sides it means that you are walking the right line in the middle. That's the general landscape.

ICANN is a remarkable achievement, despite the limitations. Part of the limitations is that it needs more issue-based discussion and more fluid processes involving all the community, and to organize correctly the balance and the exact role of governments in a multi stakeholder processes. Those are my introductory comments.

Tapscott: Could you comment on how decisions get made?

de la Chapelle: Well, there is the model and then there is the practice.

But first I would like to make a comment here regarding the scope of the question. ICANN is not dealing only with the generic Top Level Domains (or gTLDs): the .com, .org, .net and all the new ones that are going to come. As you know, it has also a role for ccTLDs and for IP addresses allocation and for protocol parameters implementation. But the reality is that the protocol parameters are entirely set by IETF, and ICANN just puts them in the distributed database that is needed by everybody. Likewise, the IP addresses and the policies around IP addresses are mostly developed by the regional Internet registries (RIRs), and so ICANN is mainly endorsing and propagating those elements. Likewise, the ccTLD mostly deal with their own stuff at their national level and a bit of coordination among themselves during ICANN meetings.

That preliminary remark being made, if we now talk about the decisions regarding the generic top level domains (gTLDs), where ICANN has the most responsibility, the model is that the processes for addressing an issue come bottom up.

In a nutshell the model is: when an issue pops up, an issues report can be produced. If needed, a working group is then created within the GNSO, the Generic Name Supporting Organization. Anybody can participate in the working groups, which use conference calls, mailing lists and so on. When they finally reach a level of consensus on the recommendations, this is passed to the GNSO Council. The Council decides either by consensus or by voting with different majority rules, whether to endorse the working group's recommendation.

Then this recommendation goes to the ICANN Board, and the Board finally validates this and says yes, we will now get into implementation. That is the pure model, and the Board in the end is supposed to mostly validate that the process has been followed and that the consensus is indeed a consensus. The reason why I say that practice is sometimes a little bit different from this pure model is that although the working groups are theoretically open to everyone, the reality is that it is extremely rare, if ever, that the governments participate in the working groups. This means that in the whole process that I described, they intervene mostly through the Governmental Advisory Committee (GAC).

The GAC can provide advice in the course of the work, but usually this occurs when the final recommendation comes to the Board. Coming back to the way things function concretely, one of the problems that the working groups actually usually are limited to the people within the GNSO and do not involve enough people from outside, and certainly rarely the governments, although their input would be useful. So it's mostly an internal GNSO process. Then it's validated by the GNSO Council, but in some cases the discussion is not really completely conclusive, and the Board actually takes a larger role in the definition of policy than the pure model supposes. It shouldn't be the case, but it's something that happens. It's a trend.

The other element that goes in the same direction is that the distinction between what is policy and what is implementation. Normally it is supposed to be policy by the community supported by staff for the drafting. Policy is the community, the GNSO, the GNSO Council and the Board. Implementation on the other hand is supposed to be the purview of ICANN staff. However, there are many cases where the frontier is much more fuzzy and some implementation modalities are actually raising policy questions, or some policy decisions are difficult to implement.

So there is a much more complex interaction. That was the case in particular for the new gTLD program: in the end a significant part of final tweaking of the applicant guidebook was made by the Board instead of going back all the time to the GNSO.

So, the question of participation in working groups; the question of whether the Board has - or not - a role in policy setting, and the distinction between implementation and policy, are three elements that sometimes make the model not work as purely as it is supposed to be.

This is something that people are aware of, and there is actually a working group on implementation and policy that will address this distinction. There are a lot of discussions within the Board. I was on the Board until a few weeks ago. I finished my term in Buenos Aires, but I can testify that there are a lot of discussions within the Board to make sure that it does not become a policymaking body but the policy validation body, i.e. the third stage of my model. There are also a lot of discussions within the GNSO to see how the model of the working groups can be further improved, making it more inclusive, more efficient and easier to follow.

Tapscott: One question I have is about the role of government. Now, so the Government Advisory Committee was purely advisory, but you're saying that it's becoming more active now. Are there members of government on the Board itself?

de la Chapelle: No. The Board is composed of voting Board members plus liaisons. The voting Board members are themselves brought to the Board through two different tracks. One track is based on the constituencies: certain seats are elected by the different constituencies. You can see the composition on the site. The other half of the Board basically is composed of the voting members who have come through the nominating committee.

The nominating committee is an original structure that is in a certain way transversal, while the constituency delegation to the Board or election to the Board is vertical. The NomCom is more transversal. Half of the Board is basically brought through this NomCom, which is itself composed of delegates from the community. So it's a two tier system where all the different constituencies in a specific proportion, designate somebody on the NomCom, and the NomCom then as a whole, with representation from all the different constituencies in various proportions, is selecting half of the

members of the Board by rotation. There are eight members, so it's three, three, two. One year three, one year three, one year two, as it is a three year mandate.

There are liaisons as well who are not voting members. I should add that among the voting members the CEO is also a member of the Board, apart from this nomination processes. The liaisons are coming from either the technical community, and particularly the root server system advisory committee, the security and stability advisory committee, and a few other sources, mostly in the technical community. But there is one thing, which is that although there are no members of governments among the voting members, the chairman or chairwoman, in the current case, of the Governmental Advisory Committee is a member of the Board as a liaison to the GAC, and not as a voting member.

So the chairman, or chairwoman, of the GAC is fully engaged in all the activities of the Board, sees everything and is participating in everything. I should add that there is another relatively recent addition to the nomination process to the Board. There is one seat that comes directly from the "at large" through its own process. So you have three tracks. The first is the different constituencies, about half the Board, the second track is the nominating committee, and one seat from the ALAC, plus the CEO. These are the voting members of the Board plus the liaisons, including the Governmental Advisory Committee chair.

There have been discussions regarding whether what was done with the "at large" could be replicated with the GAC, ie: whether the GAC could nominate or designate one person as a voting member to the Board. It raises a significant number of questions and problems. It would be a big change in the evolution of the structure, and it is probably clear that the governments themselves would have trouble designating only one person among themselves, and that the question of whether this person becomes independent as a member of the Board or not would be a difficult matter to track in the current system where people are not full time on the Board and without any other activities.

People on the Board are conducting their own activities in parallel, and if somebody were designated from the GAC, it would be somebody who is in function in a government, and this would contradict the bylaws. As an indication for instance, I was elected to the Board in 2010 when I was the French representative in the GAC and vice chair of the GAC, but it was a completely separate process, as I went through the NomCom. When I was elected, I had to quit my functions in the government, quit the GAC and it was the first time actually that somebody was elected directly from the GAC to the Board. Currently governments participate in the Board through the non-voting liaison, which is the GAC chair.

Caswell: I would like to discuss the issue of legitimacy. Governments have a certain legitimacy. What makes the Internet governance mechanism, the multi-stakeholders, legitimate?

de la Chapelle: There is a panel that has been established under the President of Estonia, Toomas Ilves, which is dealing with the evolution of Internet governance and Internet cooperation. A question that I was asked to present to the panel in London a couple of weeks ago was precisely this question of legitimacy.

First of all, the question is not whether the governments have legitimacy and other structures don't, or if the other structures have legitimacy and the governments don't. I always resent the notion that it is either multi stakeholder or multilateral, and that multi stakeholder should mean without the governments. The governments have legitimacy, they keep their legitimacy, and they are very relevant actors in multi stakeholder processes. So, It's much more nuanced than this.

The important question of legitimacy is in my view based on a few things for multi stakeholder processes. You know the motto of the IETF which is: "we believe in rough consensus and running code?"

Tapscott: Yes. It's now a legendary aphorism.

de la Chapelle: Let me pick on those two expressions and broaden them a little, because they provide two important foundations for the debate on legitimacy. The first thing regarding legitimacy is: does the system work? You may have the most legitimate organization with all the processes to designate people that everybody agrees on and so forth, but if the result produces structures that actually do not handle the tasks that they are supposed to handle, then I believe they ultimately lose legitimacy.

A lot of the systems that we have in representative democracy are faulty in this regard. They are formally legitimate, but they are losing their capacity to actually address the problems in the right way because of many issues that are now pervasive in a lot of countries. So, the first thing is running code, i.e. an organization has an element of legitimacy, almost however it is organized, if it fulfils its stewardship role correctly. If you look at the IETF, the legitimacy is not established by any higher authority. IETF produces standards, and the legitimacy is proven because people adopt those standards.

So, running code and doing the work, delivering, is a fundamental element of legitimacy. The second element is rough consensus. One of the problems that we are facing today is that most of the mechanisms that involve voting, elections and so on, are leading to very unsatisfactory situations. They often have little respect for minorities, and we see the domination of the smaller majority. Think of the situation where somebody has been elected with 50.001 percent of the ballots cast. But if you consider those who did not vote, the victor actually represents, say, 40 percent of the total population eligible to vote, which itself is a proportion of the total population. So these people have been elected with a very slim majority that actually is a minority. Nevertheless, they sometimes consider it as a mandate to do something that is just on their side of the equation.

Rough consensus tries to solve the conundrum between pure voting majorities which often do not sufficiently respect minority views, and the other extreme, which is UN consensus. It looks for total consensus so if one entity really doesn't want something to be discussed, or put on the agenda, or addressed or solved, it simply doesn't happen. Rough consensus in the IETF is an effort to really listen but to move forward when no better solution can likely be found and a decision needs to be made. So the second element of legitimacy in my view is about listening to the voices. Legitimacy comes from making sure that everybody has the ability to say his piece, be listened to, and that everybody has tried to accommodate all views.

So these are the two elements that in my view make various multi-stakeholder processes legitimate. It's not that the others are not legitimate, and there are many well-functioning systems at the national level in representative democracy, but the key question is we are dealing with things at the international and cross-border level. So when we talk about the role of governments and whether they are the sole source of legitimacy, the problem is that governments are local authorities at the global level. They are separate authorities and they have no authority to impose anything on any other government.

But what we have to deal with is usually the management of commons. It can be common resources, like the domain name system. It can be common standards, or it can be common spaces when we talk about cyberspace and social media networks. How the different actors cooperate is extremely

important. No single actor, even the collection of governments, can on their own solve the issues that deal with the governance of or the governance on the Internet.

There is a need for cooperation, and that leads to two other principles that I would like to mention. These are in addition to running code and rough consensus. The two other principles are 1) accountability, and 2) the right to participate, which I will talk about in a few moments.

Normally, good functioning national governments do provide accountability. The decisions are supposed to be adopted - and they usually are in democratic countries - through the rule of law. There is the judiciary, and there are a lot of redress mechanisms in democratic countries.

But accountability is a discussion that is on-going in ICANN. I am not sure that its accountability framework is complete enough. The development of ICANN's accountability framework and the appeal mechanism and quasi-judiciary functions in the ICANN environment is something that is under discussion at the moment to enhance what is in place, which is mostly reconsideration by the Board on its decisions.

For the other institutions in the multi stakeholder space, accountability is mostly done through transparency. The lists are open, the archives are public, all exchanges are documented. They are published online, and in most discussions like the IGF, what people say is directly transcribed. So, transparency is a component of accountability, but there is another dimension, which is the quasi-judiciary, dispute resolution mechanisms. However, when we talk about accountability, the one thing that is delicate in the whole debate about the role of governments in the international system is their chain of accountability.

In many cases, international discussions in international organizations, it can be ITU, WTO and so on, a lot of discussions are conducted at relatively low hierarchical levels. Yet, the chain of accountability is pretty long between let's say the third secretary in the embassy or the mission of a country in Geneva who participates in a meeting and the electors, the citizens of his country or her country. They may have voted for somebody as a parliamentarian; the majority of the parliamentarians have decided who is the Prime Minister; the Prime Minister has decided who is the Minister of Foreign Affairs; the Minister of Foreign Affairs has discussions with his staff who is going to be the ambassador in Geneva, and the ambassador in Geneva deals with the HR of the Ministry of Foreign Affairs to get the third secretary.

The chain of accountability exists, but it is very long. For sure, if somebody really screws up, there will be an accountability. But the real problem is that there is very little capacity for the other dimension of accountability, which is the ability to commit. When you are the plenipotentiary ambassador to a very important international conference, you do have the power to commit your country. When you are just a participant in a process that can be an inter-governmental process at a low level, you do not have the authority or capacity to say yes, and speak on behalf of the whole country. This is harming the process. So, accountability is a very important element for multi stakeholder mechanisms, but it is also a question for international negotiations among governments only.

Finally, and more shortly, there is an important principle which is a very provocative principle. In international governance, for Internet issues and probably any other issue that involves commons, I believe there is an underlying principle of legitimacy which is: the right for any person or entity to participate in an appropriate manner in the governance processes dealing with the issues it has a stake in.

This is a fundamental underlying right that is never explicitly mentioned or documented, but which I think is the foundation of the multi-stakeholder approach. And yes of course, we are not talking direct democracy at a global level. There are levels, there are different modes. This is why I say: "in an appropriate manner". But when you think about it, the notion that anybody, and I really mean anybody or any organization, businesses, international organizations, governments and all that, have the right to participate in the process, is exactly what the idea of ICANN is about.

It is open to everybody on an equal footing. This is, when you think about it, as radical a notion and as big a mental leap as when people said we will establish representative democracy on universal suffrage. Any citizen, irrespective of his or her age, wealth, education, abilities or whatever, has the same right to vote. What is the process? Instead of one person, one vote, it's one person (or entity), one voice, and the right to participate in processes and be heard.

I think this is the core foundation of the legitimacy of the multi stakeholder process, and it is revolutionary and audacious. It was completely unbelievable to believe that anybody could have the same right to vote, and as you remember in the early days, people were offended by this notion, not to mention giving the right to women. But in the case of the multi stakeholder approach and Internet governance, it has worked from the onset with this notion that if you are a stakeholder, if you have a stake in an issue, you need to be able to participate, and this is a very far-reaching notion. To be frank, it breaks the current foundation of the international system, or at least it challenges the current foundation of the international system which is the monopoly of representation of citizens by their government.

Tapscott: Can I add something to that? When we were researching this whole process, one of the things that came out is when the Internet was first developed, and this is going back now into the '70s, that instead of having a command and control structure, it would be a structure based on cooperation and collaboration. Is this like a new style of management that we're watching evolve?

de la Chapelle: You are absolutely right in what you say, but it's not only a matter of cooperation. One of the founding principles and approaches is the notion of distribution of responsibilities. It's a combination between the notion that there is a shared responsibility and the distribution of responsibilities on an issue-by-issue basis. What is striking is that we are familiar with a few of those institutions that have helped build the Internet, but the reality is that there have been many working groups, taskforces, all different names, and the interesting thing is that they evolved on an issue-based and need-based basis.

First of all the Internet was conceived as a layered system so that people could do their stuff at their layer and not bother about the other ones above or below. Each layer was an enabler for the layers above and each layer was merely building on the APIs of the layer below. Accordingly, for each of the layers, the different structures have emerged as need arose, and on an issue-by-issue basis. The people who deal with the Internet engineering taskforce (IETF) are not the same as the ones who deal with the ICANN stuff or with the regional Internet registries. Although the regional Internet registries (RIRs) collaborate very closely one with another, they deal with their own stuff in their own region. This is why it's distributed, and this is why it works and why it's scalable.

So the approach is not only based on cooperation, it's based on interoperability, distribution of responsibilities, layers and issue-based and need-based structures. That's the origin of the approach and this is why there is a sort of visceral reaction when there is the whole debate about the role of the ITU as one single organization to handle Internet issues.

The people who, like me, are trying to be balanced, do not oppose the notion that ITU has a role to play. Quite the contrary. The ITU has an important role to play. But the visceral reaction is against the idea that there would be one single entity or organization that will deal with everything Internet-related: it is completely contrary to what got us to today's Internet. The way the Internet has worked so far, and the reason why it has grown so organically from a few thousand users to three billion is precisely because everybody does its own stuff with its own processes regarding the issues that are within their mandate.

The notion that there could be one entity that deals with everything that is related to the Internet makes no sense. Every single international organization today is concerned by the Internet. ILO is concerned by the Internet, UNESCO is concerned by the Internet, WTO is concerned by the Internet, the ITU, but also UNCTAD, also WHO in some respect when it deals with the counterfeit medicines and so on.

So the notion of distributed responsibilities is the core of the current approach, and yes, cooperation and stewardship are very important words.

Tapscott: At the Global Solution Networks meeting in Brussels you talked about the importance of differentiating between governance of the Internet and governance on the Internet. Could you elaborate?

de la Chapelle: Yes, if you look at the definition of Internet governance in the Tunis Agenda, which overall is a rather good definition, it clarified a certain number of things that were discussed during the WSIS summit. One was about developing regimes. You are probably familiar with the notion of principles, rules, norms, decision making procedures and programs. This is the traditional definition of an international regime. So, Internet governance is about regimes to deal with some issues.

The second thing is the last few words say that this is about regimes "shaping the evolution and use of the Internet". The fact that there is evolution and use is exactly the distinction that I was making. There is governance OF the Internet, which is mainly the management of it as a system, as a structure, and there is governance ON the Internet, i.e. what people use it for, what they do on or with the Internet. The fact that it covers those two dimensions is a very important element because the first is more technical, whereas the second one is more policy. One talks about the system and its reliability, its resilience, its interoperability, its expansion and so on, and the development of new applications. The other one is what people do on this. It's mostly about behaviour and humans.

So, this distinction is important. But that does not mean that it is a sharp distinction. Why? Because there are technical decisions on the system that have policy consequences. Without naming too many, the questions of having an addressing and naming system that is not directly related to the physical geography of nation states has huge consequences in terms of universal accessibility. At the same time it has policy consequences in that it makes jurisdictions harder to apply. Likewise when you try to solve an issue regarding privacy or freedom of expression, you rapidly bump into the notion that technically you may not know where this information is being stored. So, if content is illegal in one country but it is stored in another one and managed by a platform incorporated in a third country, what is the policy

consequence? Which legislation should apply? This is the problem we address with the Internet & Jurisdiction Project that I run.

So this distinction is not a sharp distinction, there are connections. But just like the layered system allows the interoperability and building stacks of applications on top of one another, the technical architecture is and should remain in its governance relatively distant from the governance on the Internet, or what people use on the Internet.

Furthermore, we do have a lot of structures, institutions and processes for the governance of the Internet, that have been progressively developed through the last 30 years. This is precisely the Internet governance ecosystem in the narrow sense, the idea behind ICANN, W3C, IETF, RIRs and so on. These organizations function, they exist, they cooperate and they do the job.

The problem we have is at the moment we do not have equivalent multistakeholder tools to handle the governance ON the Internet issues that relate to the behaviour of people. On the one hand treaties and inter-governmental organizations bump into the difficulty of reaching consensus at the global level. Those intergovernmental institutions also have difficulty involving the non-governmental actors in their discussions. There is progress, but it's still a fundamental legitimacy and recognition problem. As a result, because there are no international regimes and no consensus at the global level, the only tool really available for policymakers at the national level is the national law.

We now witness the proliferation of national laws that are overlapping, extending jurisdiction across borders, and potentially conflicting. To avoid this, we should draw lessons from the way we have built the institutional ecosystem for the governance of the Internet, and apply these lessons to the governance on the Internet. We need to develop a series processes to produce issue-based governance networks, institutions and regimes, as needed, to handle the issues related to the use of the Internet, such as privacy, freedom of expression, cybercrime and so on. These questions are not new but they take new dimensions with the Internet.

The governance on the Internet is confronted with the main challenge of how do you allow all the different stakeholders to participate in discussions on these issues. This is why we have the Internet governance Forum (IGF), the meeting in Brazil later this year (NETmundial), this is why there is this broad discussion about One Net and how to build the mechanisms to handle the issues related to the use of the Internet.

Tapscott: So governance of the Internet is clear, but governance on the Internet is a continuum. Would you agree that there is also higher level, Big G governance, if you like, on the Internet, which could refer to new models of network governance of any issue that has to do with governance? So, it's now possible to govern other resources like water or forests now through multi stakeholder models on the Internet.

de la Chapelle: I'm fully in line with this, and I can send you a paper that I produced, if I remember correctly, in 2003 for the Yale Conference on environmental governance. What you are talking about is something that I fully agree with, and the distinction I make is you get governance *of* the Internet, governance *on* the Internet or activities on the Internet, and governance *in* the Internet age.

If you think about it, there was no possibility to have representative democracy without the printing press. The printing press had, at least in Europe, two major consequences. The first one was it triggered the Thirty Years War that led to the Treaty of Westphalia, which provided the foundations for the later

emergence of the nation states with very clear boundaries as opposed to a more feudal medieval system. Those nation states in turn were able to precisely document their frontiers because they were able to print maps and establish their laws, because it was possible to print the laws and distribute them.

It was also possible to do representative democracy because the press and the print in general, gave you the capacity to know what your representative was saying on your behalf in a parliamentary debate. So the printing press, the nation states and representative democracy system are closely connected with one another. I strongly believe that the governance challenges that we are facing that are of a trans-national nature that need to involve the different stakeholders, and cannot be solved and could not be solved before we had at least the embryo of the new communications techniques that the Internet has brought.

This means a global network accessible to everyone, and a layer that is just embryonic is collaboration tools. Wikis are just the first step of collaboration tools, and the social media networks are basically the distribution mechanisms for production of content, but what's still lacking is very efficient and simple tools for collaborative work, for policymaking and other decision making things. But for instance, if you talk about environmental governance, the fact that you can place sensors in some places and connect them to the Internet so that the monitoring of a regime can be done automatically without having to send inspectors, is changing the capacity to monitor and enforce.

So, governance in the Internet age is transformed because it facilitates the participation of a much broader range of people across borders, and also enables an easier monitoring of the different regimes that are being put in place. If you read Elinor Ostrom, who was the Nobel Prize winner in economics, one of her seven principles, if I remember correctly, for appropriate governance of common resources is the notion that you need to be able to monitor and detect and to sanction non-respect of the rules, otherwise your regime crumbles. So, I fully agree with you: govrnance is an issue that goes beyond the Internet. The distinction is again: governance OF the Internet, governance ON the Internet, and then going into governance in the Internet age, where I think a multi stakeholder approach is going to spread.

Basically the Internet is the test bed where new modes of governance that could be applicable more broadly are going to be tested.

Tapscott: Yes, I think and of course you know that we've spent the better part of a decade on that one. I think maybe the typology re governance of the Internet, governance on the Internet with the policy issues, then you have governance through the Internet. That's like global governance of any issue, water, force, conflict, or for any process too, like policy making itself, that may be a good way of describing the three levels.

de la Chapelle: Absolutely, I've used that formulation as well.

Tapscott: That is great. Thank you for your time.

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