



# conversations

## POWER, PRIVACY AND SECURITY: DISCUSSIONS ON ACCESS, CONTROL AND USE OF INFORMATION

*interview with Sandra Braman*

Sandra Braman is one of the world exponents when we talk about studies on the place and role of information in society today. Has been studying the macro-level effects of the use of new information technologies and their policy implications since the mid-1980s. Current work includes *Change of State: Information, Policy, and Power* (2006) and the edited volumes *Communication Researchers and Policy-makers* (2003), *The Emergent Global Information Policy Regime* (2004) and *Biotechnology and Communication: The Meta-technologies of Information* (2004).

In this interview for The Debatedouro, she migrates easily between basic and polemic discussions, using her vast knowledge to launch profound answers to recent issues such as the control of information, the performance of Brazil in matters of global internet governance and the recent disclosure of episodes of United States espionage.



Does the Information Age really exist? If yes, what is the greatest evidence?

In my view, yes, the Information Age does really exist in the sense that the creation, processing, flows, and use of information are now fundamental to everything we do. The number of ways in which we rely upon information as it has been mediated technologically has so multiplied that it has changed the nature of society in profound ways. In many areas, that has meant replacing tangible materials with information as the resources of interest, and in other areas it has meant the ability to do things that were never before possible. The tools we use today are so different from industrial technologies that we can call them informational meta-technologies. The distinction is important because informational meta-technologies have vastly expanded the degrees of freedom with which we can relate to ourselves, each other, the material world, and information itself.

Of course information has always been important to society, so what we are talking about is a change in its relative importance that is significant enough to justify saying that the Information Age has replaced the Industrial Age. This is a global phenomenon, even though change takes place in different ways in societies around the world, and to greater and

lesser extent within and across cultures, because everyone on the planet, and every thing, is affected by those making decisions at the bleeding edge of "informatization".

Eric Michaels' book *Bad Aboriginal Art* is illustrative in this regard. He allows us to see how very different the sense of information controls and relationships, access to information, and privacy are in the ancient northern Australian culture of the Warlpiri from those that dominate globally. He also reports on the ways in which they were able to take advantage of being in the "Information Age" to develop a niche for themselves within the global economy that in turn made it possible for them to sustain elements of their traditions essential for cultural survival. The Warlpiri were able to do that because of decisions they made about which information to hold for themselves, which to let go; and how to manage the letting go: through which channels, to whom, under what conditions, with what costs and projected benefits -- information policy in the contemporary sense.



For you, who have produced such an extensive literature on the place and influence of information in modern society, mainly in the state and government sphere, does the pulverization of the concept and its application in large scale turn information into a beast of seven heads? In your view, have the limits of the information studies been overreached, or is it necessary to go even further?

You are really asking three different questions here. They all sound simple, but the simplest questions are often the most difficult!

When I started looking at how people define "information" while working on my doctoral dissertation on information policy in the mid-1980s, it was clear that there were even then literally hundreds of definitions out there, from every possible type of practice as well as academic discipline, and from the most abstract and theoretical to the most precise and use-oriented. These could be compared with each other along several dimensions, yielding four categories: information as a resource, as a commodity, as perception of pattern, and as a constitutive social force. By a couple of decades later, when I was completing the book *Change of State*, two more categories had become apparent: information as an agent, and as a basin of possibility.

Have we gone too far in thinking about everything in terms of information? In one sense yes, for those who think only in terms of information. We still, delightfully, live in a very world made of things. There are significant environmental costs of our informational activities. Poverty, starvation, and disease don't disappear when confronted with a database. In other senses, no, from the perspective of whether or not we fully understand just what the changes we are going through will mean for us in the long run, what choices we should be making right now, or what future decision points may appear as a result of changes now only barely or not yet in evidence.

Do I think it has gone so far that information will become completely unmanageable by humans? Yes, no, and maybe. Yes, in the sense that the amount of information, its complexity and the complexity of the interactions, transactions, and judgements involving intelligent agents that are themselves in some cases autonomously evolving, may well have brought us to a moment of ungovernability although, importantly, that does not mean we should stop trying. No, in the sense that I personally don't believe there is a single intelligence in the network itself, though I confess I did note it with some interest when -- just around the turn of the millennium -- the number of nodes in the global telecommunications network upon which the Internet has been built reached the number of neurons in the human brain. And maybe, because in the face of my own statement of no belief I do also acknowledge the insight of George Dyson, who in his book *Darwin among the Machines* notes that if there were an intelligence in the network, there is no reason to believe it would be in a form recognizable to humans.



Thinking about the relations among states, what types of information activities (creation, processing, flows and use for a particular purpose) are available to states? How much power is reserved to the information itself rather than the state, even when used by the state? What type of power is involved when it is held by the information in ways that go beyond the ability of the state to control it?

Since "the state" is not a black box, a singular entity, it is for me impossible to imagine that there could be a type of informational activity that would not be available for use by states. We are just beginning to think about the legal implications of informational agency. Even questions about software liability -- accountability for what happens when software fails, which could be life-critical in, say, a hospital or even a car -- have not yet been fully resolved in most legal

systems. The first conference on "robot law" was held in 2012. Informational agency is of intense interest in the cyber security and cyber war environments.

Brazil provided a relatively early example of state use of information as an agent when, according to a news report, a municipality experimented with the issuance of traffic tickets in response to license plate image capture after a sensor noted a speeding car. In such an instance, we can say that information exercises power because it is making things happen without human intervention, a matter of deep concern from a legal perspective. Those concerned about cybersecurity look, among other things, at the "nexus" between a particular information flow and an occurrence, including attention to the number of processing steps involved, to determine when there might be causality sufficient to assign responsibility.



To talk about one of your research topics, we remember a sentence from your book 'Change of State': "access to information is used by the state for informational purposes proactive persuasive". So, what is actually the informational state? It is a new model or a statement? Does it already exist somewhere in the world?

Since the international system of secular states developed in the mid-1600s with the Westphalian agreements, there have been many different kinds of states. The informational state relies most heavily on informational forms of power in addition to -- often in replacement for -- forms of power that involve control over behavior by use of materials (instrumental power), by use of institutional design and rules (structural power), and by use of persuasion (a form of power variously referred to as soft, consensual, and/or symbolic). The bureaucratic state that dominated since the 1870s but began to weaken in the 1970s was a great producer and consumer of information; think of the census, and immigration data. This was also the form of the state that built the first round of the global information infrastructure; it was to regulate the telegraph that the very first international organization was formed in the 1860s, what we now call the International Telecommunications Union (ITU).

Once that information infrastructure was in place, and the habit of creating and collecting all that data became well engrained, the networks and the data themselves became the subject of experimentation as new tools of power. Just as Marshall McLuhan said that the content of any new medium is the medium that came before, so in the evolution of political form the infrastructure of the bureaucratic state became the media, the tools of power, of the informational state. Policy-maker use of big data, notable for the flexibility of analytical approaches and rhetorical value, takes us further down this road.

In my understanding of the history of the informational state, the 1960s were a turning point. Beginning early in the decade, the Japanese government became seized with the concept of a post-industrial world in which information would be central and funded a great deal of research to support informatization and to study it. (Discussion of these developments was appearing in the Japanese mass media before Daniel Bell introduced the notion to the English-speaking world.) Arguably, it was Brazil that provided the first exemplar of an informational state when in 1964, the government that came into power tried deliberately to centrally control so many diverse aspects of information, communication, and culture, intervening in the information production chain from production of the technologies needed to collect and process information to mass media distribution of content. Governments vary in how far they have gone down this path, but it is likely to be those that are the most sophisticated in the use of informational power that will be the most successful in the new configurations of power relations into which the Westphalian system is evolving.



Will there be a new type of divide among countries and their governments, based on the unequal availability of and access to strategic information resources? If so, which will differentiate more: the ability to obtain these resources or the ability to operate them? Is it worth betting on discussions about The New World Information Order?

Your insight that new types of "divides" are at stake today, and may be in the future, than those with which we were familiar in the past, is terrific. The New World Information Order (NWIO), sometimes called the New World Information & Communication Order (NWICO), was an effort by the nonaligned nations beginning in the 1970s to influence the workings of the international system in such a way that unfavorable dependencies were not sustained in the postcolonial world. Its origins were actually in an attempt to develop a New World Economic Order, but it was quickly realized that global information flows had to be restructured and freed up before meaningful work on the economic system could begin.

There were several divides of concern during the NWIO debate, which continued under a UNESCO umbrella into

the early 1980s, when the withdrawal of the US, the UK, and a few other countries [check which countries] from UNESCO over NWIO-related issues turned the conversation quiet. There were inequities in access to scholar and scientific information, knowledge as well as technology transfer, the ability to communicate interpersonally within a country and across its borders, the ability to broadcast domestic news as understood domestically rather than through the eyes of others, and on. Institutional consequences of the ideas put forward by those promoting the NWIO did include the establishment of regional broadcasting agencies and a number of other such changes, but stopped far short of the global equity in the ability to create, access, process, store, distribute, and use information that were the fundamental goals of the New World Information Order. Meanwhile, sociologists doing empirical research on a much smaller scale, on knowledge differences within specific communities, also found divides in access to and use of information that paralleled socio-economic class divisions within those groups. Causality was understood to run in both directions -- people were poor because they weren't accessing and making use of information to make their decisions, and they weren't accessing and making use of information to make decisions because they had never had the opportunity to learn how to do so, couldn't currently afford access, and so forth.

References to a digital divide are very common today, but as your question highlights, that is usually done without specifying in just what dimensions that is the case. I also like the emphasis on the utility or effectiveness of types of informational resources, processing, or capacities about which there is concern when there is a divide. A quick and cheap answer to your question would be that it is the ability to use that is more important than ownership or (ostensible) control. The word "ostensible" is important here because software that can take over the control of the computers of others is now so prevalent and effective that those who think about cyber security from the perspective of international law talk about using a "control" test to determine whether or not a given state is actually responsible for a cyber attack taking place using what would be its facilities if determined only by ownership and normal management. It is also important to note that if it is actual electronic control that is of the most importance, then the individual can be considered as much of a potential threat as is an enemy state. Whether or not a state does so, or what it means to do so, raise a number of ethical, and political, questions. Access to information -- access to knowledge -- is the critical foundation upon which all other digital divide questions rest.



One of the climaxes of the discussion about the use and the power of information by states is the relationship with globalization of anti-terrorism efforts and laws. Does the fight against terror worth the sour situation that has been taking shape among some countries due to episodes of international espionage?

Whether or not it was "worth it," this development was in my view inevitable because it seems to be a fundamental characteristic of the species that, given a tool, humans must use it. We should remember that when the first atomic bomb was tested, there were some scientists who believed it was entirely possible that it would ignite the planet's atmosphere and end life on earth. The bomb was still dropped.

Once digitization took place, making it possible to turn any kind of interaction or expression or object into flows of bits, this kind of effort was bound to have been attempted as soon as the technologies were up to the task. Because information is gathered both via the global network and "ubiquitously embedded" in all kinds of objects in our environment, the types of surveillance that could take place are essentially limitless.

What you so beautifully refer to as a "sour" situation among states as a result of the news from the Snowden leaks about the surveillance under way by a number of governments can be read as one more step in the transformations of relationships between the law, society, and governments that have been underway since at least the 1970s. Historians of the law describe these changes as so profound in nature that they equal those that took place when the international system as we know it was first put in place in 1648 with the Westphalian agreements. Even very basic issues, such as what it is that is the subject of the law, and what kinds of actions (including information flows) should be considered threats, are under debate; they are no longer givens. A variety of factors have come together to generate this turbulence, but certainly informatization has been key among them. In developments like those that have been unfolding since Edward Snowden's leaks about surveillance we can see individuals, civil society, and the state in new types of negotiations with each other regarding how governance will operate in the future.



Will it be possible to establish a global information regime and regional information regimes, considering the informational supremacy of the United States?

Assuming you mean "regime" in the sense in which it is used by political scientists -- to refer to shared principles, norms, rules, and decision-making procedures -- some of the processes by which this might come about are underway. Notably, the key entity in managing the Internet domain name system, ICANN, is global rather than international because its decision-making affects the entire planet but the decision-makers are not representations of geopolitically recognized governments, as is the case with international organizations like the WTO or the UN. Although ICANN's mandate is global, up until recently it had always had a special, contractual relationship with the US government that grew out of the history of the Internet design process.

For a long time, many governments, civil society advocates, and others have argued that a more representative means of Internet governance had to be found. A variety of alternatives have been put forward, with Brazil providing leadership in arguing for change. One of the most important outcomes of the Snowden leaks may be that the information they provided about government surveillance was used as the justification for ICANN and other organizations involved in management of the Internet to break from the United States. Decisions about what kind of governance mechanism will now be developed for ICANN will be made at its next meeting, which will be held in Brazil with an explicit invitation to your president to provide global leadership in designing the next stage of Internet governance.

The ball is now in Brazil's court. This presents many challenges. Having justified the disruption of a governance system that, at minimum, worked, with the argument that government surveillance is unacceptable, can the Government of Brazil then in good faith conduct surveillance?



What does Snowden mean to the United States Security? Will there be other 'Snowdens'? Or is he an exception?

Snowden already comes on the heels of others, including those not as well known such as William Binney, a former US intelligence officer who resigned in October of 2011 and has since been publicly expressing concern as a whistleblower about what he considers to be NSA abuses of its surveillance capabilities. In between there has been at least one non-profit organization, newspapers such as The New York Times and journalism schools experimented with online anonymous tip systems inspired by that of WikiLeaks, and everyone from diplomats to The Washington Post to scholars to lawyers in the courtroom have used information that came from WikiLeaks as support for their own arguments.

Similar experimentation has been underway around the world, and all of this is taking place within the wider culture of openness in which Brazil has always been such a leader. Even economists who would not go far in the direction of openness admit that information is inherently leaky, even before one gets to any particular set of interests in leaked information; that is, whether such information is sought for public service or for entertainment purposes, for example.

So yes, in my view it is quite likely that there will be a series of individuals, networks, or groups choosing to step forward in such roles. Complete protection against all possible sources of leaks can be suicidal. In the cybersecurity world, they are now talking about the danger of "self-denial of service" because we are so globally interdependent. The real cure has to go in another direction. One of the big inversions in many legal systems around the globe since 9/11 has been replacing the presumption of innocence (until proven guilty) and a preference for protecting the "good" even if some of the "bad" get away, with a presumption of guilt (everyone potentially so even if not yet of interest) and a preference for ensuring that the "bad" don't get away even if means many of the "good" are hurt. It may mean that we need to rethink the very foundations of what kinds of relationships among states and societies, and between states and their citizens, are needed to sustain life in all of its diversities in an electronic environment. Words like "trust" and "respect" come to mind.



Another high point of this of discussion (and bringing back the theme of State Informational) is the relationship among information, state and individuals. In your book, you say that "the informational state knows more and more about Individuals , while Individuals know less and less about the state" and also "the individual disappears in the informational state into a probability" So is it no coincidence that more and more ways to keep individuals online are placed for easy access, like the social networks?

This is another area in which others are much more knowledgeable than I; the scholarly literature could be mined for studies of various uses of social media by governments for a variety of purposes. (This would include governments like

those of the Basques, which are not recognized by the UN but have a government based in the network.)

Certainly various types of stakeholders are interested in seeing as many people, and as much activity, taking place within social networks as possible. Vendors of software and technologies make profits, as do those who advertise on social networks and who commoditize information gathered about and produced by users. Criminal justice and intelligence entities find the information they produce fruitful. Scholars have a never-ending source of material to write about. Creative individuals and small groups know it is possible that they could design something of great social or economic value and transform their own lives, and/or the lives of others, as a result. The interests of particular sets of these stakeholders can come together, such as those of some private sector interests and those of the state. The privatization of so much military activity, as in Iraq and Afghanistan, would facilitate such synergies.

The big question here really concernse-government. How far should it go? If everyone is required to be networked in order to receive government services and operate as a citizen, there is a compulsion that many individuals may find distasteful and counter, even strongly counter, to their preferences. Research on the telephone has shown that there has historically been a consistent 2% of the population -- irrespective of income -- preferred not to have a telephone in home. The point about income is important because it means that the choice was not based on cost; it was, at least for a demonstrable some, about the personal choice to have freedom from the network in the very personal environment of the home. As someone who lived "off the grid" for many years I can personally report that being out of reach of a telephone for long periods have its delights. So from this perspective, the goal of ubiquitous e-government may have a shadow.

 It has become increasingly difficult to define and relate the information to mature principles as 'freedom of speech', 'freedom of the press', 'information public/private' and contemporary concepts like 'open government ' and 'participatory democracy'? Why?

Every new communication or information technology has stimulated reconsideration of such basic and all-important concepts. Even Plato and Aristotle disagreed regarding whether things put in writing should be treated differently from information communicated orally. It was the printing press that inspired governments to think about both licensing and intellectual property rights, the telephone raised concerns about invasions of privacy, and so on.

This need to think again in the aftermath of any innovation affecting information, communication, and culture has dominated the legal landscape ever since governments began regulating information and communication technologies. I've written about this history as it played out in US communication law and regulation in a piece called "Where Has Media Policy Gone?" which can be found on my website at [people.uwm.edu/braman](http://people.uwm.edu/braman). The same type of history can be written for every other country, including Brazil.

 By contrast, why is it possible to say that the globalization of anti-terrorism efforts is accelerating the development of e-government practices?

In the area of anti-terrorism, the UN Security Council mandate to all governments to change their laws in several areas so that all were alike and in line with its preferences was a very powerful force in support of e-government because much of what was required to implement laws was driven by practice. A couple of unusual features of that Security Council mandate are pertinent. For the first time in history, the Security Council issued a resolution (1373) without any prior discussion within the General Assembly. That mandate was also, unusually, followed by support from UN teams to governments around the world as they reviewed their existing laws and regulations to determine what might have to be changed, wrote new laws, and set up systems that would allow them to implement laws and regulations in the area of counter-terrorism.

 Would you like to add anything else?

Brazil's move to the center of discussions about the next phase of Internet governance will further strengthen its overall position as a global leader in the area of information policy that also includes its activities regarding intellectual property rights and on. You and your government now have a unique opportunity as alternatives that have been discussed are pushed to their limit

Making good use of that opportunity, however, will not be easy and how to do it is not obvious. The current crisis over the Internet unfolds along several dimensions.

There is the political problem of the future of Internet governance, where Brazil has an opportunity to play a significant role in the design of a form of global governance that does not begin by assuming a contractual foundation in agreements with the US government. Resolving this problem may involve development of an entirely new type of global governance mechanism, so it is a political issue on many levels.

There is the technical problem of address overload that requires a shift to a new set of network protocols, IPv6. Efforts to fragment the network of networks as it has been functioning motivated by other concerns, whether those of privacy or security or efficiency or profit, will interact with the shift from IPv4 to IPv6 to add several layers of complexity to the design, supply, and management of network infrastructure and services.

And there are the problems of internal consistency that we might think of as ethical problems. If the justification for walking away from the US at the foundation of Internet governance was the history of US surveillance, then what kind of surveillance would it be acceptable for the government of Brazil to perform? If Brazil argues for decentralized control over data about citizens when it is speaking to the international community, how should it respond to similar requests from Brazilian provinces, municipalities, and communities of diverse cultures?

There will be other questions, but it is already clear that at this moment the political, technical, and ethical issues are tightly intertwined. Everyone in the world is watching to see what Brazil will do with this global leadership opportunity.

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