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THE IMPACT OF THE INTERNET ON SOVEREIGNTY: UNFOUNDED AND REAL WORRIES

There is a growing debate about the Internet and its impact on sovereignty. A good example in the legal scholarship is the recent special issue of the Indiana Journal for Global Legal Studies. The major lines of the debate are increasingly polarized among those who believe that the Internet undermines state sovereignty and those who believe that it strengthens liberal democracy. Not unrelated to these two positions is the parallell debate between those who assert that it is impossible to regulate the Internet versus those who maintain that there are various legal instruments available to states for regulating Internet transactions.

I want to argue here that one of the reasons for the polarization in views evident in these debates has to do with, on the one hand, misconceptions about the architecture of the Internet and, on the other, an uncritical assumption that national sovereignty is a given, an unchanged feature of national states. In short, part of the problem is that both the conception of the Internet and that of sovereignty fail to incorporate the finer grain of each and their recent transformations. What has happened in this debate to some extent is a shaping of the interpretation of the Internet's impact on sovereignty in terms of two major long-standing positions in the political theory and legal scholarship on the nature of state power --the Realist and Liberal conceptions of state power. Left out of this debate are the specific features of the Internet, let alone the fact that the Internet itself is a dynamic entity. Left out also is the possibility that these two major theories are themselves inadequate to understand state power and national sovereignty in today's context of globalization.

I am concerned about the broader theoretical and political implications of the faulty characterization of the two fundamental concepts in the debate. Among the key issues I want to focus on concerning the Internet are a) the confusion between privately owned digital networks and public digital space, b) the multiple meanings of commercialization of the Net, and c) the possibilities for regulating the Net. Very briefly, my argument will be that it is

the enormous growth of private digital networks--especially the case of the global financial markets-- rather than the Internet, which is having the greater impact on national sovereignty and indeed transforming it. Secondly, the rapid growth of commercial uses on the net is not necessarily a democratising dynamic, as is often argued under the assumption that markets are a condition for a free society. Commercialization may well create new forms of inequality in digital space --what one could think of as cybersegmentations. Finally, there are features of the Internet today which suggest that regulation is possible, and that it is not necessarily a space of total freedom, a sort of new wild west. But it is a radically different version of regulation from what we have associated with the modern state over the last half century.

When it comes to sovereignty, we see a tendency towards a somewhat unproblematicized acceptance of this category. Taking sovereignty as if it were a fundamental given is particularly inadequate in the current period when we are seeing some rather important transformations in that specific form of power and legitimacy we call state sovereignty. The uncritical acceptance of sovereignty as a given is evident both in so called Realist conceptions of the state, with their emphasis on the power of the state, and Liberal conceptions, with their emphasis on democratic mechanisms as explaining the power of the state. My argument is that economic globalization and technology have brought with them significant transformations in the authority of national states. Especially important here is the growth of new non-state centered governance mechanisms which have transformed the meaning of national territorial sovereignty independently from whatever impact the Internet has so far had, and further, the formation of partly digitalized global financial markets which can deploy considerable power against the will of national states.

In brief, we cannot take either of these two categories-- the Internet and sovereignty-- as givens. They are dynamic conditions subject to a variety of pressures. Even the Internet, with its young history, can already be thought of as having had two phases and entering a third one. Making problematic the two basic categories in the debate--the Internet and sovereignty-- introduces a number of qualifyers into some of the dualities running through the debate, notably the realist/liberal opposition in theories of the sovereign state and the interpretation of the Internet as representing either a fundamental revolution or basic continuity in technologies of communication. Liberals have tended to view it as a revolution with enormous potential while Realists tend to take the second view and argue that the state will find ways of regulating the Net and indeed is already capable of doing so. This duality in a way misses the point: the specificity of the Internet in terms of sovereignty is going to have to do in good part with the kinds of uses and practices enacted in the Net and the extent to which commercialization and privatisation, including copyrighting, create new forms of concentrated power and inequality on the Net.

I.THE INTERNET'S THIRD PHASE: NOVEL IMPLICATIONS FOR DEMOCRACY.

There is little doubt that the Internet is an enormously important tool and space for democratic participation at all levels, the strengthening of civil society, and the formation of a whole new world of transnational political and civic projects.1

But it has also become clear over the last few years that the Internet is no longer what it was in the 1970s or 1980s; it has become a contested space with considerable possibilities for segmentation and privatisation. We cannot take its democratic potential as a given simply because of its interconnectivity. We cannot take its "seamlessness" as a given simply because of its technical properties. And we cannot take its bandwidth availability as a given simply because of the putative exponential growth in network capacity with each added network.2techical developments over the last two years raised the carrying capacity of fiber optic cable from 20 gigabits per second in 1996 to 400 in 1998.

This is a particular moment in the history of digital networks, one when powerful corporate actors and high performance networks are strenghtening the role of private digital space and altering the structure of public digital space, that is, the Internet. Digital space has emerged not simply as a means for communicating, but as a major new theater for capital accumulation and the operations of global capital. Yet much of the writing about electronic space and network power has been shaped by the properties of the Internet, more precisely what one can think of as its first two phases.3

To recap a familiar story, the first phase of the Internet was confined largely to a community of insiders--scientists and select government agencies. That community invented communication standards and communication protocols that ensured access for all the members of that community. The second phase of the Internet, centered in the decade of the 1980s, strengthened the democratic and open character of the Net and made it a space of distributed power that limits the possibilities of authoritarian and monopoly control. It is by now well known that the particular features of the Internet are in part a function of the early computer hacker culture which designed software that strengthened the original design of the Net --openness and decentralization-- and which sought to make the software universally

available for free.

But with the establishment of the World Wide Web in 1993, and its large scale discovery by business by 1995, we can say that the Net has entered a third phase, one characterized by broad-based attempts to commercialize it.4emergence of firms that sell access services to speed up access. This is not an essential service to gain access, but it is a convenience, and an option for those with the income to pay for it. Another is the possibility of adding value (including commercial value) to Net features through the incorporation of voice and image, which consume enormous bandwidth and hence will eventually probably be more easily subjected to premium pricing mechanisms than is e-mail for instance. When we consider the enormous amount of software design effort that is right now going into producing programs that can ensure safe credit card processing and other types of electronic payment, then we can see that commercialization is likely to increase even though today it is minor. This could stimulate the creation of Web sites that incorporate the latest developments of voice and image and could charge for access. I think of the growing use of voice and image for non-essential uses as a de-greening of the net. E-mail is a system of astounding efficiency and "ecological soundness." Voice and image with their enormous consumption of bandwidth are much less so. Commercialization is often regarded as an extension of the positive aspects of the Net. But if carried too far it may in fact have negative consequences for the civic and political potential of the Internet, and in that regard, negative impacts on Liberal state agendas. This commercialization is pursued through the development of software that can simultaneously capitalize on the Net's features and implement billing/payment systems, and it is pursued through the extension of copyrights--in other words, the opposite of the early hacker culture. There is insufficient recognition of the tension between some of the features of the Internet which promote openness and interconnectivity, on the one hand, and, on the other, the rapid growth since 1995 of software that seeks to facilitate and expand private appropriation and use of the Net and that would allow for the implementation of copyrighting on a scale we have never seen before.

Yet much of the thinking about digital space and about questions of power and democracy, has been shaped by the properties of the Internet's first two phases. What stands out especially in the second phase is the condition of the Internet as a space of distributed power that limits the possibilities of authoritarian and monopoly control. While this remains a feature of the Internet, too many other dynamics have also been set in motion for us to just stay with this rather utopian view. In this regard, it seems to me that we need to re-theorize digital space and uncouple it analytically from an exclusive focus on the properties of the Net which have so sharply shaped our understanding.

The polarization between Internet romancers, on the one hand, and the logic of business and markets, on the other, is contributing to a parallel polarization in the discourse about digital space, quite independently from the Realist vs. Liberal view when it comes to the state. There is a utopian approach that emphasizes the decentralization and electronic democracy of the Net, and a dystopian approach that emphasizes the global power of the large corporations.

Neither account is adequate today. While corporate forces have immense power in the shaping of digital networks, it is also a moment when we are seeing the emergence of a fairly broad-based civil society--though as yet a minor share of world population-- in electronic space, particularly in the Net, which signals the potential for further developing democratic features of the Net. Further, each of these accounts rests on assumptions that limit the possibility of critical appraisals and future potentialities.

The assumptions that run through much of the discourse of the Internet romancers veil the existence of new forms of concentrated power that may undermine the better features of the Internet; nor do these assumptions help us understand the limits of such new forms of concentrated power, an important political issue. One assumption is that it will always be the open, decentralized space it was designed to be; this makes it ahistorical. John Perry Barlow's 1996 "A Declaration of the Independence of Cyberspace" probably epitomizes this view. Besides this political utopian vision there now is also an economic utopian view, especially strong in the U.S., which sees the Net as offering the possibility of a whole new type of market economy, one truly open and democratic. The California based Wired magazine is a key axis for this line of thought. The second assumption, tightly interlinked with the first, is that digital space is a purely technological event, and in that sense an autonomous space to be read in technical terms. One implication of such a technological reading is the notion that it can escape existing structures of power and inequality in the wider society.

The dystopian view of the Internet has its own limiting assumptions: Big capital will take over and the new high-income transnational class will also become a virtual class, with its spatial mobility further enhanced by digital mobility. Most people will be left out and at best reduced to passive consumers of Internet commerce. Son questions of subjectivity: the transformation in the conditions through which our subjectivity is formed due to the overwhelming presence of technology intermediated sociability. This is a cultural pessimism derived from a notion that the new digital technologies will replace all other technologies through which people connect: the telephone replaced by e-

mail, work in office buildings by tele-work from home, social visits by on-line chat clubs, business travel replaced by video conferencing, actual experiences by virtual reality games.

Both the utopian and the dystopian view of the Internet rest on assumptions that limit our understanding of current conditions and developments. The utopian view excludes the fact that electronic space is embedded in actual societal structures and is internally segmented, both conditions with enormous implications for current and future developments as well as for the theorization of networked space and power. The dystopian view excludes the limitations and complementary dependencies of the new digital technologies --no technology is an absolute: it cannot replace all other technologies aimed at similar functions, in this case communication and interactivity. And it excludes the fact of growing contestation between powerful economic actors and civil society in public electronic space, a fact which in itself may lead to new forms of political engagement and in that sense be a force for strengthening political activity.6

The Internet, then, has not only undergone significant transformations, but also is caught up in polarizing representations about its key features.

II. PUBLIC DIGITAL SPACE: CONTESTED AND THREATENED

In my research I have come to regard the Internet as a space produced and marked through the software that gives it its features. There are significant implications attached to the fact that the leading Internet software design focus in the last few years has been the design of "firewalls" and, more recently, of so-called virtual business networks that operate over the Net via "tunnelling" and/or encryption.7 Both of these represent private appropriations of a public space.8 The rapid growth of this type of software and its use in the Internet does not necessarily strengthen the public-ness of the Net. This is especially significant if there is less production of software aimed at strengthening the public-ness of the Net.9 Further, this type of software also sets up the conditions for copyrighting, particularly the possibility of copyrighting use/access, including every single use/access.

In my reading, far from strengthening the Internet's democratic potential as many liberal and neo-liberal commentators maintain, excessive commercialization can threaten it. Much of the commercial potential and economic activities often attributed to the Internet, are actually part of private digital networks or firewalled (i.e. privatised) sites in the Internet, a subject I return to later. But even the currently far more limited world of commercial uses possible on the Net, as compared to private digital networks, can bring some problematic consequences to the democratic potential of the Net.

Although the Net as a space of distributed power can thrive even against growing commercialization, and today's non-commercial uses still dominate the Internet, the race is on. Considerable resources are being allocated to invent ways of expanding electronic commerce, ensuring safety of payment transactions, and implementing copyrighting. These are not easy tasks. At last year's Aspen Roundtable on Electronic Commerce, an annual event that brings together the CEOs of the main software and hardware firms as well as the key venture capitalists in the sector, it was once again established by these insiders that there are considerable limits to the medium and that it probably will always cater to a particular niche markets, with a few possible exceptions.10

The Internet may continue to be a space for de-facto (i.e. not necessarily self-conscious) democratic practices. But it will be so partly as a form of resistance against overarching powers of the economy and of hierarchical power, rather than the space of unlimited freedom which is still part of its representation today in many milieux. The images we need to bring into this representation increasingly need to deal with contestation and resistance, rather than simply the romance of freedom and interconnectivity or the new frontier. In this regard the reawakened interest among non-commercial digital organizations and digital activists in open-source systems, notably Linux, is worth noting. We are seeing the rapid growth of a new generation of alternative organizations and of individuals knowledgeable about digital technologies who are working on the public dimensions and free access questions.11

There is an incipient literature that enacts this negotiation. Among the more important is the ongoing work of the recently created collective Nettime (1997; Lovink 1998) formed by people who are very knowledgeable about the Internet, many of whom are Net activists, but at the same time critical of the romancing of the Net I described above.

One aspect important to the positive democracy effect of the Net, is that there has been a proliferation of non-commercial uses and users. Civil society, whether it be individuals or NGOs, is a very energetic presence in cyberspace. From struggles around human rights, the environment, and workers strikes around the world to genuinely trivial pursuits, the Net has emerged as a powerful medium for non-elites to communicate, support each other's

struggles and create the equivalent of insider groups at scales going from the local to the global.

The political and civic potential of these trends is enormous. It offers the possibility for interested citizens to act in concert. Several authors have examined the possibility of enhancing democratic practices through the formation of communities on the Net and the possible role of governments in supporting them.12 The possibility of doing so transnationally at a time when a growing set of issues are seen as escaping the bounds of national states makes this even more significant. We are also seeing a greater variety of subcultures on the Net in the last few years after being dominated by young white men, especially from the US. The growth of global corporate actors has also profoundly altered the role of government in the digital era, and, as a consequence has further raised the importance of civil society in electronic space as a force through which a multiplicity of public interests can, wittingly or not, resist the overwhelming influence of the new global corporate world.

III. STATE REGULATION AND THE INTERNET

A different issue about sovereignty is raised by the possibilities of regulating the Net. It seems to me that if there is to be some kind of regulation it is going to be very different from what we have usually understood by this term. It is certainly the case that in many ways the Net escapes or overrides most conventional jurisdictions.

Here I would like to focus briefly on a fact that is too often left out of the discussion: there is a kind of central authority overseeing some of the crucial features of the Net having to do with addresses and numbers granting.13 This does not mean that regulation is ipso facto possible. It merely signals that the representation of the Net as escaping all authority is simply inadequate. 14 The nature of this authority is not necessarily akin to regulatory authorities but it is a gate keeping system of sorts and raises the possibility of oversight capacities. Even though these oversight capacities would entail considerable innovation in our concepts about regulation, they signal that there are possibilities overlooked in a faulty characterization of the architecture of the Net.

This centrally managed function of the Internet involves the control and assignment of the numbers that computers need to locate an address.15 It therefore can instruct all the top "root servers" of the Net --the computers that execute address inquiries-- and these will accept these instructions. This is, clearly, a power of sorts. For a long time it was not formalized, in good part because its origins lie in the first phase of the Internet. It is the power held by the group of computer scientists who invented the communication protocols and agreed on the standards that make the Net work today. They worked at debugging the systems over the last twenty years and did so not necessarily under contract by any agency in particular. It is a de-facto group which worked at making the Net workable since its beginnings. The particular function of assigning addresses is crucial and was for many years under the informal control of one particular scientist who named this function the "Internet Assigned Numbers Authority."

In the summer of 1998, the Internet Corporation for Assigned Names and Numbers (ICANN), now the group assigned to oversee the Net's address system, was established. It represents a formalization of the earlier authority.16 It was basically started as a group of insiders with fairly lose and ineffective by-laws. By early 1999 it had implemented conflict-of-interest rules, opened up some board meetings, and worked towards developing a mechanism to elect board members in an effort to build in more accountability. It is today the subject of growing debate among various digital subcultures (e.g.see Nettime for summaries of the debates).

As the Net has grown and become more international there appears to be growing concern that a more organized and accountable system is necessary. This signals the presence of sectors with the will to strengthen and develop this central authority.

The US government's "Framework for Global Electronic Commerce," a blueprint for Internet governance, argues that because of the Internet's global reach and evolving technology, regulation should be kept to a minimum. It also suggests that in the few areas where rules are needed, such as privacy and taxation, policy should be made by quasigovernmental bodies such as the World Intellectual Property Organization (WIPO) or the OECD.

One of the issues with this type of proposal is the absence of transparency and the problems it brings with it. These become evident in one of the first big Net policy dilemmas: cybersquatting. (Private speculators seizing valuable corporate brand names on the Internet and selling them back, at an enormous price, to the firms carrying those names.) Net addresses are important for establishing an identity online. So companies want to establish a rule that they are entitled to any domain names using their trademarks. But the Net is used for more than e-commerce, so consumer advocates say this rule would unfairly restrict the rights of schools, museums, pol. parties and other noncommercial Net users. However, in the deliberations that have taken place at WIPO, it is largely the large firms

who are participating, in meetings that take place mostly behind doors. This privatizes the effort to design regulations for the Net.

While the purpose of these governing mechanisms is not about regulation as we have know it, their existence and, perhaps more importantly, the necessity of some such bodies, represents a significant operational opening for some sort of regulation/governance. This is often overlooked in many discussions about the Net and its freedoms.

IV. DISTINGUISHING PRIVATE AND PUBLIC DIGITAL SPACE

The Internet is only one portion of the vast new world of digital space, and many of the dramatic features attributed to the Internet's power to neutralize sovereignty are actually features of private digital networks, such as those used in international finance. Many assertions about economic processes, dynamics and potentials are happening in private digital space and have little to do with the Internet. I consider this a serious, though fairly common, confusion.17comes to the broader subject of network power, most computernetworks are private. It might be worth repeating that even if we just consider Internet Protocol compatible networks and we take the figures for the period preceding the explosion of business interest in the Net, also then most networks were private: Just counting networks as opposed to traffic volume, in 1994 there were about 40,000 IP compatible networks, but the Internet itself accounted for about 12,000 of these. That leaves a lot of network power that may not necessarily have the attributes of the Internet. Indeed, much of this is concentrated power and reproduces hierarchy rather than distributed power. Most financial activity and other significant digital economic activities take place in private digital networks.18 Further, as I already mentioned, much of the use firms make of the Net today asumes the form of firewalled web sites and, increasingly, privatized "tunnels" -- the new citadels on the Net. This is not likely to strengthen democratic practice.

Further, we must recognize that private digital networks are also making possible forms of power other than the distributed power made possible by public digital networks. The financial markets illustrate this well. The three properties of electronic networks: speed, simultaneity and interconnectivity have produced orders of magnitude far surpassing anything we had ever seen in financial markets.

Before the financial crisis in Asia hit the global market, turnover value was estimated at US\$ 75 trillion --a figure that dwarfs the value of cross-border trade and investment. The consequence has been that the global capital market now has the power to discipline national governments, as became evident with the 1994-5 Mexico "crisis" and the 1997-8 Asian crisis, when investors were capable of leaving en masse taking out US\$55 billion, and the foreign currency markets had the orders of magnitude to alter exchange rates radically for some of these currencies.19

It also may be significant that although in some ways the power of these financial electronic networks rests on a kind of distributed power, i.e. millions of investors and their millions of decisions, it ends up as concentrated power. The trajectory followed by what begins as a form of distributed power may assume many forms, in this case, one radically different from that of the Internet. It signals the possibility that digital network power is not inherently distributive. Intervening mechanisms can re-shape its organization. To keep it as a form of distributed power requires that it be embedded in a particular kind of structure.

Digital space, whether private or public, is partly embedded in actual societal structures and power dynamics: its topography weaves in and out of non-electronic space. In the case of private electronic space, this feature carries enormous implications for theory, for the results of the digitalization of economic activity, and for the conditions through which governments and citizens can act on this new electronic world of the economy and power. The embeddedness of private economic electronic space entails the formation of massive concentrations of infrastructure, not only worldwide dispersal, and a complex interaction between conventional communications infrastructure and digitalization. The notion of "global cities" captures this particular embeddedness of global finance in actual financial centers.20

There is no purely digital economy and no completely virtual corporation. This means that power, contestation, inequality, in brief, hierarchy, inscribe electronic space. And although the digitalized portions of these industries, particularly finance, have the capacity to subvert the established hierarchies, new hierarchies are being formed, born out of the existing material conditions underlying power and the new conditions created by electronic space.

V. BEYOND THE INTERNET'S IMPACT: SOVEREIGNTY RECONFIGURED?

The growth of the Internet as a significant space for practices of various kinds is taking place at a time when we see a number of major transformations in national sovereignty. I find it quite impossible to consider the impact of the

Internet on sovereignty as if sovereignty itself were a stable condition.

There are two issues here. One is the historicity of the character of sovereignty located in the state--that particular kind of intermediary. Over the last few years we have seen a shift of some components of this sovereignty to other entities--supra and sub-national as well as non governmental. Who gains legitimacy as a claimant under these new conditions? There are different capacities in different sectors. The Net could become an extremely important public space for strengthening the claims of non-state actors that lack the resources of globally oriented corporations or of other sectors with considerable resources.

The second issue is the need to examine the assumption about the state as the exclusive representative of its people.21 It is no longer simply a matter of the Liberal vs. the Realist interpretation. I find this frame confining in much of the debate about the Internet and sovereignty, even though I would agree with one of the lines of argumentation which holds that different states can be characterized either way and that depending on this they will be more or less affected by the Internet. Different intermediaries may emerge between the state and what it represents (I.e. the people), including private bodies in arenas where it used to be public bodies that governed.22 Seeing the rise of markets and of transnational corporate actors, I cannot help but ask whether Liberal theory and its enactment in political or state practice necessarily imply a liberal state: we have historically perhaps seen this, but today the elements are there to reconfigure this association. At least some scholars argue that we are seeing the neo-liberal rather than the liberal state coming out of liberal policies.23

Further, if we are going to consider issues of sovereignty and democracy, then we must ask a critical question about what actors are gaining influence under conditions of digitization and whose claims are gaining legitimacy. For instance, it could be argued (and it is my argument) that private digital space has had a far sharper impact on questions of sovereignty than the Internet. The globalization and digitization of financial markets have made these markets a powerful presence. Indeed, the logic of the global capital markets is today not merely a condition of raw power but one with normative potential. The logic of these markets has contributed to the elaboration of a set of criteria for what is proper government conduct on the economy. This new power of the financial markets is partly a consequence of the orders of magnitude they have reached in good part through their digitalization and the fact that they are globally integrated, two conditions that are mutually reinforcing. The capacity of these markets to affect existing meanings of sovereignty is considerable and in my view, thus far has been greater than that of the Internet.24

New transnational regimes and institutions are creating systems that strengthen the claims of certain actors (corporations, the large multinational legal firms) and correspondingly weaken the position of smaller players and of states.25 Ruggie has pointed out that the issue is not whether such new institutions and major economic actors will substitute national states but rather the possibility of major changes in the system of states: "global markets and transnationalized corporate structures...are not in the business of replacing states" yet they can have the potential for producing fundamental change in the system of states.26

What matters here is that global capital has made claims on national states and these have responded through the production of new forms of legality.27There is a growing consensus among states to further the goals of economic globalization, to the point that some see in this a constitutionalizing of this new role of states (See Panitch 1996, Cox 1987, Mittelman 1996).28 The new geography of global economic processes, the strategic territories for economic globalization, had to be produced, both in terms of the practices of corporate actors and the requisite infrastructure, and in terms of the work of the state in producing or legitimating new legal regimes.29

One possible reading of recent developments in the earlier Mexico crisis and in the current Asian crisis, but also in a more structural context--the adoption of neoliberal economic principles by governments wanting to join the global economic markets-- is that these markets have emerged as nonstate "actors" whose claims have acquired legitimacy.30

This then invites us to raise a whole set of questions about how certain actors have gained this legitimacy in their claims, and in the case of the specific concerns here, how has the development of digitalization favored some over other actors. Put this way, it still leaves unadddressed the question about the future impact of the Internet. And here I would say that commercialization as discussed earlier may well dampen the impact of the Internet in terms of political practices. I return to my earlier point about the importance of strengthening the variety of cultures active on the Net, the importance of struggles for greater bandwidth for civil society actors and for those organizations who cannot pay for increasingly scarce bandwidth.

In my reading the risk on this particular issue is self complacency about the democratic potential of the Internet. The

potential is there but we cannot take it for granted, nor can we assume that commercialization is simply going to strengthen this democratic potential. It may well be the case that in the context of the former centrally planned economies of Central Europe and the former Soviet Union, commerce on the Internet is a democratizing practice--at least for a while. But the growing practice of privatising portions of the Net, electronic commerce and the --almost inevitably associated-- strengthening of intellectual property rights on the Internet are to be taken seriously. If uses by civil society multiply, grow, strengthen, raise the interconnections among various nonstate actors in various locations across the globe, then there is probably less to worry about. But right now, there is not enough of this, and the risk that we are left with a poor man's Internet, with slow connections, in competition for bandwidth with entities that can pay for expensive, or for that matter not so expensive but still involving costs that often cannot be afforded by many community organizations or underfunded sectors of civil society.

VI.CONCLUSION.

The Internet is only one portion of the vast new world of digital space, and many of the dramatic features attributed to the Internet's power to neutralize sovereignty are actually features of private digital networks, such as those used in international finance. Similarly, the key about many of the current transformations and their potential to limit sovereignty may not be the elimination of sovereignty but its unbundling and partial relocation to other supra-, sub and non-national institutions.

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ENDNOTES

- 1 In the broadest sense the Internet consists of the technologies that support TCP/IP. In speaking about the Internet as a public space the reference is more specifically to the uses made through software design and distribution of those technical capacities.
- 2 Indeed carrying capacity has grown enormously, probably surpassing Moore's Law exponential growth rate.
- 3 I have developed this specific argument in Globalization and its Discontents (1998) chapter 9.
- 4 Commercialization can enter the Net in several ways. One is the
- 5 A different type of dystopian view is centered
- 6 For instance, the development of so called "insular technologies" centered on low-cost high frequency radios rather than depending on the fiber optic network and hence on the telecoms that control it. For a full description see the archival material and ongoing debate on Nettime. The idea is the possibility of a world-wide build out of TCP/IP connectionless networks as a low-cost and effective option to the multi-trillion US\$ PSTN worldwide dominated by large telecoms.
- 7 This saves companies the cost of private computer networks, with the requisite staffing and servicing, and the cost of frame relay connections.
- 8 An additional issue, one which I am not referring to here, is the privatisation of infrastructure that has also taken place over the last two years. (see Globalization and its Discontents, chapter 9).
- 9 See for example the failure of Digital City Berlin and of Digital City Vienna. The original Digital City, Amsterdam, remains a lively and dynamic public space. It has taken enormous work and time on the part of a group of dedicated founders and members to ensure its survival.
- 10 The Global Advance of Electronic Commerce. Reinventing Markets, Management and National Sovereignty. A Report of The Sixth Annual Aspen Institute Roundtable on Information Technology. (Aspen, Colorado, August 21-23, 1997) David Bollier, Rapporteur. Washington, D.C.:The Aspen Institute, Communications and Society Program 1998.
- 11 See for instance the recent (March 1999) Next Five Minutes metings in Amsterdam and Rotterdam, especially the technical workshops, and the upcoming Wizards of OS meeting in Berlin (July 1999).
- 12 Digital City 1997; Calabrese and Borchert 1996; Calabrese and Burgelman 1999; Rheingold 1993. See also my review of various web sites of this type in Artforum November 1998 p.30
- 13 There are also more specific issues that may affect the regulation of particular forms of digital activity through a focus on infrastructure. There are different types of infrastructure for different types of digital activities, for instance,

financial markets versus consumer wireless phones. This a subject I have elaborated elsewhere. See "The State and the Global City" in Globalization and its Discontents.

- 14 For the most extreme version of this representation see John Perry Barlow's "Declaration of Independence of Cyberspace."
- 15 One could consider the community of scientists who have worked on making the Net workable and who have had to reach many agreements on a broad range of technical matters, as a sort of informal central "authority." In most other cultural settings they would probably have become a formal, recognizable body --with, one might add, considerable power. There is an interesting sociology here.
- 16 With the growth of business interest in the Net, the de-facto authority of the early pioneers of the Net and their logic for assigning addresses began to be criticized. For instance, firms found that their names had already been asigned to other parties and that there was little they could do; the whole idea of brandnames and intellectual property rights over a name was not part of the early Net culture.
- 17 When it
- 18 The growth of direct online investment does often use the Internet. It is mostly retail and represents a minor share of the overall global financial market. Even factoring in its expected tripling in value over the next 3 or 4 years will not give it the type of power of the global financial market I am discussing here.
- 19 The other half of this argument has to do with questions of normativity --the fact that the global financial markets are not only capable of deploying raw power but also have produced a logic that now is seen as setting the criteria for "proper" economic policy. IMF conditionality has some of these features. There is an emerging literature on this. I have discussed this issue and some of the literature in Losing Control? chapter 2.
- 20 I examine some of these issues in "Global Financial Centers" Foreign Affairs, Vol.78, January/February 1999. The growth of electronic trading and electronic netowrk alliances between major financial centers is allowing us to see the particular way in which digitalized markets are partly embedded in these vast concentrations of material resources and human talents which financial centers are.
- 21 See, for example Franck 1992; Jacobson 1996
- 22 For instance, the new public voice of some NGOs and of First-Nation people in international fora. For a more general discussion see Losing Control? chapters one and three.
- 23 See, e.g. Cox, 1987; Panitch 1996.
- 24 I develop this in Losing Control?, chapter 2. See also The Global City. (Princeton University Press 1991).
- 25 I discuss this in Losing Control? chapter one.
- 26 Ruggie(1993: 143)
- 27 In many ways the state is involved in this emerging transnational governance system. But it is a state that has itself undergone transformation and participated in legitimating a new doctrine about the role of the state in the economy. Central to this new doctrine is a growing consensus among states to further the growth and strength of the global economy. (See, e.g. several chapters in Mittelman 1996).
- 28 29 Representations that characterize the national state as simply losing significance fail to capture this very important dimension, and reduce what is happening to a function of a putative global-national duality--what one wins, the other loses. I view deregulation not simply as a loss of control by the state but as a crucial mechanism to negotiate the juxtaposition of the inter-state consensus to pursue globalization and the fact that national legal systems remain as the major, or crucial instantiation through which guarantees of contract and property rights are enforced.
- 30 There are two distinct issues here. One is the formation of new legal regimes that negotiate between national sovereignty and the transnational practices of corporate economic actors. The second issue is the particular content of this new regime, one which contributes to strengthen the advantages of certain types of economic actors and to

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