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Institutionalizing without Institutions?
Web 2.0 and the Conundrum of Democracy

1. Introduction

Since the early days of digital networks, the debate on their (potential) cultural significance has been very sensitive to questions of *power*. Discussions about the Internet's technological properties, such as its distributed topology and general-purpose protocols, often were and still are accompanied by claims about present and future social "effects". And from speculations over military schemes and purposes to appreciations of a scientific "peer-review" mode of governance by argument and the countercultural appropriation of information technology (IT) as a means of liberation, few other technologies have raised similar interest in the cultural forces that shaped them. On various levels, both public media and academic discourse have paid considerable attention to matters of power, control, and authority, framing the Internet alternately as lawless, anarchic, free, "a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity" (Barlow 1996) or, more recently, as a space of surveillance, commercial manipulation, and sweeping monopoly[1]. The heated debates on such different topics as open access in science publication, the selective prioritization of digital traffic ("net neutrality"), the modes of introduction for new top-level domain names, the rise of "citizen media", or illegal file sharing clearly show that the Internet has become a central battleground in the cultural, political, and economic re-negotiations that characterize this day and age.

At the same time, our understanding of these dynamics is still fairly limited, for at least four reasons. First, information technology is expanding very quickly into every area of civilization but instead of being merely *adopted*, it continues to mutate and fluctuate instead of settling down. New services are added every day and existing ones evolve quickly through both use and design. Second, while we do understand that the Internet's structure is full of heterogeneous zones and layers and that configurations of control are therefore distributed unevenly, we have yet to devise the theoretical and methodological tools to map out these configurations in a systematic fashion. Third, we are beginning to realize that many of the current controversies are complex amalgams of old and new questions that blur established categories, and that re-shuffle social, legal, and political fault lines without leaving them behind. Past struggles live on reconfigured, and their history continues to resonate in every issue, however "new" it may appear. Fourth, the Internet is at the center of a process of globalization that is vastly more complex than the simple "Westerni-

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[1] Especially *Google Inc.'s* dominance of the search market and fast expansion into other important fields has prompted a rising tide of critical inquiries over the last years. *Facebook*'s stellar rise is provoking similar concerns.

zation" or "Americanization" of an amorphous mass of "developing" countries; again, it is *hybridization* rather than *replacement*.

Taken together, these four elements go far in explaining the cacophonous concert of voices that surrounds the question of the Internet as a *political agent*. The practical difficulties in making sense of our current situation can also account for, at least partially, the presence of a strong normative component in both public discourse and research. As with other heated topics like climate change, terrorism, and the financial crisis, our lack of analytical security might actually boost the need for moral positioning.[2] The complexity of the Internet as a cultural phenomenon, at least, has in no way hindered the proliferation of broad claims about its potential for either salvation or apocalypse.

One of the most common claims frames the Internet as a force of *democratization*. Appearing recently in conjunction with the "Web 2.0" phenomenon, it portrays network technology as an agent of decentralization that will bring an end to cultural hierarchies, to the reign of expert technocrats, to the exclusionary media system, and to government "as we know it". There is a tendency in certain parts of Europe, especially in France, to dismiss these claims – often made by American commentators – as either naïve (they don't *understand* what they say) or cynical (they don't *mean* what they say). While this article will try to formulate yet another critique of the latest burst of cyber-optimism, I hope to stay clear of simple polemics and provide a deeper reading of the cultural[3] contexts these overtly positive accounts build upon. I will argue that a particular and partial interpretation of American political mythology[4] fuels much of the Web 2.0 discourse, giving it a historical depth that is too often overlooked. Taking into account its cultural weight, I believe that this particular "web of significance" – understood in its double connotation as both *meaning* and *value* – merits a critique that is not simply dismissive but treats it *as a political philosophy*; for this is what it is. What follows, is an attempt to make the debate of the Internet's political potential a little more about *politics* and a little less about *technology*.

2. Between statutory and capillary concepts of power

To start off my argument, I would like to show that our understanding of politics, or more specifically, of the means for producing political outcomes, revolves around two poles that can be established by looking at the definitions for such central terms as "institution", "governance", and

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[2] For a neurological account of how emotions are central to cognition, see for example: Damasio, Antonio: *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Avon Books, 1994

[3] "Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning." (Geertz 1973, p. 5)

[4] "Cyber-optimists are common in the United States where the Internet reflects certain deeply-held values in American culture." (Norris 2001, p. 232)

"power". These two conceptual ideal-types operate not only on the level of analysis; they also play a role when it comes to framing fields of normative desirability and political action.

2.1. Institution, governance, and power

The research workshop these ideas were first presented at revolved around the question of the "governance" of the Internet. When looking at the term "to govern", the *Oxford English Dictionary* (OED) proposes two meanings that operate on different levels. The first definition, "to conduct the policy and affairs of (a state, organization, or people)" implies a direct level of causation; while the second, "to constitute a rule, standard, or principle for", is more subtle and indirect. This difference in how behavior is influenced can be made clearer by looking at a related term, "institution". Common use associates with it a specific form of organization, more precisely "a large organization founded for a particular purpose, such as a college, bank, etc." (OED). Such institutions usually imply an ensemble of agents, a set of goals, regulations, and procedures, as well as a certain physical coherency (an address) and juridical coherency (a legal status as association, company, etc.). The first meaning of "to govern" as "conducting" is closely related to such structures. But there is another use for the term "institution" that refers to something a lot less clear-cut: a second entry in the OED indicates it to also mean "an established law or custom", which appears closer to the second meaning of "governing" by setting rules and standards. Curiously, this distinction between a "stronger" and a "softer" notion carries further into the web of associated concepts. While the two layers of meaning are not strictly analogous to the distinction between *force* and *persuasion* that runs through Plato's *Republic*, two levels of procedure emerge: one that operates through *formal establishments,* while the other is embedded in *social mechanisms*. And these two levels do indeed evoke different means of coercion, different techniques of control, a different *praxis* of power. To simplify further, I would like to call the first concept of power "statutory" and Machiavellian, and the second "capillary"[5] and Foucauldian; they differ in their perception of how power operates, on which level, by what means and with what effect.

But these two poles do not only structure the analysis of power. They run through *prescriptive* reasoning in politics, economy, social development, and other domains. The *analytical* match between Machiavelli and Foucault resonates, sometimes strangely mediated, through debates that pitch representative democracy against participatory democracy, top-down politics against bottom-up initiatives, big business against NGOs, capital punishment against prison reform, and so forth. I am not arguing that the complexities of current debates boil down to this simple set of oppositions; but rather that the two poles of reference that structure the analysis of how power *actually works*, echo through the question of how power *should work*. In addition, they define two modes of investigating power on / over / by means of the Internet.

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[5] This term is taken from Foucault (1997).

2.2. Studying power on the Internet

When following a statutory frame of reference, critics commonly examine the formal establishments that shape the technical dimensions (protocols, standards, formats, etc.), administrative dimensions (address spaces, domain names, bandwidth, etc.), and legal dimensions (general and purpose-built law applying to the Internet) of the Internet infrastructure. They dissect the composition, inner workings, and decisions of Internet-specific organizations such as ISOC, ICANN, or W3C, as well as the Internet related policies of national governments and transnational organizations like the WTO. Commercial actors (ISPs, etc.) make up a third group of actors under scrutiny. How do these organizations shape the Internet? Who is represented in their committees and how does decision-making work? What is the balance of power between governments, commercial actors, and NGOs? Between countries? While analysts of organizational establishments are often critical of current arrangements, especially when it comes to representation in decision-making bodies, they generally perceive the statutory mode of governance as, in principle, *legitimate*.

The capillary viewpoint on the Internet as an arena of power entails a more diffuse field of issues and terrains that cannot be easily summarized. But a considerable part of research efforts follow one of two lines of investigation, organized either around the Habermasian question of the "public sphere" and deliberative democracy, or around the issue of "identity politics", often developed from a particular[6] reading of Michel Foucault's work. While the first is concerned with the media landscape and the question how (minority) issues can access public debate, the second is more exhaustive, and interested in larger, more general questions of cultural dominance. Both however see *expression* and *participation* as the central issues, and ask how the Internet reconfigures access to these functions. Especially in American research and critical comment, there seems to be a widely shared view according to which the Internet allows capillary configurations of power – local initiatives, ad-hoc pressure groups, fan cultures, "issue publics" – to challenge the statutory powers that be. Sympathies generally go with the underdog and *legitimacy* is first and foremost located on the grass-root level.

In this article, I want to examine an analytical and normative position related to the second set of questions, which has gained a high level of visibility through blogs, magazines, and popular science books, but which is also relevant in research circles such as the important Association of Internet Researchers (AOIR). In this "cyber-optimistic" viewpoint, the Internet is the agent of a "capillary revolution" that is set to bring decentralization, equality, and democracy. While I will examine some aspects of technology, my goal is to steer the argument back to the political underpinnings that orient the judgments we pass on possible "effects" of that technology.

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[6] For an account of the reception of French philosophy in the United States see Cusset, François: *French Theory: How Foucault, Derrida, Deleuze, & Co. Transformed the Intellectual Life of the United States.* Minneapolis: University of Minnesota Press, 2008

3. Self-organization and Web 2.0

In the following paragraphs, I will argue that a well-published Web 2.0 discourse, fashioned in Silicon Valley and echoed in scholarly commentary, should be seen in the continuity of an earlier ethos that blended technological determinism with American political mythology. While most critics have concentrated on the first ingredient, I will pay considerable attention on the second.

3.1. The Internet elite

In the 70s and 80s of the last century, the rise of personal computing and digital networking set the scene for an intriguing coming together of new and impressive digital technologies with a counter-culture whose desire for social change, in the end, did not translate far enough into political realities. The historical recuperation[7] currently in full swing of the "renegade geniuses" that brought us the PC and the Internet should not conceal the fact that the early computer culture of the 60s, developing around campuses and research institutions, was a confined phenomenon. While a countercultural ethos was most certainly an integral part of that culture, it was only the beginning of personal computing in the late 70s, when hippie culture had already sobered up considerably, that allowed for the development of a larger space for practical experimentation and the development of techno-utopian[8] narrative. The height of a "first wave" of socio-political projections based on networked personal computing can be found in the 80s, when Usenet, bulletin board systems, and multi-user dungeons showed that even the limited textual interfaces of the day could foster settings of intense sociality. The first systematic accounts of these early phenomena by Howard Rheingold (1993), Sherry Turkle (1995), and others fueled a techno-social imaginary that exploded in a much larger "second wave" of cyber-optimist discourse, floating on the success of the Web and the frenzy of the dot-com boom. In a seminal text, Barbrook and Cameron (1996) termed the emerging hybrid of digital entrepreneurship and rhetoric of social emancipation the "Californian Ideology", which "simultaneously reflects the disciplines of market economics and the freedoms of hippie artisanship […], made possible through a nearly universal belief in technological determinism". Only the Internet as *evocative object*, as a projection space for all kinds of ideas could have made such an improbable alliance possible.

> "[F]or libertarians the Web symbolizes the rewards of entrepreneurial risk-taking individualism and the benefits of the unfettered marketplace, while for communitarians the digital world mirrors the values of egalitarian forms of direct democracy and grassroots networking." (Norris 2001, p. 232)

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[7] Many (scholarly) publications have feed the myth of the "pioneer days" over the last years. See for example: Hafner, Katie and Lyon, Matthew: *Where Wizards Stay Up Late: The Origins of the Internet.* New York: Simon & Schuster, 2000

[8] I use the term "utopia" loosely in allusion to Thomas More's narrative of an ideal society.

The intellectual operation necessary to bind the two worldviews together worked, in part, through a specific reading of the "first wave" phenomena, in particular of Rheingold's take on the "virtual community". The book describes the life of a bulletin-board system called the *Whole Earth 'Lectronic Link* (WELL), that seemed to have succeed where real-life communes had failed: the creation of a self-organized community that could transcend the limits of space and scale beyond a couple of hundred members without losing grassroots governance. The WELL and its increasingly successful member base symbolized, in a sense, the particular peace contract many (partially disillusioned) anti-corporate hippie activists had made with (at first small-scale) entrepreneurship. As long as the values were right, a little commerce could not hurt.

But the key to understanding the convergence of this mutating counterculture with laissez-faire capitalism on a conceptual level lies in recognizing the conflation of the two meanings of the term "self-organization", which can either refer to principles of community governance or to a formal scientific concept that designates "a process where the entropy of a system decreases without the system being guided or managed by external forces" (Casadei et al. 2007, p. 148). Seen trough the somewhat crude cybernetic perspective that more often than not accompanies technological determinism, the difference between these two meanings vanishes because a social "system" is no longer considered to be fundamentally different from any other system.

In a second step, an essentialist understanding of the "network" concept as a force of "decentralization", "flexibility", "complexity", etc. served as the intellectual vehicle that explains why social systems, in the networked future, will inevitably liberate themselves from systemic roadblocks such as governments in order to finally rejoin an optimal state of flow. In this narrative, technology will unshackle capillary self-organization from the suffocating embrace of statutory institutions. Kevin Kelly, former hippie activist and founding executive editor of *Wired Magazine* – according to Barbrook and Cameron the *Pravda* of the Californian Ideology – formulated the idea in unambiguous prose:

> "The Net is the archetype - always the same picture - displayed to represent all circuits, all intelligence, all interdependence, all things economic and social and ecological, all communications, all democracy, all groups, all large systems. (…) Hidden in the Net is the mystery of the Invisible Hand - control without authority. Whereas the Atom represents clean simplicity, the Net channels the messy power of complexity." (Kelly 1994, p. 25)

Relying on metaphorically enhanced cybernetics and borrowings from its various intellectual siblings – artificial intelligence, chaos theory, complexity theory, etc. – the second wave of Internet enthusiasm was able to transpose key terms such as "decentralization", "distributed control", "self-governance", or "non-hierarchical organization", from the language of countercultural community-building into the realm of entrepreneurial cyber-capitalism where scarcity doesn't exist, without them losing their anti-establishment ring and affective value. Historically portrayed as a threat to social cohesion by sociologists such as Durkheim, Tönnies, and many others in the 20th century, capitalism, decentralized and neutered by digital networks, could now be framed as

a means to promote collective and individual emancipation and, of course, "community". Liberated from the constraints of space, the "invisible hand" of self-organization would allow people to freely come together and assemble around affinity and common interest, to exchange goods in a perfect marketplace. Referring to the Silicon Valley cyber-optimists, Kroker and Weinstein (1994) speak of a "virtual class" that is "compulsively fixated on digital technology as a source of salvation from the reality of a lonely culture and radical social disconnection from everyday life". Computers and networks were put forward as the quintessential anti-industrial, anti-Taylorist, in short, anti-modernist technology and portrayed as agents of social transformation. The logical enemy, in this equation, is the state:

> "Crucially, anti-statism provides the means to reconcile radical and reactionary ideas about technological progress. While the New Left dislikes the government for funding the military-industrial complex, the New Right attacks the state for interfering with the spontaneous dissemination of new technologies by market competition." (Barbrook and Cameron 1996)

In an angry yet instructive reaction[9] to Barbrook and Cameron's text, the founder of *Wired Magazine*, Louis Rossetto, accused the authors of "an atavistic attachment to statism, and an utterly dismal failure to comprehend the possibilities of a future radically different than the one we currently inhabit, one that is actually democratic, meritocratic, decentralized, libertarian".

It would be a mistake, however, to dismiss the propositions of the "digital literati", or "digerati"[10] as simply naïve or cynical. While they have been rightfully criticized for their technological determinism and defense of *laissez-faire* capitalism, their values and ideas represent more than that; and a critique must take into account the larger political heritage they are embedded in. This is because the quasi-totality of technological-utopian thinking not only projects technology as the means to produce certain states of social organization, but as the means to achieve *a very specific state* of how social life is to be organized. This "ideal republic" as a desirable outcome is not necessarily tied to technology itself, but rather to culturally and historically embedded political utopia. In order to understand not only why these specific ideas have recently made a comeback in the context of Web 2.0, but also why scholarly critique in the US is relatively scattered and rare, I believe that we need to open a somewhat awkward line of reasoning and examine what could be called the American political *a priori*.

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[9] Rossetto, Louis: *RE: Californian Ideology.*
(http://www.hrc.wmin.ac.uk/hrc/theory/californianideo/response/t.4.2.6.html)

[10] With a book that consists of 33 portrays of the "doers, thinkers, and writers […] who have tremendous influence on the emerging communication revolution", Brockman (1996) actually created a reasonably complete inventory of the "virtual class" (Kroker and Weinstein 1994), the principal artisans of the "Californian Ideology" (Barbrook and Cameron 1995). Already the title, "*Digerati: Encounters with the Cyber Elite*", is quite revealing indeed.

3.2. American Political Mythology

To jump right into the middle of things, I would like to start with a quote from a recent piece[11] by conservative cultural critic and New York Times columnist David Brooks:

> "When I was in college, I was assigned 'Leviathan', by Thomas Hobbes. On the cover was an image from the first edition of the book, published in 1651. It shows the British nation as a large man. The people make up the muscles and flesh. Then at the top, there is the king, who is the head and the mind. When the Pilgrims left Britain to come to America, they left behind that metaphor as well. For these settlers, and the immigrants who have come since, the American nation is not a body with the government as the brain. Instead, America has been defined by its vast landscape and the sprawling energy of its entrepreneurs, scientists and community-builders."

The reference to the "Pilgrims" – a group of separatist protestant colonizers from England that left Europe in 1620 to create a mode of life unhindered by religious authorities – points to what has become a centerpiece of American political mythology, a close second only to the constitution[12]. Every year, the (mis)fortunes of the Plymouth colony are remembered on what is arguably the quintessential American holiday, Thanksgiving. Like any ritual, this celebration is not so much about the historical content but about the "moral of the story", the *lesson* and *model* derived from canonical interpretations. These are *institutions* in the sense of social mechanisms, structuring believes and guiding behavior. And it is hard to overstate the political and moral density of a tale that includes rugged separatists (barely) surviving in a harsh new land, moments of transatlantic solidarity with the native people, and a mode of governance that has been called a "Pilgrim Republic" (Goodwin 1888). The story is not only remarkable for the central place it occupies in the American political imaginary, but also for its broad influence on a larger idea of *democracy* that goes beyond the organization of governance. The Pilgrims embody an idealized culture that is built on what could be called a "democratic character", for which the members of the *Mayflower* congregation have become the archetype. This character has been constructed – and is constantly being actualized – around an ensemble of core values, which include cultural and spiritual simplicity, artisanship, individual and communal self-reliance, as well as the rejection of "cultural" sophistication, perceived as aristocratic. The protestant esteem for lay spirituality – most strongly developed in Puritanism – and the historical persecution by church authorities add a strong element of distrust of social hierarchies to this narrative blueprint. Howard Zinn, one of the great American historians and self-described radical, wrote in his *Passionate Declarations* (2003), in the chapter "American ideology", something that indicates the continuity of these ideas, their pervasiveness even in political thinking that is not suspect of conservative affiliation:

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[11] Brooks, David: *The pragmatic Leviathan.* The New York Times, 18.1.2010

[12] The *Mayflower Compact*, a short document written and signed by the settlers in 1620, which laid the foundations for self-government, is in fact considered to be one of the major sources of inspiration for the Constitution of the United States of America.

"To depend on great thinkers, authorities, and experts is, it seems to me, a violation of the spirit of democracy. Democracy rests on the idea that, except for technical details for which experts may be useful, the important decisions of society are within the capability of ordinary citizens. Not only *can* ordinary people make decisions about these issues, but they *ought* to, because citizens understand their own interests more clearly than any experts." (Zinn 2003, p. 6)

Historically, one of the major groups picking up on these ideas and developing them further were the American Transcendentalists: Thoreau, Emerson, Whitman, and others. Their philosophical positions – anti-urban[13], intuitionist, and strongly opposing religious doctrine – have found a permanent place in American political mythology, not least because books like Thoreau's *Walden* portray a rugged integrity and self-reliance that find admirers on both the left and the right.

The libertarian ethos that characterizes the Silicon Valley brand of techno-utopism indeed takes many cues from a cultural heritage that builds around the (strong) individual and favors small-scale community governance where the individual is not submerged in the structures of complex bureaucratic systems. Naturally, there is a strong mistrust of the state – and any large bureaucratic structure for that matter – etched into a political ethos built on a narrative that includes fleeing from state-sanctioned religious persecution. The favored level of governance, the local community, persists therefore not only as an ideal, but, at least in some parts of the United States, in institutional form. The *town meeting*, most often found in New England states, has the peculiar quality of being an administrative and legislative body that is not based on representation but on full assembly. Initially established by Puritan settlers, these meetings allow for every resident of a town to attend and, most importantly, to vote. While larger towns (e.g. larger than 6000 in Massachusetts) may opt for representational modes of organization, I believe the full assembly form represents, for many, an ideal that, again, transcends political fault lines. In my view, the particularity of the Web 2.0 variant of technological optimism distinguishes itself from the older dot-com ideology by emphasizing this theme even more strongly, albeit with an important twist.

3.3. Web 2.0 as a scaled-up community

The term "community" has played a central role in American affective politics for a long time, and as Cherry Schrecker (2006) argues, this thoroughly positive connotation carries, with extremely few exceptions, through most of Anglo-Saxon sociology. As Raymond Williams remarks, it is a concept that "unlike all other terms of social organization (*state*, *nation*, *society*, etc.) [...] seems never to be used unfavourably, and never to be given any positive opposing or distinguishing term." (Williams 1985, p. 46) Now, Web 2.0 promotional discourse, but also a non-negligible part of related scholarly analysis, has been celebrating the potential benefits "participatory" websites might have for the revivification of community cohesion in a nation that

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[13] "On any moral question, I would rather have the opinion of Boxboro than of Boston and New York put together." (Thoreau 2001, p. 339)

supposedly "bowls alone". In terms of the categories proposed by Wellman and Leighton (1979), Web 2.0 pundits, like early cyber-optimists, start out from a "community lost" motive that holds "that the industrial bureaucratic nature of social systems has caused the weakening of neighbor-hood communities" (ibid., p. 377). Unlike the "community liberated" argument according to which technology has had the effect that "primary ties have remained viable, useful, and im-portant" (ibid.), even if no longer bound to physical space, the role of technology here is embed-ded in what I would like to call a "community regained" motive, where ties are not just reconfig-ured, but first *broken* and then *rebuilt* via information technology. This idea is already very pre-sent in many "second wave" appreciations of the virtual community[14], but Web 2.0 discourse adds a crucial element: the notion of scale.

While systems like the WELL seemed to be limited in their potential to add members without losing cohesion, the large-scale tools of Web 2.0 with their millions of users have often be pre-sented as means to eliminate "roadblocks" on the way towards large-scale community organiza-tion:

> "The difficulties that kept self-assembled groups from working together are shrinking, meaning that the number and kinds of things groups can get done without financial motivation or manage-rial oversight are growing." (Shirky 2008, p. 22)

To make things clear, the "third wave" of cyber-optimism has been much more rigorous and sophisticated in both analysis and argument, compared to the cluster that preceded it, even if it rehashes many of its central ideas; it is also more academic. There is less talk about ant colonies and beehives. [15] I do in fact agree with many of the observations put forward. Much of what could be taken to constitute a "Web 2.0" literature is full of references, examples, and, a little less often maybe, thorough empirical methodology. At the same time, the space from which illustra-tive cases are taken is quite restricted: open source software production and Wikipedia are the "canonical" forms while user-generated content production, fan-culture, citizen-journalism, and blogging form a space around them. In these cases, the argument is made that where previously groups above a certain size had to rely on formal structures – bureaucracies, companies, etc. – they could now "organize without organizations" (Shirky 2008). This potential is more often than not portrayed as a potential for "democratization", which essentially refers to two of the elements I have mentioned in the last section: the role of experts and collective governance:

> "The second big element of Web 2.0 is democracy. We now have several examples to prove that amateurs can surpass professionals, when they have the right kind of system to channel their ef-

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[14] "The political significance of CMC lies in its capacity to challenge the existing political hierarchy's monopoly on powerful communications media, and perhaps thus revitalize citizen-based democracy." (Rheingold 1993, p. 13)

[15] If *Wired Magazine* was the intellectual epicenter of the second wave, the TED (Technology, Entertain-ment, Design) Conference and online video repository (http://www.ted.com) plays that role for the third.

> forts. […] Another place democracy seems to win is in deciding what counts as news. I never look at any news site now except Reddit." (Graham 2005)

The first part of essayist Paul Graham's argument does not call for much explanation. It fits perfectly into the line of Howard Zinn's comment on the contradiction between "the spirit of democracy" and "the reliance on great thinkers" cited above. This is a classic theme in political philosophy and maybe the most striking points of difference between American and French political imaginaries. But I am more interested in the second part here. One of the central elements of Web 2.0 has been the omnipresence of voting and rating mechanisms. The ranking of content according to these procedures is a common feature, and on sites like *Reddit*, or the more popular *Digg*, users vote on news items. I will come back to these systems further down, but in the context of the question of scale, the example is well suited: online voting systems allow something like a town meeting style *full assembly* where everyone can cast a vote. Through the power of IT, there is no real limit to the size of the congregation and if one takes "democracy" to be more or less synonymous with voting, Web 2.0 can obviously be portrayed as a means for bringing community style governance *sans representation* – and therefore without a class of political experts – to a new scale, making it possible to potentially assemble / aggregate an infinite number of citizens / users. If one adds the Web's much celebrated possibilities for *expression* and *participation* to the mix, one can argue that user-generated content sites, blogs, and social networking applications contribute to some very good news indeed for democracy. Additionally, the positive effects are based on technological properties, which, as a rule, are less precarious than political consensus building and, conveniently, can be *exported*, too.

Again, I do not want to deny the political potential of IT. But there are at least two lines of critique that cannot be ignored, and summarizing them will be my task for the remaining pages of this article. The first one concerns what I perceive as flaws in analysis, whereas the second articulates doubts about the political philosophy I have laid out.

4. Self-organization and software as institution

The two strands of critique I shall put forward are not meant to turn the Web 2.0 enthusiast's ideas on their head. I do, in fact, share some of their intuitions, most importantly a sense for the immense potential of digital technology to disrupt organizational structures in all areas of life. What I do however want to put into question is the idea that technology will deliver us automatically from the messy and frustrating business of politics into a world of automated consensus and pacified difference. I believe that such a technology-infused transformation is neither possible nor desirable. My first line of critique will therefore try to show that digital networks may very well produce effects of centralization as much as decentralization, and give rise to new mechanisms of power that imply new vectors of domination and abuse.

4.1. Self-organization as placeholder

The analogy between self-organization as community governance and self-organization as scientific concept is a key element in the arsenal of the "class of the new" (Barbrook 2006); but it has also led to an empirical critique that is actually based on the "hard" quantitative approach that the "second wave" cyber-optimists seemed to admire so much. Recently, a new branch of applied mathematics, dubbed the " Science of Networks" (cf. Watts 2005), has studied the distribution of network connectivity in an empirical fashion. Their findings provide a counter-narrative to the idea of the Internet as a Jeffersonian deliberative democracy:

> "Cyberspace embodies the ultimate freedom of speech. Some may be offended, others may love it, but the content of a Webpage is hard to censor. Once posted, it is available to hundreds of millions of people. This unparalleled license of expression, coupled with diminishing publishing costs, makes the Web the ultimate forum of democracy; everybody's voice can be heard with equal opportunity. Or so insist constitutional lawyers and glossy business magazines. If the Web where a random network, they would be right. But it is not. The most intriguing result of our Web-mapping project was the complete absence of democracy, fairness, and egalitarian values on the Web." [Barabási 2003, p. 56]

In the mathematical approach to network analysis, the hyperlinked topology of the Web is projected as a formal structure that can be explored with the help of statistics and graph theory. What researchers like Barabási have found, is that the Web and many of its sub-structures exhibit distributions of connectivity where a small number of nodes (Web pages, blogs, products, users, etc.) receive a very high percentage of connections (links, votes, visits, etc.). Here, Steven Weber's convincing critique of the self-organization concept, "used too often as a placeholder for an unspecified mechanism" (Weber 2004, p. 132), is brought to a conclusion, in the sense that the science of networks actually puts forward a mechanism that explains the behavior of the system in question. This mechanism, called "preferential attachment" (an initial advantage in connectivity will multiply over time), does not, however, confirm the claims of "egalitarianism" that were made so often by cyber-optimists, quite the contrary. Certain self-organized systems seem to tend towards oligarchic, "winner takes all" dynamics; they become "predatory", as critics like Kroker and Weinstein (1994, p. 16) have argued. At the same time, it is extremely difficult to resist the suggestive power and seductiveness of "self-organization":

> "Self-organization often evokes an optimistically tinged 'state of nature' narrative, a story about the good way things would evolve if the 'meddling' hands of corporations and lawyers and governments and bureaucracies would just stay away." (Weber 2004, p. 132)

What the science of networks shows is that if we replace the "placeholder" with actual explanatory mechanisms, we may find outcomes that may be "natural" – whatever that means – but far from politically desirable. Then again, preferential attachment can be observed in *certain* self-organized systems, while other systems are governed by different dynamics. Theorists like Yochaï Benkler (2006), perhaps the most sophisticated of the "third ware" optimists, have started

to take a closer look at network structures and come up with "middle ground" explanations that take skewed distributions into account. Analyzing the political blogosphere in the United States, he concedes that there are indeed extreme variations of visibility – some blogs have millions of readers, while others have very few – but he also finds that the hubs link back into the network, creating an "attention backbone" that functions through "filtering, accreditation and synthesis mechanisms", creating a layered public sphere. These may be the beginnings of a more differentiated account of how authority plays out in these settings.

Over the years, the quantitative study of networks has established different types of dynamics at play in different kinds of networks (cf. Amaral et al. 2000). Several parameters influence growth mechanisms and the form of the distribution curve. And many phenomena that can be quantified simply do not follow a power-law structure at all. We should not forget that human society is quite different from, say, a snowflake or an anthill, in that it allows for feedback to be integrated on a very fundamental level: knowledge about a certain kind of dynamic may very well change it, when actors adjust their behavior to adapt. Donald MacKenzie (2006) has convincingly shown for stock trading that the relationship between market dynamics, financial models, and trader strategies is far from stable and prone to psychological effects. Awareness of distribution processes on the Web may actually prompt actors to change the parameters of the system, directly affecting outcomes. Google's search engine is said to give a "newcomers bonus" to newly registered sites to alleviate the huge difficulty for a late entry to a game that already has its dominant players. Powerful economic actors can actually outplay the logic of preferential attachment through traditional or viral marketing campaigns. The concept of self-organization should therefore not be seen as explanatory in itself, but as an invitation to ask how a particular system operates. Even if there are no *institutions* (as formal establishments) regulating behavior, there are always *institutions* in the sense of mechanisms, rules, and established dynamics. Networks can have very different *effects* according to the mechanisms at play. On the Web, such mechanisms can be formulated as software.

4.2. Software as institution

Instead of maintaining that computer networks have clear and identifiable effects, I would argue that digital technology is basically malleable and its first "effect" consists of transposing the design of the structural properties of mediating forms and functions into the software layers. As Google's "newcomer bonus" shows, technical processes can shape distribution dynamics. The news aggregator *Digg* provides another example:

A true Web 2.0 poster-child, *Digg* lets registered users send in links pointing to any content on the Web, which will then be voted on by other members, either on the main page or via widget buttons on the sites of content providers. The more votes a piece of content gets in a certain space of time, the higher its placement on *Digg*'s front page and the various thematic sub-pages. When

in 2006, the blogger Rand Fishkin had a closer look[16] at the people who actually sent in the posts that made it to the top, a familiar picture emerged: a small number of 100 users had posted the links to 56% of all the items that ever made it to the front page. Again, an oligarchy seemed to rule the "gatewatching" (Bruns 2005), i.e. the processes of ordering and filtering already published information, the *layering of visibility*. However, the creators of the site decided to react and try to break the dynamic with a change in the ranking algorithm that was implemented in November 2006. Via the site's social-networking feature and the calculation of similarity in users' voting patterns, the *Digg* system can produce a measure of "distance" between users. The change made to the voting system now means that in order to get ranked well, an item now not only needs to get many votes, but also votes from a *heterogeneous* user pool, i.e. from a subset of the social graph with a high value for the added distances between the individual members. The goal was to reduce the dominance of highly linked peer groups. This modification was only one among many possible means to react to a distribution of influence that was deemed undesirable, yet a very powerful one. But even here, there is no "prime mover" in sight: *Digg*'s members – often media professionals trying to use the site's large user base to direct traffic – did react to changes and adapted their strategies to the new situation.[17] This techno-social back-and-forth leads me to argue that the moment distribution dynamics are put under the microscope, they lose their status as laws of *nature* and become laws of *people*; they become *political*. But even without postulating a new determinism, we have to concede that writing computer code has become an important means to *act strategically* in digital space.

Technology can change the rules of the game, most certainly, but it does not make the grueling political process disappear; it may reconfigure the struggles, displace and hide them for a while behind the illusion that there is a simple answer to the question of how we should live together that bypasses power and fundamental conflicts of interest and belief. What the advent of networked information technology does however is making engineering and design a *locus* of truly strategic behavior. This is of course the argument Lawrence Lessig (2006) has been making for over ten years now, and if we look at the organizing capacities of Web 2.0 applications, his "code is law" aphorism seems more substantial than ever. In Scott's (1995) language one could argue that there is a true transformation happening on the level or *regulative* institutions, "external systems of rules", where the means of producing outcomes – behavior – are changing. Even when looking at Wikipedia, celebrated by most cyber-optimists, we can see how software is used to structure governance by introducing means to resolve "edit wars", block users, lock articles, and so forth. Software now habitually provides specific answers to questions that do not seem tech-

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[16] Fishkin, Rand: *Top 100 Digg Users Control 56% of Digg's HomePage Content.* Blog post, July 20th, 2006, http://www.seomoz.org/blog/top-100-digg-users-control-56-of-diggs-homepage-content

[17] Sites like *SocialBlade* (http://socialblade.com) offer tips how to make it to the front page, adapting quickly to algorithm changes.

nical at all: What is communication? What is cooperation? Which information is valuable? What is decision-making?

The idea that technology implements values and should be seen as an "actor" in the shaping of social processes is of course not new; from actor-network theory to the "values in design" tradition, there are many approaches that look at the political dimension of technology without postulating an overarching political metaphysic. When looking closer, the reality is almost always more complex than the euphoric accounts make it out to be. In many of the "self-organized" systems that make up Web 2.0, we find that a small group dominates structures of visibility. Commercial actors have adapted to a new playing field and are creeping in on the social networking sites and the places where users generate content. In open source software development, we find "benevolent dictators" and in projects like Wikipedia, the conflicts that become inevitable when scaling the effort have led to software structures and social organization that are a lot more hierarchical and bureaucratic than they were in the beginning. But what does that mean? Should we dismiss these efforts and start over again? Move elsewhere to a new *frontier* that we can homestead for a couple of years before the rush of the new wears off and the *institutionalizing* begins? If technology won't deliver us from the conundrums of governance, negotiation, and struggle, we may as well reengage politics proper.

5. Democracy as set of contradictions

In 1952 beat poet Allen Ginsberg famously noted in his journal "Democracy! Bah! When I hear that word I reach for my feather Boa!" and indeed, the second half of the 20th century has paradoxically not only seen a spread of liberal democracy, but also considerable disillusionment with this form of government. I believe that this can in part be attributed to the fact that western societies have continued to diversify socially and culturally, becoming more heterogeneous and flexible, while the large-scale bureaucracies that administrate modern states seem to be stuck in structural lock-in. The obvious speed and facility of organizational innovation on and through the Internet provides a sharp contrast to the perceived sluggishness of political institutions. While debate on the Internet looks lively, open, authentic, and engaged, the bickering of "old white men" in our parliaments appears conceited, petty, scripted, and "out of touch". The question is, then, what these palpable contrasts actually *mean*. I do not pretend to have an answer, but I would like to make three points that I believe have not been sufficiently addressed in many debates on Web 2.0 politics.

5.1. Democracy as community?

My first caveat concerns the role of that term which "seems never to be used unfavourably" (Williams 1985, p. 46): community. In both the French and German traditions, connotations are

considerably more ambivalent[18], and while the nostalgic[19] ideal of a digital "Pilgrim Republic" based on small-scale self-governance may well be appealing, it turns its back to the realities of the governance of contemporary societies, that are vastly more complex and pluralistic than the settler communities of the Frontier days. For political philosopher John Rawls, the question of pluralism is at the center of the issue:

> "I believe that a democratic society is not and cannot be a community, where by a community I mean a body of persons united in affirming the same comprehensive, or partially comprehensive doctrine." (Rawls 2001, p. 3)

Proponents of the ideal of community governance rarely mention that, historically, these forms were not only limited to rather small groups, but also to groups characterized by low division of labor and high cultural homogeneity. The classic village community, and the religious separatists that established the Plymouth community even more so, may have lacked coercion in the sense of authoritarian means of statutory institutions enforcing compliance; but they were riddled with capillary, "cultural" coercion in the form of strong normative codes and shared meaning.[20]

In his article *Disenchanting the Concept of Community*, on of the few texts critical of the community ideal, Berger (1988) defends the idea of "cultural modernism", which "emphasizes limited, partial, segmented, even shallow, commitments to a variety of diverse collectivities". For this kind of "freedom or liberation or pluralism of choice" – which resonates with Wellman and Leighton's (1979) motive of "community liberated" – to work, however, there has to be a structured form of governance on the level of society, a representative institution that arbitrates between conflicting interests. This mediation has to rely on at least some communality – Rawls speaks of "reasonable" plurality – but the challenge is indeed to manage *difference*.

Liberal representative democracy has always been an imperfect answer to the challenges posed by modern "societies of strangers", where members no longer share the bonds of family, religion, or social status that made pre-modern societies cohesive. Our current systems of governance are by no means *ideal*. They bear the marks of thousands of years of injustice, oppression, and partiality. There is historic privilege, stale compromise, social inequality, exploitation, and war. Obviously, there are many reasons to be unsatisfied with the current state of affairs. But there have also been countless efforts to make these societies more equal, just, and free from fear and these efforts have left their mark as well. Guaranteed constitutional rights protect citizens from state

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[18] The reasons for this ambivalence are quite different however. In the French political tradition, "community" is seen as a danger to the impartial and transcendent Republic, while the German reluctance is related to the historic experience with Nazism and *Volksgemeinschaft*.

[19] "The remarkably popularity of nostalgic images of community leads one to wonder whether this concept has been oversold." (Mutz 2006, p. 147)

[20] "Whatever else it means, community always refers to commonly held values and behavioral prescriptions, the honoring of which are ultimately conditions of membership." (Berger 1988)

control and freedom of speech is largely realized. As Jens Jessen, has recently pointed out[21] in *Die Zeit*, it is democracy that guarantees a free Internet and not the other way around.

So while there may be considerable disenchantment with the political maneuvering and compromises that seem to dominate liberal democracy and a longing for the warmth of community, we should be highly cautious when it comes to writing off society – *the coexistence of people that neither agree nor resemble each other* – as a locus for democratic governance. As Vedel (2003) points out, the community model embraced by most cyber-optimists tends to perceive key political institutions – parties, unions, media companies, etc. – as perversions of the democratic ideal of non-representational assembly. But how can we imagine governance of very large groups of people without mediating forms that invest the *longue durée* and channel disparate individualities into more collective forms? Without checks and balances between accountable actors? The real question concerning the political power of IT is not whether it is intrinsically "liberating" or "oppressive" but how we can profit from the organizational capacities of digital networks without falling prey to their tendency to become oligarchic. Like the founding fathers, we will have to come up with checks and balances, structures of mediation and representation, etc.; instead of relying on technology to deliver us from institutions we may want to ask how technology can help us improve them. As I shall argue, however, the mere multiplication of occasions for individuals to express themselves may not suffice.

5.2. Democracy as deliberation?

My second point targets the notion of deliberative democracy, or rather the conceptual reduction of democracy to deliberation. According to Barbrook and Cameron (1996), the digerati "want information technologies to be used to create a new 'Jeffersonian democracy' where all individuals will be able to express themselves freely within cyberspace".[22] I certainly do not agree with Andrew Keen that "[a]mateur journalism trivializes and corrupts serious debate" and turns democracy "into the rule of the mob and the rumor mill" (Keen 2007) – there is a lot of very high quality debate to be found on the Web. But I want to question the idea that the possibility for expression and free(wheeling) debate is a *sufficient* criterion for democracy. Indeed, while Habermas may posit the existence of a well-developed public sphere as a necessary condition for a well-functioning democracy, he does not go as far as reducing the latter to the former. Much like the equation between community and democracy, such a reduction would again omit certain realities of modernity that we cannot simply wish out of existence. In his essay *Why Conversation is Not the Soul of Democracy*, Columbia professor Michael Schudson (1997) argues that the spontaneous conversational form of deliberation may actually not be a good model for understanding democratic debate. Analyzing amongst other examples the highly formalized Constitu-

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[21] Jessen, Jens: *Das Netz trügt*. Die Zeit, No 24, 4.6.2009

[22] "We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity." (Barlow 1996)

tional convention of the United States in 1787, he presents an argument that goes against the current mainstream:

> "[W]hat makes conversation democratic is not free, equal, and spontaneous expression but equal access to the floor, equal participation in setting the ground rules for discussion, and a set of ground rules designed to encourage pertinent speaking, attentive listening, appropriate simplifications, and widely apportioned speaking rights." (Schudson 1997, p. 308)

In this line of thought, the increasing quantity of conversation one can observe in digital spaces may be less important than its *quality* when it comes to judging whether the Internet has restructured "public discourse in ways that give individuals a greater say in their governance than the mass media made possible" (Benkler 2006, p. 271). Merely pointing out that much of the discussion on the Internet lacks most of Schudson's criteria for "publicness" would be too easy and my goal is not to prove Internet optimists wrong, but to introduce certain lines of inquiry into the debate. I would simply like to restate the idea that effects of technology may vary with the chosen design principles. Systems have been built that explicitly try to "promote quality, discourage crap"[23] by means of software. Most famously, *Slashdot*'s elaborate discussion filtering system, which distributes moderation privileges over the whole user base, does not shy away from introducing normatively motivated mechanisms into the platform (cf. Rieder / Thévenet 2005). The results have been encouraging to say the least. So, instead of trying to settle the debate on whether the Internet is a boon to democracy or the end of culture, I would like to ask the question what kind of tools could help with the daunting task of building a public sphere that promotes the kind of serious debate Schudson is talking of.

5.3. Democracy as fundamentally contradictory?

My third point concerns an ambiguity that may be both subtler and more perplexing than the two other ones. It is related, however, to a rather well publicized debate. In 2002, Cass Sunstein, legal scholar and now a member of the Obama administration, made another practical argument against the current architecture of discourse online. The possibility for citizens to get stuck behind information filters – by automatic means such as personalized content aggregators or simply by not leaving the "echo chambers" of the blogosphere – could have the practical effect of exposing them exclusively to opinions they are comfortable with, trapping them in a "Daily Me":

> "Freedom consists not simply in preference satisfaction but also in the chance to have preferences and beliefs formed under decent conditions – in the ability to have preferences formed after exposure to a sufficient amount of information, and also to an appropriately wide and diverse range of options. There can be no assurance of freedom in a system committed to the 'Daily Me'." (Sunstein 2002, p. 50)

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[23] From *Slashdot*'s FAQ (http://slashdot.org/faq/com-mod.shtml)

As before, my first question would not be so much whether the picture of the "Daily Me" is correct or not, but rather what kind of software architectures would foster which kinds of media ecologies. There is, however, a more puzzling argument to be made here, one that should remind us of how deeply *difficult* the questions are that we are dealing with when we start to go beyond the simplistic causalities of technological determinism.

Sunstein is actually defending what has become something of a commonplace: in order to function as well-informed citizens, we have to expose ourselves to opposing viewpoints. At the same time, we want citizens to "participate". But the work of Diana Mutz (2006) has shown that too much of "hearing the other side" may actually be detrimental to participation and political action. Being persistently exposed to views that contradict one's own, people tend to become doubtful and less willing to take political action (campaign, demonstrate, write to their MPs, etc.).

> "Although diverse political networks foster a better understanding of multiple perspectives on issues and encourage political tolerance, they *discourage* political participation, particularly among those who are averse to conflict." (Mutz 2006, p. 3)

For Mutz, there is a clear empirical contradiction between the ideals of deliberative democracy and those of participatory democracy. The most politically active citizens may actually be the least tolerant. This is a conundrum that no technological object can even come close to solving.

6. Conclusion: platform power and the culture of circumvention

The central point that I have tried to make over these pages is that the major fault of contemporary cyber-optimism is perhaps not simply its technological determinism, but a tendency towards an essentialist view of both technology and democracy that eschews the complexities and deep contradictions that characterize both. A logic based on intellectual shortcuts that lead from networks to self-organization / decentralization / deliberation to "democracy" blinds us to the completely disparate trajectories that have unfolded over these last years on the Internet. Sure, there have been astounding developments in "amateur" production, from open source to citizen journalism, and there have been major political events buzzing with short message staccato. But if I had to single out one remarkable socio-political development related to the Internet over these last years, it would be the emergence of *network giants*, companies like *Google Inc.* and *Amazon.com, Inc.*[24] that, starting out from nothing, have succeeded in creating integrated markets at amazing speed. These companies, together with older commercial actors like *Apple Inc.* who knew how to seize the opportunities provided by market transformations, are now bridging telecommunication services, hardware and software platform development, content distribution, and

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[24] I quote the full company names with a purpose: the commercial activities of both companies can no longer be limited to their initial services, a search engine and an online bookstore. *Amazon* has become a hardware provider with the Kindle e-book reader and it is a leader in the emerging market for cloud computing. The expansion of *Google* into a plethora of markets probably needs no further explanation.

advertisement into transversal economies of scale that leverage the supposedly decentralizing network effects into global quasi-monopolies that may well be here to stay.

What has been announced as a push towards a more decentralized, democratic, "citizen-based" future is in fact a complex Web of vectors that point in different and often opposing directions at the same time. With Deleuze and Guattari, we could make the case that *deterritorialization* is always accompanied by *reterritorialization*: configurations of power may become porous and disperse but new forms will rise in their wake. The emergence of companies like *Google Inc.* should also remind us that capillary and statutory forms of power may not only forge alliances; the former may rise from the latter, and when a search company defies (at least for a while) the government of the coming economic superpower, we know that something has happened. Examples for hybridizations of mechanisms of power can be found in many places. If we look at what Henry Jenkins (2001) distinguishes as two media systems: "one broadcast and commercial, the other narrowcast and grassroots", we find that not only do they "interact in complex ways", but that they intertwine and fuse into unanticipated amalgams, forming most notably a growing continent of "commercial grassroots" that many of the fan culture phenomena Jenkins describes actually belong to. Services like *Facebook* and *YouTube* are prime examples of *centralized decentralization*, made possible by datacenter technology we pay for by either our attention – *advertisement* – or the knowledge that can be derived from analyzing our behavior – *marketing*. The mastery of these forms of indirect *micropayments* is what boosts *Google*'s quarterly results, financial crisis or not.

The configurations of power implied by these mechanisms are certainly very different from the statutory structures we are adjusted to. The shift may be close to what Foucault had in mind when he argued, in his later work on *gouvernementalité*, that his concepts of discipline and the *panopticon* were probably not well suited for analyzing contemporary societies. As an alternative he proposed the notion of "security" (Foucault 2004), whose corollary is not the individual but a more abstract category, the "population". This aggregate is governed by a technique of power that creates markets and *milieux* (environments, basic rules, etc.) rather than *buildings* (prisons, hospitals, etc.). Its means of knowing is no longer *surveillance* but *statistics*. In such a configuration, *data* becomes the central currency and the network giants are directly at the source of an infinite supply.

The Internet – and the Web in particular – has most certainly stirred established structures in areas vital to democratic life. Unfortunately, governments have been unable to channel the capillary energies into new institutional forms on the statutory level. The clumsy efforts[25] of states to reign in their digital citizens have fueled the Internet's libertarian reflexes and fostered what I would call a "culture of circumvention", whose political ethos no longer aims at any kind of

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[25] Independently from the question of their legitimacy, many legal efforts, from DMCA to HADOPI and *Internetsperren*, have contributed to the growing alienation between (certain) citizens ant their governments.

change in established systems of governance but solely seeks the creation of spaces that leave behind the "weary giants of flesh and steel" (Barlow 1996). But technology focused anti-statism might actually be pulling the carpet from under its own feet. The hope for magical technological solutions to the messy realities is counterproductive if it leads to an attitude that disengages traditional political process to simply "route around it"[26].

This is perhaps the argument I really wanted to arrive at after these long meanderings. Instead of asking whether the Internet is an agent of democratization, we could be asking what kind of democracies we need to deal with the deep social and cultural transformations that currently play out on a global scale. As a second step, we could ask how the Internet might help in bringing these settings closer to reality. Most importantly however, if we want to reverse the process of disillusionment with politics beyond the community, we had better not hope that technology will bring us justice, equality, and democracy. Our time would be better spent asking what we want these terms to *actually mean*.

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[26] John Gilmore, co-founder of the *Electronic Frontier Foundation* is famously attributed with the phrase "The Net interprets censorship as damage and routes around it."

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