INTRODUCTION

> One day, in retrospect, the years of struggle will strike
> you as the most beautiful.
> – Sigmund Freud

THESE DAYS, STRATEGIC CONSIDERATIONS FOR POLITICAL ORGANIZA-tion no longer bother with mediation, representation, and identity politics. Instead, the key question revolves around the design of new (sustainable) organizational forms. What is the social today, if not social media? It is not enough to indulge in the aesthetics of revolt. Flaws in the 19th and 20th century models of the party, the union, and the movement are easy to detect, but what's replacing them? It is tempting to say that the network is the dominant form of the social: a programmed life under permanent surveillance. What can replace the corporate walled gardens such as Facebook and Twitter? Our answer to this question is a firm and open one: a federation of organized net-works, sustainable cells that operate as secret societies.

Many have already identified social networks as a conspiratorial neoliberal invention that, in the end, only benefits the global elite. Think of the vampire data mining economies made possible with all

your searches, status updates, likes, etc. The algorithmic modulation of networks generates patterns of data that hold economic value for social media corporations and finance capital. These extraction machines produce a subject Maurizio Lazzarato calls "indebted man." Exodus for the multitudes, it would seem, is a futile proposition.

Nearly twenty years into the 21st century we can conclude that global elites are not threatened by temporary uprisings and will only be questioned by an offensive counter-power that is capable of learning and incorporating its own trial-and-error experiments of daily struggles into the social body. But wait a minute, how does this intersect with the technological condition? Digital networks have been discredited for their short-lived character that merely reproduce the hegemonic fragmentation of desperate subjects. No matter how legitimate such structural proposals are, they often end up in a retromania of social imagination.

In defense of the network. Fatigue has well truly and set in. Time has been stolen. Sleep has been injured (Jonathan Crary). Online efforts have been exploited to the max by the cynical social media and their economies of data mining. The network form has either eroded or been totally expropriated and relocated to the cloud. The shift from networks to cloud-based media has been a setback, a regressive move. People are tired of updating and maintaining the labor of online administration. The work of securing social capital is now a chore preferably outsourced to PAs on the global peripheries. If, as an influencer, you don't have the resources to hire your personal Tweeter, then you have to carve out the time in the day to shoot your own selfies. Migrating across platforms has now become part of many people's digital biographies. The tedium of doing this repeatedly has well and truly set in. Will young people be the first among those to terminate the contract with social media?

So what to do, and where to go in order to live and work in ways autonomous from these technologies of capture? One place to start is at the level of organization, which requires addressing the problematic of infrastructure. Our proposition is that the (legitimized) desire to build lasting collective forms should grow out of 21st century materialities and not be based on nostalgic notions of mass organization. Instead of dismissing the network as such, we propose to rewire, recode, and redefine its core values and develop new protocols for the social, which, in today's society, is technical in nature.

Today's problem is no longer the Art of Mobilization. Organized networks have access to an array of tools, though a relatively limited range of social media platforms are more often the preferred choice for mass mobilization. Memes spread like wildfire in real-time. We know how to put together campaigns, create shit storms, and go viral: read the fucking manual, as hackers in the past used to say. Majorities are enraged and rally against climate change, repression, violence, rape, authoritarian rule, education cuts, poverty, and job losses. We sign petitions and maybe even shut down a website. But we need to shift these technical practices to another level.

Designing encryption as a standard is one core technical practice relevant to organized networks that we see developing post-Snowden and the National Security Agency (NSA) revelations. Encryption accessible on a mass scale is an example of an alternative at work, of the time-old paradox of constraints creating possibility. Pre-Snowden, encryption was for a handful hackers, high government communications, and corporate transactions with something at stake. But we are now are in the midst of a tipping point where individual users – and less so organizations – are deciding to encrypt communications. So the next level would be to see more coordinated efforts at encrypting collective communication.

Is encryption an example of standards scaling up? A form of civil defense in a time of serious technological onslaught? What can people do to protect the privacy of communication and the dignity of their online life? Of course forms of secure communication goes on within social and political movements among the chief organizers or facilitators. But less so across the social base of the movements who are not so much involved in decision making. This leads to potential dead-end streets in the forms of content and organization. What is the broader potential of crypto?

The mass introduction of cryptography is a reassessment of the secret society as a cultural technique. Invisible and secret organizations have been accused of the "terror of the informal," which is reprimanded for not being accountable. This politically correct rhetoric needs to be countered with the argument that organized networks are not public organizations or state bodies. The trick is to achieve a form of collective invisibility without having to reconstitute authority. Organized networks are not vanguard parties. The party in its original sense claims to articulate the general interest and will of the people. As

an organizational form, the party is a sustainable structure that is here to stay regardless of its own fluctuations in the polls. But the party today is without passion and holds little relevance to people's daily social lives and communication practices.

The secret society has always been connected to conspiracy, but what if it becomes not only a necessity but a civil duty? Many of the other possible alternatives lead to the romantic world of offline. Think "maker cultures" – which can't function anyway without the marketing power of social media and the distribution and production systems of global supply chains. The slow food movement is another example, which is now thoroughly commercialized as well. Forget the nostalgia option. Offline romanticism is also part of the NSA repertoire when they break into your house: this is the exception in their weapons armory, and why they invest so much in online surveillance and hardware manipulation.

The social-technological default of encryption makes secret societies mainstream. The question of what issues or agendas to pursue remains open and undecided. Encrypted communication requires a motivating cause. Once this is identified, networks could begin to organize in more secure and sustainable ways.

Organization under Platform Capitalism

In an age of algorithmic governance and preemptive action, the prevailing schema of politics is orchestrated around data analytics of social media. Politicians gravitate toward Facebook and Twitter on the advice of their minders, assuming the pulse of the masses can be aggregated and calibrated back into policy settings. Oversight of this cybernetic machine is also pursued by humanities and social science researchers invested in digital methods that index the inputs of civil society in participatory mode. Against this managerial model of governance and knowledge production, the question of correspondence between data and the world of objects and things remains elusive as long as schemas of intelligibility command institutional, epistemological, and political hegemony.

The fantasy of government through cybernetics was trialed at the prototype level in Stafford Beers' experiments in data-driven socialism in Allende's Chile in the 1970s.[1] Such a model was revived in recent

years with the attempt by the P2P Foundation, along with initiatives such as Bernard Stiegler's L'Institut de recherche et d'innovation (IRI), to install peer-to-peer models of socio-economic production and education in Ecuador. The attempt to implement a counter-hegemonic system in this instance failed primarily because of a struggle to find a common language. This is not a problem of what Naoki Sakai terms "homolingual translation" so much as a problem of making a concept quantitatively jump into the form of a meme that penetrates and infects institutional mentalities.[2]

As much as the free software and creative commons movements have hit the mainstream they have paradoxically remained in the margins of the power of the stacks, otherwise known as platform capitalism. In earlier times there was either the mainstream or the margin. You could exist in one but not both. Within a near universal condition of a mainstream without margins, the capacity to devise and unleash the power of critique is consigned to the *Trauerspiel* of modernity. Immanence without an outside is submission with occasional resistance whose only effect is to supply data-driven capitalism with a surplus of records and related metatags.

For all the attempts to establish a critical mass for alternative practices in the age of the Anthropocene, which manifest as networks of organic food suppliers, hipster maker economies, co-working spaces, urban gardening, and renewable energies, there remains a dependency on mainstream architectures from global logistics to data centers and the perpetuation of an international division of labor. There is no visible prospect of these core planetary systems being overhauled or replaced. Despite the proliferation of these sort of alternative practices, the decline in global working standards and employment opportunities is inseparable from the penetrative force of finance capitalism.

However much the possibility of thinking the Hegelian totality remains as a utopian position from which to overcome the fragmentation and dissipation of material and social life, the digital architectures that operationalize the world increasingly withdraw from the grasp of the human. Even those such as Yanis Varoufakis, who have glimpsed

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1   See Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge, Mass.: MIT Press, 2011).

2   On the distinction between "homolingual" and "heterolingual" translation, see Naoki Sakai, *Translation and Subjectivity: On "Japan" and Cultural Nationalism* (Minneapolis: University of Minnesota Press, 1997). See also Naoki Sakai, "Translation," *Theory, Culture & Society* 23.2-3 (2006): 71–86.

the inner-workings of the Euro-technocratic elite, are unable to manifest proposals for a movement of the disaffected. The network imaginary cannot on its own perform the work of implementation. Why? Because the stacks reign supreme.

The consolidation of resignation is one option. The now struggling agenda of the Mont Pèlerin Society is another. Regional geopolitical giants of Putin's Russia or the Beijing Consensus may, for all we know, deliver the path to restoration for a "multi-polar" future able to withstand the ravages of capitalism in ways not reliant on Silicon Valley's engineering logic of techno-solutionism. But unless we wish to commit to a paternalistic vision to be realized by whatever geopolitical elite invested in the global redistribution of wealth and resources, the question of organization without state-enmeshed sovereignty remains to be addressed.

Organization aimed at clutching power from above will do nothing in terms of forging a global grammar able to design concepts that critique and direct debates on issues and conditions in order to regain the initiative. Cognitive capitalism obtains power, in part, because of its binding capacity.[3] It is able to distribute and implement a coherent message across a vast range of institutional and organizational settings. In other words, cognitive capitalism holds an elective affinity with technologies of mediation. Without continuous network maintenance, it falls apart. Rituals of organization are required to galvanize sociality in coherent rather than perpetually dispersed forms and practice.[4]

Where are the forms of organization that regenerate the collective confidence that typified the historical avant-garde? Can new modes of organization function in a centrifugal manner to escape the sectarianism of the group dynamic? A decade ago we proposed the concept of organized networks as a new institutional form in response to the "walled gardens" of social media. We foregrounded the need for a strategic turn that could address the problem of sustainability of social organization. Neighboring concepts such as "platform cooperativism"

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3   See Yann Moulier Boutang, *Cognitive Capitalism*, trans. Ed Emery (Cambridge: Polity Press, 2011).

4   See James Carey, "A Cultural Approach to Communication," in *Communication as Culture: Essays on Media and Society* (New York and London: Routledge, 1992), 13–36.

and the many experiments in social centers and educational infrastructures such as "freethought" are strong examples of how the work of invention is manifesting as new organizational forms.[5]

A distributed laboratory of thought is needed that fuses intellectual and political invention without the clientelism of the think tank model. A praxis that dispenses with the misguided sentiment of post-capitalist economies and all the privilege that entails. The inquiry of this book contributes to a wider intellectual, political, and artistic cataloguing of concepts, problems, and conditions that experiment with the organization of thought not consigned to the affirmation of the transcendent. How to unleash concepts that organize totality as a distributed and differentiated architecture is key to the formation of autonomous infrastructures able to withstand the monopoly on decision gifted to algorithmic capitalism.

From Weak Ties to Strong Links

Sloganism: "I feel protected by unpublished Suite A algorithms." (J. Sjerpstra) – "I am on an angry squirrel's shitlist." – Join the Object Oriented People – "When philosophy sucks—but you don't." – "See you in the Sinkhole of Stupid, at 5 pm." – "I got my dating site profile rewritten by a ghost writer." – "Meet the co-editor of the Idiocracy Constitution" – The Military-Entrepreneurial Complex: "They are bad enough to do it, but are they mad enough?" – "There really should be something like Anti-Kickstarter for the things you'd be willing to pay to have not happen." (Gerry Canavan) – Waning of the Social Media: Ruin Aesthetics in Peer-to-Peer Enterprises (dissertation) – "Forget the Data Scientist, I need a Data Janitor." (Big Data Borat)

If we look back at the 2011–2013 upheavals we see bursts of "social media" activity. From Tahir to Taksim, from Tel-Aviv to Madrid, from Sofia to São Paulo, what they have in common is communication

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5   See Trebor Scholz, "The Rise of Platform Cooperativism," in *Uberworked and Underpaid: How Workers are Disrupting the Digital Economy* (Cambridge: Polity, 2017), 155–92 and the related event, Platform Cooperativism: The Internet, Ownership, Democracy, The New School, New York, November 13–14, 2015, HTTP://PLATFORMCOOP.NET. See also, *freethought* – a collective formed in 2011 by Irit Rogoff, Stefano Harney, Adrian Heathfield, Massimiliano Mollona, Louis Moreno, and Nora Sternfeld, HTTP://FREE-THOUGHT-COLLECTIVE.ORG.

peaks, which fade away soon after the initial excitement, much in line with the festival economy that drives the Society of the Event. Corporate social networking platforms such as Twitter and Facebook are considered useful to spread rumors, forward pictures, file reports, and comment on established media (including the Web). But no matter how intense the street events may have been, they often do not go beyond "short ties." As temporary autonomous spaces they feel like carnivalesque ruptures of everyday life and are perhaps best understood as revolts without consequences.

In the aftermath of 2011 we've seen a growing discontent with event-centered movements. The question of how to reach a critical mass that goes beyond the celebration of temporary euphoria is essential here. How can we get over the obvious statements about the weather and other meta fluctuations (from Zeitgeist to astrology)? Instead of contrasting the Leninist party model with the anarcho-horizontalist celebration of the general assembly, we propose to integrate the general network intellect into the organization debate. We've moved on a good 150 years since the Marx-Bakunin debates.

It is time to integrate technology into the social tissue and no longer reduce computers and smart phones to broadcasting devices. As so many know, either tacitly or explicitly, technologies are agents of change. To understand social transformation therefore requires an understanding of technology. Harold Innis and Marshall McLuhan both knew this well. It is therefore not unreasonable to say that media theory provides a reservoir of diagnostic concepts and methods to assist those making interventions against regimes of control and exploitation. We would even go one step further: don't just rehash concepts on file, but invent your own by deducing the correspondence between concepts and problems as they manifest within your own media universe of expression. Find sites of conflict, passion, and tension, and you'll soon get a rush of thought to the brain.

The organized networks model that we propose in this book is first and foremost a communication tool to get things done. We are aware that this proposal runs into trouble when (tens of) thousands of users start getting involved. Once you hit that kind of scale the Event takes over. The "orgnets" concept (short for organized networks) is clear and simple: instead of further exploiting the weak ties inside the dominant social networking sites, orgnets emphasize intensive collaborations within a limited group of engaged users with the aim of

getting things done. The internet's potential should not be limited to corporate platforms that are out to resell our private data in exchange for free use. That option gives you silos ripe for NSA raids. Orgnets are neither avant-garde nor inward-looking cells. What's emphasized is the word "organ." With this we do not mean a New Age-gesture of a return to nature or a regression into the (societal) body. Neither is it a reference to Aristotle's six volume work called the *Organon*. Even less does it refer to the tired notion of the "body without organs" (or Žižek's reversal, for that matter). The organ of orgnets is a social-technical device through which projects are developed, relations built, and interventions made. Here, we are speaking of the conjunction between software cultures and social desires. Crucial to this relation is the question of algorithmic architectures, something largely overlooked by many activist movements who adopt – in what seems a carefree manner – commercially motivated and politically compromised social media software such as Facebook, Twitter, and Google+.

Today's revolts no longer result from extensive organizational preparations in the background, neither do they produce new networks of "long ties." They do, however, often emerge from a collective unconscious of accumulated discontent. The informal networks that unzip the tweets and create events are the real forces behind the growing list of "global uprisings," from M15 in Spain, Gezi Park in Istanbul, to "yellow umbrellas" in Hong Kong. Think of the public protests in São Paulo: initially a response to an increase in the costs of public transport, the underlying motivation behind such demonstrations was a longstanding malaise stemming from social inequalities and economic privileges bestowed upon a corrupt elite. What's left is a shared feeling: the birth of yet another generation, though one not limited to age or even necessarily class or political persuasions. Even though small groups have often worked on the issues for many years, their efforts are usually focused on advocacy work, designing campaigns, doing traditional media work, or attending to those who are immediately affected by the crisis on the ground. Important work, but not precisely about preparing for the Big Riot.

Is it wishing for too much to want sustainable forms of organization when the world seems to be in perpetual flux, if not on the brink of total chaos? Very little stability defines labor and life as we know it. Ideologies have been on the run for decades. So too are political networks amongst activists. At best we can speak of a blossoming of

unexpected temporary coalitions. What we need to focus on in the years to come is time-in-between, the long intervals when there is time to build sustainable networks, exchange ideas, set up working groups, and realize the impossible, on the spot. How might such a long-term strategy be conceived and orchestrated within the logic of networks?

We can complain about social media causing loneliness, but without a thorough re-examination of social media architectures such sociological observations can easily turn into forms of resentment. What presents itself as social media critique these days often leaves users with a feeling of guilt, with nowhere to go, except to return to the same old "friends" on Facebook or "followers" on Twitter. As much as mainstream social media platforms come with an almost guaranteed capacity to scale as mass networking devices, they are not without serious problems that many are now familiar with: security of communication (infiltration, surveillance, and a willful disregard of privacy), logic or structure of communication (micro-chatting among friends coupled with broadcasting notices for the many subscribed to the cloud), and an economy of "free labor" (user generated data, or "the social production of value").[6]

While there has been some blossoming of social media alternatives such as Lorea (www.lorea.org), which is widely used among activists in Spain, other efforts such as Diaspora ended quite disastrously after successfully raising $200,641 in development funds through Kickstarter but failing to gain widespread traction among activists, until an overall implosion of the project after one of its founders committed suicide. The increasing migration of youngsters to Instagram (a subsidiary of Facebook) and Snapchat was probably inevitable (irrespective of whether the NSA leak happened or not). But as April Glaser and Libby Reinish note in a *Slate* column, these social media alternatives "all use centralized servers that are incredibly easy to spy on."[7]

Current social media architectures have a tendency to incite passive-aggressive behavior. Users monitor, at a safe distance, what others

6   Tiziana Terranova, "Free Labor: Producing Culture for the Digital Economy," *Social Text* 18.2 (2000): 33–58

7   April Glaser and Libby Reinish, "How to Block the NSA from your Friends List," *Slate*, June 17, 2013, http://www.slate.com/blogs/future_tense/2013/06/17/identi_ca_diaspora_and_friendica_are_more_secure_alternatives_to_facebook.html.

are doing while constantly fine-tuning their envy levels. All we're able to do easily is to update our profile and tell the world what we're up to. In this "sharing" culture our virtual empathy is on display, but not a lot else. "She really ain't all that. Why does all the great stuff happen to her and not me?" Organized networks radically break with the updating and monitoring logic and shift attention away from watching and following diffuse networks to getting things done, together. There is more in this world than self-improvement and empowerment. Network architectures need to move away from the user-centered approach and instead develop a task-related design undertaken in protected mode.

Three months into the Edward Snowden/NSA scandal Slavoj Žižek wrote in *The Guardian* "we need a new international network to organise the protection of whistleblowers and the dissemination of their message." Note that the two central concepts of our argument are utilized here: a network that organizes. Once we have all agreed on this task it is important to push the discussion further and zoom in on the organizational dimension of this timely effort. It can be an easy rhetorical move to emphasize what has already been tried, but we nonetheless need to do that.

One of the first observations we need to make is how Anonymous is the missing element in Žižek's list of Assange, Manning, and Snowden. Despite several setbacks – including more recent associations with the Alt-right movement – Anonymous remains an effective distributed effort to uncover secrets and publicize them, breaking with the neoliberal assumption of the individual as hero who operates out of a subjective impulse to crack the code in order to make sensitive material public.[8] The big advance of anonymous networks is that they depart from the old school logic of print and broadcasting media that needs to personalize their stories, thereby creating one celebrity after the other. Anonymous is many, not just Lulzsec.

We also need to look into the many (failed) clones of WikiLeaks and how specific ones, such as BalkanLeaks, manage to survive. There is also GlobaLeaks and the outstanding technical debate about how to build functioning anonymous submission gateways. It has been

8   See the Nettime mailing list thread on "The alt-righty and the death of counterculture," July 2017, https://nettime.org/Lists-Archives/nettime-l-1707/threads.html.

widely noted that WikiLeaks itself is a disastrous model because of the personality cult of its founder and editor-in-chief, Julian Assange, whose track record of failed collaborations and fallouts is impressive. Apart from this "governance" debate, we need to look further into the question of what the "network" model, in this context, precisely entails. A step that WikiLeaks never dared to take is the one of national branches, based either in nation-states or linguistic territories.

To run a virtual global advocacy network, as Žižek suggests, looks sexy because of its cost-effective, flexible nature. But the small scale of these Single Person Organizations (SPOs) also makes it hard to lobby in various directions and create new coalitions. Existing networks of national digital civil rights organizations should play a role here, yet haven't so far. And it is important to discuss first why the US-organization Electronic Frontier Foundation, the European Digital Rights network, or the Chaos Computer Club for that matter have not yet created an appealing campaign that makes it possible for artists, intellectuals, writers, journalists, designers, hackers, and other irregulars to coordinate efforts, despite their differences. The same can be said of Transparency International and journalist trade unions. The IT nature of the proponents seems to make it hard for existing bodies to take up the task to protect this new form of activism.

Design your Power

7,136,376 people like this. Sign up to see what your friends like.
– Facebook

I want to return to a world without recommendation algorithms.
– Jenny Schaffer (VICE)

There is a scenario that can influence the work and lives of billions. It is a simple reversal of the dominant social media logic of monopolies such as Facebook, Twitter, and Google. Instead of growing networks through "weak ties" users concentrate their efforts on small groups in order to get things done: a collective move from communication to social action, from weak ties to strong links. So far network gurus have only looked to the ever-growing imaginary of connection. Software and algorithms are designed to expand our engagement with the "link

economy," though without any form of remuneration that arises from the capture of data and extraction of value.

But what's the use of endlessly maintaining the network of 500+ "friends," where your primary occupation becomes "working for the timeline"? For all the pictures we upload and status updates we generate, our primary signal to friends we've never met is that we're still in the rat race: look at me, I am still alive, do not forget me. Tragically, the cultivation of the celebrity-self is even more forgettable than the unobtainable juice of fame we secretly slather on to our increasingly numb membrane of desire.

We should start sabotaging the pressure to update and grow our networks. Strategies, if not devices, are required that short-cut the implicit competition that so often compels us to act. The proposal here it to intensify what's already there and collaborate – instead of merely communicate – in ways that ensure existence is a force to be reckoned with. Call it a lingering passion to invent. The concept of organized networks is first and foremost an Unidentified Theoretical Object (Adilkno), a space of potentialities that can be opened – and closed again. Read it as a proposal to undermine the widely-felt Fear of Missing Out.

Amalgamating the words "organization" and "network," the concept of orgnets is something we developed in 2005 as a response to the rise of the "social networking" paradigm and orthodox ideas in management circles about the "networked organization." The term can be read as a variation and upgrade of the popularity and mystique that surrounds "organized crime," while intersecting with the more imaginative but slightly conceptual term "organized innocence" (as described by the Adilkno collective in their book *Media Archive* from 1998). Needless to say, orgnets are both virtual and real. They are as much living data, crunching away on hard-disks, as they are hardcore urban tribes, non-identities, invisible for non-members.

Orgnets have grown in response to European offline romanticism and assembly strategies from Occupy activists. Meeting in-real-life ("breast-to-breast") is touching yet expensive and often impossible to arrange on the hop. Most collaborations these days, if serious, are not touristic in nature anyway. Leave those junkets for the coterie clinging to the vestige of power bestowed upon boardrooms. There is a tragic, harsh element in the fact that more often than not we don't coincide in the same room, building, city, or continent. This is the rotten reality of our global existence.

Organized networks are out there. They exist. But they should still be read as a proposal. This is why we emphasize the design element. Please come on board to collectively define what orgnets could be all about. The concept is an open invitation to rethink how we structure our social lives mediated through technical infrastructures.

Whereas it is possible to interpret the rich history of humankind as orgnets, from clans and villages to secret societies, collectives, and smart mobs, we prefer to emphasize the 21st century blend of technology and the social. Orgnets have appeared on the scene in a time of high uncertainty. Not only do we have the catastrophe of planetary life driving fear into the soul of the future. But we also have what seems a broader social incapacity to act. And this is partly a result of the problem of traditional institutional forms grappling with the challenge – still – of a world that is deeply networked by digital media.

Witness, for example, the crisis of conventional organizations such as the trade union, the political party, the church, and the social movement. Losing credibility by the day, increasingly decoupled from their constituencies, and no longer able to galvanize collective passion to mobilize action. The primary pillars of social organization that defined the 19th and 20th centuries have struggled to reinvent themselves to address the complexities that define our times. This is where orgnets step in.

Networks are not goals in themselves and are made subordinate to the organizational purpose. Internet and smart-phone based communication was once new and exciting. This caused some distraction, but the widespread enthusiasm they once elicited is definitely now on the wane. Distraction itself is becoming boring. The positive side of networks – in comparison to the group – remains its open, informal architecture. However, what networks need to "learn" is how to split-off or "fork" once they start getting too big. Scale can become the enemy. At this point networks typically enter the danger-zone of losing focus. Intelligent software can assist us to dissolve connections, close conversations, and delete groups once their task is over. We should never be afraid to end the party.

The Hype about Hyperlinks

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The AI Problem, as it's called – of making machines behave close enough to how humans behave intelligently – . . . has not been solved. Moreover, there is nothing on the horizon that says, I see some light. Words like 'artificial intelligence,' 'intelligent agents,' 'servants' – all these hyped words we hear in the press – are restatements of the mess and the problem we're in.

We would love to have a machine that could go and search the Web, and our personal stores, knowing our preferences, and knowing what we mean when we say something. But we just don't have anything at that level.

Michael Dertouzos, Director, Laboratory for Computer Science, MIT[1]

The Web is vast and growing exuberantly. At a recent count, it had over a billion pages and it continues to grow at the rate of at least a million pages a day.[2] (It is characteristic of the Web that these statistics, as you read them, are already far out of date.) There is an amazing amount of useful information on the Web but it is getting harder and harder to find. The problem arises from the way information is organized (or, better, disorganized) on the Web. The way the Web works, each element of this welter of information is linked to many other elements by hyperlinks. Such links can link any element of information to any other element for any reason that happens to occur to whoever is making the link. No authority or agreed-upon catalogue system constrains the linker's associations.[3]

Hyperlinks have not been introduced because they are more useful for retrieving information than the old hierarchical ordering. Rather, they are the natural way to use the speed and processing power of computers to relate a vast amount of information without needing to understand it or impose any authoritarian or even generally accepted structure on it. But, when everything can be linked to everything else without regard for purpose or meaning, the size of the Web and the arbitrariness of the links make it extremely difficult for people desiring specific information to find the information they seek.

The problem of retrieving relevant information from a corpus of hyperlinked elements is as new as the Net. The traditional way of ordering information depends on someone – a zoologist, a librarian, a philosopher – working out a classification scheme according to the meanings of the terms involved, and the interests of the users.[4] People can then enter new information into this classification scheme on the basis of what they understand to be the meaning of the categories and the new information. If one wants to use the information, one has to depend on those who wrote and used the classifications to have organized the information on the basis of its meaning, so that users can find the information that is relevant given their purposes.

David Blair, Professor of Computer and Information Systems at the University of Michigan,[5] points out that most 'traditional' classification schemes were explicitly or implicitly linked to a 'practice' of some kind. The life-sciences are the obvious example, but there are other less formal practices that form the foundation of such orderings, such as the timeless practice of farming, where the farmer must be able to identify many kinds of plants, animals, pests, diseases,