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## **New Economy, Financialization and**

## **Social Production in the Web 2.0**

Initially, in the 1990s, beginning with the decision to suspend the ban on the commercial use of the internet and with the introduction of the Web protocol, the meeting between the New Economy which the famous “dot.com”s were an expression of and financial capital was a happy pair. It was an economy of abundant capital and new labor cultures that developed in these short years from the mid-nineties to the May 2001 crash and saw a generation of 20 to 30 year olds, mostly North Americans and Northern Europeans, who founded a whole series of micro-businesses in the empty frontier space opened by internet commercialization. In this gold-rush atmosphere, these new North American and Northern European generations were literally invested by enormous flows of capital in a kind of generalized gamble that led the mass of investors to heavily finance a multitude of micro-businesses based above all on the selling of products and services online.<sup>1</sup>

The capital that invested in this young workforce was used to finance labor cultures that were very different from the previous ones. In fact, during this period, pushed by countercultural movements tied to the invention of the personal computer, there was an open polemic with the model of corporate computer labor *à la* IBM (suit and tie, the corporation hymn sung in the morn-

ing all together, the company as family).<sup>2</sup> The young entrepreneurs and dot.com workers used this capital to finance ludic cultures, where the classic divisions in the type of labor (with men responsible for the most part for programming and women responsible for design and social relations) still persisted, but in an informal atmosphere that prolonged the soft heterosexuality of university life (think Douglas Coupland novels, particularly *JPod*).<sup>3</sup> While the workplace atmosphere became ludic and more informal, wages as fixed income were integrated into a participation of variable income constituted by rent earned through stock actions. Sprinkled by a potent flow of financial capital—also in mutation—hardly anyone seemed to care that the rhythm of digital labor made agreements and compromises like those of videogames (see for example the traumatic and theatric un/masking of the true “boss” in Lars Von Trier’s 2006 film *Direktøren for det hele* [*The Boss of it All*]) and that the wages of the most part of new media employees were much lower than those of traditional media workers.<sup>4</sup> Under this financializational push, schizophrenically, a new labor culture emerged that, as noted by Andrew Ross, absorbed the refusal to work and transformed it into a new modality of labor that partially accounted for the needs for liberty and informality that had come from the precedent cycle of social struggles, imported the partial dissolution of the borders between life-time and work-time from academic and university labor and, in many cases, an entrepreneurship that combined self-education and self-exploitation.<sup>5</sup>

In the May 2001 crash, the so-called “dot.con” bubble clamorously popped, and for a moment it seemed that the New Economy—that dream of diffused financial liquidity able to sustain a new way to work and produce—had vanished. Was this the

scrapping of general intellect, as Franco Berardi sustained at the time, in favor of returning to a war economy, with its new police and security inflection, catalyzed by September 11th?<sup>6</sup>

Yet, the 2001 crash didn't so much mark the end of the New Economy, but rather its re-calibration. The process of financialization re-invested in the internet, but on new bases. It was, using the discourse of the New Economy guru Tim O'Reilly, a remodeling of investments towards a selection and an individualization of the new cultural and technological tendencies, and of the new economic models capable of building a "new New Economy" out of the net.<sup>7</sup> Enough with the simple re-mediation of economic models imported from the Old World, it was a matter of reflecting on what were the innovative economic models in the web. The key words in the post-crash New Economy were "social web" or "web 2.0." Web 2.0 businesses, O'Reilly says, all have something in common. Their success is based on their ability to attract masses of users who create a world of social relations on the basis of the platforms/environments made available by sites like Friendster, Facebook, Flickr, Myspace, SecondLife and Blogger. Nonetheless, O'Reilly underscores, the web 2.0 is not limited to these new platforms, but also involves applications like Google, in the extent to which they manage to harness and valorize user browsing; or other applications that again allow the extraction of surplus value from common actions like linking a site, flagging a blog post, modifying software, and so forth. Even Amazon, which first seemed like a simple bookstore re-mediation, survived the dot.com crash because, according to O'Reilly, it adopted a web 2.0 model. Amazon.com doesn't only sell books, but organizes the publication of reviews written by users about the books for sale and uses algorithms that, starting from the selection and acquisitions of the

users, are able to regroup and connect similar publications to then propose “suggestions” to site visitors.

The web 2.0 is a winning model for investors since it harnesses, incorporates and valorizes users’ social and technological labor. The frontier of innovation of the capitalist valorization process in the New Economy is the “marginalization of waged labor and the valorization of free [user] labor,” which is to say an unpaid and undirected labor, but which is nonetheless controlled.<sup>8</sup> It’s about attracting and individuating not only this “free labor” but also, in some way, variate possible forms of surplus value able to capitalize on diffused desires of sociality, expression and relation.<sup>9</sup> In this model, the production of profit for a business through the individuation and capture of “lateral” surplus value (selling advertising, the property and sale of data produced by user activity, the capacity to attract financial investments on the base of the visibility and the prestige of new global brands like Google and Facebook). In numerous cases, the surplus value lies in the savings of the cost of labor in that it is “externalized” to the users (like the externalization of videogame evaluation and beta-testing or user technical assistance).<sup>10</sup> For example, in Italy the mobile telephone company “3” has in all effects externalized technical assistance to a community of experts that answer user questions.<sup>11</sup> In exchange for their participation, the user-collaborators receive some type of more or less immaterial return (being a part of a community or social network; or, much more materially, having access to credit and various free products).<sup>12</sup>

The web 2.0, therefore, in its business version, seems to move on a terrain that is common to another movement in computer networks, the movement of social production or “peer to peer” (p2p). The p2p movement explores the possibility to create an economy

based on the mechanisms of social production in the net that is autonomous from the mechanisms of the valorization of capital, but not necessarily antagonistic to social production valorized by the capitalist organization of the web 2.0. The p2p movement maintains that it is possible to put into act forms of voluntary cooperation organized in the net able to give life to a new participative economy outside of the juridic system of individual property.

The idea of evolution is central in some forms of discussion and exposition of the p2p principles, and it is often posed explicitly against an antagonistic interpretation of social production from the Marxist tradition.<sup>13</sup> The evolutionist motif is preferred to antagonism and is used to sustain the possibility of thinking of the economy as an ecological system, that would allow for, at least at first, the coexistence of different forms of productive organization and social cooperation valorization that can coexist side by side, at least until the day when the success of p2p will render other forms of economic organization obsolete.<sup>14</sup> The p2p movement aims at developing autonomous financial tools (like a network of donators for example) or the production of new types of money able make up the income of those that participate in it.

Thus, the strategy would seem like a partial “escape” from the capitalist economy that however doesn’t exclude cohabitation and parasitism, able to, for example, take advantage of moments of “crisis” like the present one to impose the effectiveness of its models. A criticism that can be made against the p2p movement, in some way tied to the refusal of conflict as a determining element of the relation between p2p and the capitalist economy, is that it tends to produce a model of social cooperation mechanisms that is paradoxically poor from the point of view of the integration between the subjectivities that participate in it.

Sometimes this is translated, like in the exemplary case of an often cited and appreciated text on p2p, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* by the jurist Yochai Benkler, in readapting the idea of the classic economy's invisible market hand, that this time becomes the invisible hand of social cooperation miraculously able to assure the harmonic production of common wealth starting from the interplay of individual interests.<sup>15</sup>

## 1. The Internet's Guilt and Model Financing

The fundamental problem (and the fundamental resource) of the New Economy is therefore social cooperation, but a cooperation that crosses numerous degrees of sociality and activity, starting with the "lowest" level constituted by the simple cumulative action of clicking a site or searching for multimedia materials up to a "higher" level like open source software production.<sup>16</sup> In this sense, it is possible to individuate an abstract line that crosses the "new New Economy" of the web 2.0 and the mass financialization of the 1990s through to the new millennium. What seems to be fundamental in theorizing and reflecting upon the new network economy and the standard financing of micro-operators is the problem of the multiplication of interactions and individual choices able to produce surplus value. Such interactions are dispersed outside of capital's commanding capacities but nonetheless inside a more or less experimental logic of control.

It is significant that in the hottest days of the financial crisis that hit the global markets in October 2008, *Newsweek*, in an editorial entitled "The First Disaster of the Internet Age," turned the

reflectors on computer networks in general, accusing them of being among those responsible for the catastrophe.<sup>17</sup>

Here, it is worthwhile to go over what the argumentation is according to which the *Newsweek* editorial attributed the responsibility for the financial crisis to the internet. The editorial makes an explicit attack against the president of the US Federal Reserve, Alan Greenspan, who, before the dot.com financial crisis of 2001, had maintained that the internet would have transformed finance, making a “re-allocation of risk” possible through the “creation, valuation and exchange of complex financial products on a global base.”<sup>18</sup> *Newsweek* reproached Greenspan for not having foreseen how breaking up financial products (like the famous subprimes) would have created problems for the valuation of titles, triggering a search for cash that went beyond any rational valuation of titles and thus igniting the fuse of the future credit crisis.

For *Newsweek*, while it is true that the internet lowered transaction costs, it also “contaminated” financial capital insofar as it promiscuously grafted it into a new type of sociality, that of the web 2.0. The web 2.0 isn’t explicitly cited by the article, but it is significant how the criticism brought forth by *Newsweek* against internet financing repeats what has become a common place criticism of the web 2.0, which is the fact that it often leads to the production of closed worlds, or the so-called “echo chambers,” spaces, that is, where it is possible to confront oneself with similar people, closing oneself off in group narcissism from relations with different viewpoints.<sup>19</sup> It is within these echo chambers that the *Newsweek* editorial identifies spaces of aggregation of “builders of exotic new products for the now \$668 trillion [...] derivatives market.”<sup>20</sup>

Likewise, instead of rendering markets more democratic and transparent, the internet would have also created a “fog of data”

that would have helped some wiseguys on Wall Street to derail the global economy as easily as playing a videogame. If the dot.com financial crisis had been, all in all, an adolescent internet crisis, now it is the “first financial crisis of the mature internet age—a crisis caused in large part by the tightly coupled technologies that now undergird the financial system and our society as a whole.”<sup>21</sup>

The internet would have therefore brought on an intolerable multiplication of the number of economic operators whose joint behavior lacks that intrinsic rationality that permits the market to correctly assess commercial value. On the other hand, the ease with which it became possible to buy and sell shares exponentially multiplied the number of transactions that became practically untraceable and consequently increased market volatility. This interaction with the screen was also identified by an important scholar of financial markets, Karin Knorr Cetina, as a fundamental component of financial markets that fundamentally distinguishes it from other market models like anthropologic ones based on gifts and those based on the production of consumer markets.<sup>22</sup> Financial markets would then be based on a particular visual or scopic system, where the market becomes “fully visible on the screen—as a whole of pieces subjected to rapid, interchangeable, altogether contextualized changes” on which to act through a whole series of financial tools.” As a result, financial markets produce, for Knorr Cetina, a “global inter-subjectivity that comes from the characteristics of these markets as reflexively observed by the participants on their computer screens in an immediacy, synchronicity and temporal continuity.”<sup>23</sup>

According to *Newsweek's* editorial, this global inter-subjectivity driven by computer screens gave life to a “shadow-banking system” that, in 2007, was as big as the traditional one. What hap-



pened in the financial markets after the year 2000 was an inter-subjectivity not merely global, but also porous in respect to web 2.0 cultures, inserted in Facebook's social networks, influenced by the most famous bloggers' evaluations, that communicated through instant messaging tools like MSN used to conclude financial transactions. For *Newsweek*, the internet allowed for the proliferation of the "invention" of new financial tools in the same way in which it had facilitated technological innovation and at the same time made the financing of derivatives a kind of cross between "gossip and videogames [...].

Trivial conversations over instant messaging can mutate into trades. Everything gets flattened, with chatter about the weather right alongside setting up a \$100 million default swap. What matters when everything looks the same and is bookended with a happy face?"<sup>24</sup>

*Newsweek* concludes sustaining the necessity of another level of technological innovation, wishing for the creation of a new interface for financial operators on the web, a kind of electronic dashboard with quadrants able to indicate, through a color-coded system (curiously similar to the alert system created by the Bush administration to warn the population about the risks of terrorist attacks) that can facilitate the evaluation of financial markets.<sup>25</sup> In short, a new web protocol for finance capable of rendering communication transparent and in some way disciplining, through a correct evaluation, the irrational euphoria of financial operators.

The proposal to create a "financial dashboard" for the web would therefore discipline mass financial transactions, making them transparent through a new technological mediation and defusing the dangerous convergence between the social web of bloggers, Facebook, MSN and Myspace with finance. So, the

“dashboard” would add to another fundamental way in which computers become a part of the financial market assemblage, tied to the necessity of building a market “meaning” that can somehow make the chaotic dynamics of multiple interactions globally comprehensible and significant, as it would function in the realtime of distributed electronic communication. Actually, the “sense” of the market is increasingly constructed on the level of the formation of public opinion, like the aggregated meaning, nevertheless intelligible, of an ideal entity able to emit definite signals on what its perceptions, sensations and affects are. The post-crisis financial market is a market that, in newspapers and television reports, is capable of emotions like fear, anxiety, and panic, that trusts or doesn’t trust, and that, put synthetically, reacts like a single body to the signals that come from economic indexes, political statements and consumer behaviors.

For some financial operators, this global sense that the “financial dashboard” on one hand and the public opinion machine on the other attempt to take from the market comes from the use of econometric models and simulations. For example, “risk managers,” a specialized group of financial operators with technical skills and higher pay than simple operators, widely use statistical models and stochastic simulations taken from mathematicians and physicists from the ex-Soviet Bloc and India and now converted for use in the economy.<sup>26</sup> For example, the Black-Scholes model represents financial products over time, or the famous Monte Carlo, which Nassim Nicholas Taleb, a Lebanese professor of the “science of uncertainty” at the University of Massachusetts (Amherst) and discretely successful “risk manager” on Wall Street, speaks about his editorial success *Foiled by Randomness: The Hidden Role of Chance in Life and in the Markets*.<sup>27</sup> In fact, the Monte

Carlo simulator, originally developed by physicists at Los Alamos to study the chain reactions of the atom, can simulate a whole series of scenarios over time, determining a series of “evolutive paths” within a “phase-space” that can determine the possible variations of highly volatile market prices.<sup>28</sup>

Inspired by the work of the economist Robert Schiller, author of *Irrational Exuberance*, and famous for having doubted, already in the early '80s, the “efficient market” model,<sup>29</sup> Taleb relates price trends, which is to say the way in which the various scenarios dealing with price trends can vary according to the Monte Carlo simulation, not only to statistical and physical factors, but also behaviors, conducts and even physiological reactions of stock market operators. For example, Taleb stresses the importance of emotional kicks, the emotional sea-saw and the consequent shifts in the chemical state of the operators' body as a result of their continual exposure to market highs and lows.

What these models aim to simulate, maybe in vain, is therefore the behavior of an assemblage, that of the financial markets, that encompasses a multitude of variables and cultures like the social web and MSN instantaneous messaging cultures, mathematical and physical cultures dedicated to financial advising, and even the culture of financial operators in global cities like London, New York and Tokyo. Let's take, for example, the culture of the financial operators in the City of London, close to fundamental places of the English New Economy of Hoxton and Shoreditch.

Every weekday, a mass of deathly pale men in suits and ties pour from buses, trains and subways into the zone around the Liverpool Street station, only to reemerge eight or nine hours later in the bars and pubs of Old Street, Brick Lane, London Bridge, Clerkenwell Road and Hoxton Square in the search for extreme

highs and mercenary erotic experiences. For those who live in the areas neighboring the City (populations of artists, New Economy workers and African and Middle-Eastern ethnic minorities), the City operators are a particularly noisy and visible presence in the evenings and weekends, when they can be seen going in and out of night clubs to meet up in smoked-glass limousines (inside which the consummation of sex sprinkled with champagne and cocaine are easily intuited) around Hackney Road's strip clubs.<sup>30</sup> Adding another variable to the physiology of the financial markets, the surplus testosterone produced by these nocturnal activities actually makes the financial operator, according to a study by the Department of Physiology Development in Neuroscience of University of Cambridge, more efficient.<sup>31</sup> Here we might ask ourselves what uses these high levels of testosterone will be put to in the new working sector for financial operators that have lost their jobs following the crisis, which is mainly in university teaching education.<sup>32</sup>

## **2. Networks Vs. Network and Ethic-Artistic Experimentation**

From the point of view of new technologies, therefore, financial capital works like an assemblage of assemblages in which technical, cultural, social and physiological components intervene.

What Sandro Mezzadra has defined as being the process of capitalistic capture and valorization of the common concretely unfolds along a long chain where there is an attempt to construct the impossible measurement of the forms of biopolitical life that Toni Negri speaks about. It is difficult to understand what effects the new regulation efforts announced by many as an antidote for

the financial crisis will have. However, it is along this chain that any effort aimed at disrupting the dynamics of rent accumulation and exploitation of the common must act.

The question of how to struggle from assemblage against assemblage, which is the question of “net wars,” has been the object of numerous studies over the past few years, both by groups close to the American military establishment and from the point of view of the elaboration of new political practices calibrated for the net society.<sup>33</sup> In a recent publication, Eugene Thacker and Alexander R. Galloway propose a new political tactic for the age of assemblage (net) wars—the “exploit.”<sup>34</sup> Defining the struggles tied to the deployment of protocol net-vs.-net conflicts (from protocols that organize and control computer networks among others), Thacker and Galloway maintain that political resistance in the net (technological and biological, vital) implies the discovery of weaknesses or holes in existent technologies as its fundamental modality. The political practices connected with net vs. net struggles, assemblage vs. assemblage, characterized by a lack of distinction between organic and inorganic, technological and biological, imply the identification of leaks or holes in the very composition of networks and their immanent modalities of control. “The scope of political resistance in vital networks, then, should be the discovery of these exploits—or better yet: look for traces of exploits and you will find political practices.”<sup>35</sup> Such political practices, however, are not simply acts of resistance, but also involve the projection of potential shifts through the opening glimpsed and utilized by the exploit.<sup>36</sup> Obviously, this idea isn’t declaring traditional forms of political struggle obsolete, but rather asserts the necessity of working on another level, one constituted by the specific forms of control (and inevitable

weaknesses) of the great technological and biological assemblages that are organized in networks.

In reference to the notion of exploits, here I'd like to propose two ethic-artistic experiments that use a strategy parasitical to the economic-financial concatenations at the scope of inserting themselves in systemic holes to provoke catastrophes: the activity of a group of activists known as The Yes Men (a collective name associated to the Americans Andy Bichlbaum and Mike Bonanno and their admirers/imitators) and the GWEI project (Google Will Eat Itself, by Ubermorgen.com, Ludovico and Cirio).

The Yes Men, a noted group of cultural activists, act on the particular assemblage constituted by the network of corporate and government public relations that, in the Edward Bernays' public relations tradition, manipulate public opinion in order to produce consensus and benevolence levels for the corporative politics that they represent. Taking advantage of the systemic chaos induced by the multiplicity of communicative sources active in the net, and starting with assumption that the practice of public relations consists in masking the brutally cynical ideological assumptions of corporations and governmental organizations, the Yes Men create, for example, websites that perfectly imitate the ones of the targeted organization, and accept invitations sent to the site to participate at events, conferences and interviews in name of the imitated organizations.<sup>37</sup>

Assuming the authoritative aura of official spokespeople (for example they have pretended to be the spokespeople from the World Trade Organization, McDonald's, Halliburton, Exxon, Dow Chemical and even the Department of Housing and Urban Development of the US government), they've made proposals that, if shocking for many, they believe correspond to the base

ethos of these organizations. For example, they have proposed to audiences of investors and lobbyists to make vote selling legal and even making the poor eat recycled human excrement. It seems that the majority of these proposals were received in a relatively favorable way, or at least without indignation or shock, by their listeners. The Yes Men see to the publication and diffusion of both their proposals and the reactions of the investors and lobbyists in the general public.

Another strategy used by the Yes Men is again pretending to be spokespeople from large corporations and governmental organization and publicly announcing events like the closure of the WTO or the admission of guilt, and consequently the responsibility for compensation, of the damages made to the civil population by their toxins. In 2004, for example, one of the Yes Men was able to get himself invited by the BBC and publicly announced that Dow Chemical would compensate the victims of Bhopal, paying \$12 billion to the survivors. This false announcement, even if unmasked in a timely fashion by Dow Chemical, caused a 3.4% fall in the Dow stocks on the Frankfurt market and fifty cents on the New York market.<sup>38</sup> The Yes Men therefore identify, in the “information fog” mentioned by *Newsweek*, and in the proliferation of communication sources, a weak point in the assemblage of public relations that plays an important part in establishing, for example, stock prices on the financial markets. It seems that with carefully planned actions, they intend not only to cause micro-shocks that in the end are easily handled by the corporations under attack, but also to show the vulnerability of the assemblages dedicated to forming public opinion to these types of actions and to construct the market sense as it is expressed in the value of financial titles.

Another example of experimentation with protocol struggle practices, in an ethic-artistic version, is seen in the Google Will Eat Itself project (GWEI), an Italo-Austrian collaboration between Ubermorgen.com, Alessandro Ludovico and Paolo Cirio. GWEI works in a very simple way. The fundamental source of income for the search engine Google is its “AdSense” program that connects hundreds of thousands of little advertisements to web sites in the whole world. The authors of GWEI have opened a large number of AdSense accounts and put them in a series of hidden websites. Every time someone visits one of these sites, a mechanism is activated that pays the site network a micropayment from Google. Google pays monthly for these visits: once the necessary level has been reached, the amassed funds are used by the project authors to buy Google shares (therefore using Google to buy Google).

The provocation launched by this act of computer cannibalism is explicitly contextualized by a criticism of Google’s economic model and what the authors consider a fake benevolence. In “Hack the Google self.referentialism” (the theoretic text that explains the project’s assumptions),<sup>39</sup> the authors accuse Google of being a dictator who confines its subjects, not like an authoritarian or monopolistic government such as Microsoft, but a new type of monopoly in a certain number of strategic sectors in the net economy. Particularly, Google’s database seems like a veritable priceless patrimony of value that is in every effect privatized. Google’s database is immense and includes a series of preferences relative to news, images, prices, and email that can “be localized and statistically analyzed by cross checking locative, general and product searches.”<sup>40</sup> The recording of all this data, of user requests, is therefore “simply ignored by the users, which are hypnotized by



an almost perfect virtual machine.”<sup>41</sup> The web 2.0 has also allowed Google to get into the network of bloggers that, through a program like AdSense, feel they can participate in the profit generated by Google.

They accept to display this tiny text advertisement [sic] in exchange of a small amount of money for every click on them. This process is protected and monitored for preventing abuse. The final (actual) scenario is Google as the giant middleman. It sucks money from the advertisers offering a targeted portion of the global webspace. And it gives spare changes to the publishers for their collaboration. It sucks infos from the websites (and news, images, prices) and it releases it to the user’s queries. Being in the middle it is more and more the unavoidable balancing center of the system. But we’re not talking about a natural systems. We’re talking about business and predominance.<sup>42</sup>

The GWEI authors conclude highlighting this loophole, the leak or exploit, as Thacker and Galloway would call it, through which it seems possible to pick at the benevolent dictatorship of Google and others. “The greatest enemy of such a giant is not another giant: it’s the parasite. If enough parasites [sic] suck small amounts of money [...], they will empty this artificial mountain of data and its inner risk of digital totalitarianism.”<sup>43</sup>

Can these micro-leaks, individuated and exploited by the Yes Men and the authors of the GWEI project really sink the boat of financial capital and its perverse mechanisms? This isn’t the level on which these ethic-artistic experiments should be judged. It seems to me that they have an essentially heuristic value, in the

sense indicated by Galloway and Thacker.<sup>44</sup> Individuating exploits implies the necessity of opening an experimentation that touched the most ample series of concatenations possible, able to cross through all of sectors of neoliberal society hit by the effects of an economic governmentality that intensifies exploitation levels, mortifies life, barbarizes social relations and impoverishes subjectivities. On the other side of the black holes, maybe there isn't the horizon of a financial market reform or revolution, but a surmounting of financial capital and its dominion over society.

17. Cf. Antonio Negri, *The Porcelain Workshop: For a New Grammar of Politics*, Semiotext(e), Los Angeles 2008., p. 68.
18. Carlo Vercellone, "Trinità del capitale," in Aa.Vv., *Lessico Marxiano*, cit., pp. 181–196.
19. Antonio Negri, "Poteri e sfruttamento: quale nuova articolazione in una prospettiva marxiana?," <http://seminaire.samizdat.net/>, 2005. This article is, in our opinion, extremely interesting.
20. Antonio Negri, *Dall'operaio massa all'operaio sociale. Intervista sull'operaismo*, ed. by Paolo Pozzi and Roberta Tomassini, ombre corte, Verona 2007, p. 11 [our translation].
21. On this topic, and particularly on the political relevance of the struggles in defense of Susa Valley (Italy), we would like to indicate the text of Emanuele Leonardi, "Il movimento No-Tav in Valle di Susa; dispositivo-grandi opere e fermento soggettivo," in Adalgiso Amendola, Laura Bazzicalupo, Federico Chicchi and Antonio Tucci (eds.), *Biopolitica, bioeconomia e processi di soggettivazione*, cit., pp. 415–424.
22. Judith Revel, "Identità, natura, vita," cit., p. 147 [our translation].

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1. Cf. John Cassidy, *Dot.com. The Greatest Story Ever Sold*, HarperCollins, New York, 2002.
2. Cf. Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network and the Rise of Digital Utopianism*, Chicago University Press, Chicago, 2008.
3. Douglas Coupland, *Jpod*, Bloomsbury, London 2006.
4. Cf. Bill Lessard and Steve Baldwin, *Netslaves. True Tales of Working the Web*, McGraw Inc, New York, 1999; from the same authors, see the successive *Netslaves. Tales of "Surviving" the Great Tech Gold Rush*, Allworth Press, New York, 2003.
5. Cf. Andrew Ross, *No Collar: The Humane Workplace and Its Hidden Costs*, Basic Books, New York, 2004 and Rosalind Gill, *Technobohemians or the New Cybertariat? New media work in Amsterdam a decade after the web*, Institute of network cultures, Amsterdam, 2007.
6. Cf. Bifo, "Abbandonate le illusioni preparatevi alla lotta," 10 October 2002 (<http://www.rekombinant.org/old/article.html.sid=1840>).
7. Tim O' Reilly, "What Is Web 2.0. Design Patterns and Business Models for the Next Generation of Software," 30 September 2005 (<http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>).
8. Cf. Tiziana Terranova, *Network Culture: Politics for the Information Age*, Pluto Press, London 2004.

9. On protocol control, see Alexander R. Galloway, *Protocol: How Control Exists after Decentralization*, The MIT Press, Cambridge, Mass. 2004.
10. For an ethnography on the externalization of the user as “co-creator” in an Australian dot.com that works in the videogame market, cf. John Banks, “The Labour of User Co-Creators: Emergent Social Network Markets?” in “Convergence: The International Journal of Research into New Media Technologies,” vol. 14, n. 4, 401–418 (2008)
11. See the site <http://www.tre.it/public/home.php>. I'd like to thank Sandro Mezzadra for pointing out this Italian version of the web 2.0 as an externalization of user assistance services to the same user community.
12. For an analysis of participative internet culture and user relations with the media industry, see Henry Jenkins, *Convergence Culture: Where Old and New Media Collide*, NYU Press, New York 2006.
13. Cf. for example Henrik Ingo, Ethics, Freedom and Trust in “Re-public: re-imagining democracy” (<http://www.re-public.gr/en/?p=275>). On p2p as human evolution, see Michel Bauwens, “Peer to Peer and Human Evolution: Placing Peer to Peer Theory in an Integral Framework” (<http://integralvisioning.org/article.php?story=p2ptheory1>).
14. Cf. Tiziana Terranova, “Il potere della rete: Intervista a Michel Bauwens,” in *il manifesto*, 5 November 2008.
15. Cf. Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom*, Yale University Press, New Haven 2007. For an effective criticism of the invisible hand as miraculous market harmonizer, see Maurizio Lazzarato, *Puissances de l'invention. La Psychologie économique de Gabriel Tarde contre l'économie politique*, Les empêcheurs de penser en rond, Paris, 2002.
16. Cf. Benkler, *The Wealth of Networks*, cit., for a taxonomy of different levels of participation in network social production.
17. Cf. “The First Disaster of the internet Age” in *Newsweek*, October 2008, <http://www.newsweek.com/id/164588>.
18. Ibid.
19. Cf. Geert Lovink, “Blogging, the nihilist impulse” (<http://www.eurozine.com/articles/2007-01-02-lovink-en.html>).
20. The “First Disaster of the internet Age,” cit.
21. Ibid.
22. Cf. Karin Knorr Cetina, “The Market,” in *Theory, Culture and Society*, 23 (2006), 2–3 (Problematizing Global Knowledge: Special Issue), pp. 551–556 and

Karin Knorr Cetina and Urs Bruegger, "The Market as an Object of Attachment: Exploring Postsocial Relations in Financial Markets," in "Canadian Journal of Sociology" 25 (2000), 2, pp. 141–168.

23. Karin Knorr Cetina "The Market," cit., p. 551.

24. "The First Disaster of the internet Age," cit.

25. On the chromatic alert system introduced by the Bush administration as a part of a new neoconservative governmentality, see cf. Brian Massumi, "Fear the Spectrum Said," in "Multitudes. Compléments bibliographiques," 23, 4, January 2006 (<http://multitudes.samizdat.net/Fear-The-spectrum-said>).

26. For an example of an empirical-mathematical study of the "herd" behavior of financial operators aimed at creating better models, see Fabrizio Lillo, Esteban Moro, Gabriella Vaglica and Rosario N. Mantenga, "Specialization and Herding Behaviour of Trading Firms in a Financial Market," in "New Journal of Physics," 10 (2008) (<http://www.njp.org/>).

27. Nassim Nicholas Taleb, *Foiled by Randomness: the Hidden Role of Chance in Life and Markets*, Penguin, London 2004.

28. For a history on the use of the Monte Carlo simulator in the nuclear physicist community, see cf. Peter Galison, *How Experiments End*, University of Chicago Press, Chicago 1987.

29. Cf Robert J. Shiller, *Irrational Exuberance*, Broadway Business, New York 2006; also Cf. Christian Marazzi, *E il denaro va. Esodo e rivoluzione dei mercati finanziari*, Bollati Boringhieri, Turin 1998.

30. For a less anecdotal and more rigorously scientific exposition of the culture and sociality of financial operators, see cf. Caitlin Zaloom, *Out of the Pits: Traders and Technology from Chicago to London*, University of Chicago Press, Chicago 2006.

31. Cf. Amanda Gardner, "Testosterone Levels Among Financial Traders Affect Performance: British Study Found Those With More of the Male Hormone in the Morning Made More Money," in *USA News*, 14 April 2008. (<http://health.usnews.com/usnews/health/healthday/080414/testosterone-levels-among-financial-traders-affect-performance.htm>).

32. In October 2008, *USA Today* recorded a significant shift from the financial sector to the educational sector: cf. Greg Toppo, "Financial Sector's Loss Could Spell Gain for Teaching," in *USA Today*, 16 October 2008. ([http://www.usatoday.com/news/education/2008-10-15-meltdown-teachers\\_N.htm](http://www.usatoday.com/news/education/2008-10-15-meltdown-teachers_N.htm)). A similar tendency was seen in England by the *Times Educational Supplement*: cf. Kerra Madera, "Bust Causes Boom in 'Suit Recruits,'" in *Times Educational Supplement*, 23 January 2009 (<http://www.tes.co.uk/article.aspx?storycode=6007515>).

33. For an example of the first, see cf. John Arquilla and David Ronfeldt, “Networks and Netwars: The Future of Terror, Crime, and Militancy,” National Defense Research Institute, 2001. On networks that battle networks, see Antonio Negri and Michael Hardt, *Multitude: War and Democracy in the Age of Empire*, Penguin, New York 2005.

34. Alexander R. Galloway and Eugene Thacker, *The Exploit: A Theory of Networks*, University of Minnesota Press, Minneapolis-London 2007, pp. 21–22.

35. Ivi, p. 82.

36. Ivi, p. 81.

37. <http://www.theyesmen.org/>. See also the documentary “The Yes Men: Changing the World One Prank at the Time” (2003) and the following “The Yes Men Fix the World” (2009), and the book *The Yes Men, The Yes Men: The True Story of the End of the World Trade Organization*, The Disinformation Company, New York, 2004.

38. Cf. “Cruel \$12 Billion Hoax on Bhopal Victims and BBC,” in “The Times,” 4/12/2004 (<http://www.timesonline.co.uk/tol/news/uk/article398896.ece>).

39. Cf. [Ubermorgen.com](http://ubermorgen.com), Ludovico and Cirio, “Hack the Google self.referentialism” (<http://gwei.org/pages/texts/theory.html>).

40. Ibid.

41. Ibid.

42. Ibid.

43. Ibid.

44. Cf. their example of a biological and computer virus as examples of exploits in Galloway and Thacker, “The Exploit,” cit., pp. 81–97.

### Cognitive Capitalism and the Financialization of Economic Systems

The text presented here is a reduced version—as agreed with the author—of “Capitalisme cognitif et financiarisation de économies,” recently published in the volume *Les nouveaux Horizons du capitalisme*, edited by Gabriel Colletis and Bernard Paulré, Economica, Paris 2008. We’d like to thank the editor of Economica that authorized its partial translation from French to Italian by Stefano Lucarelli and its English translation by Jason Francis Mc Gimsey. Revisions by Cosma Orsi.

1. We’ve used the translation “intellectual activities” for the French expression “activités de l’esprit” knowing that the French version assumes tones that are lost in the English translation [translator’s note].