

Chapter II

The Parasite of The Commons: Digitalism and the Economy of 'Free Culture'

The parasite invents something new. He obtains energy and pays for it in information. He obtains the roast and pays for it with stories. Two days of writing the new contract. He establishes an unjust pact; relative to the old type of balance, he builds a new one. He speaks in a logic considered irrational up to now, a new epistemology and a new theory of equilibrium. He makes the order of things as well as the states of things – solid and gas – into diagonals. He evaluates information. Even better: he discovers information in his voice and good words; he discovers the Spirit in the wind and the breath of air. He invents cybernetics.

Michel Serres, *The Parasite*

Let's draw up the balance. In the beginning is production: the oil crusher, the butter churn, the smokehouse, the cheesemaker's hut. Yet I would still like to know what *produce* means. Those who call production reproduction make the job easy. Our world is full of copiers and repeaters, all highly rewarded with money and glory. It is better to interpret that to compose; it is better to have an opinion on a decision that has already been made than to make one's own. The modern illness is the engulfing of the new in the *duplicata*, the engulfing of intelligence in the pleasure of the new homogenous. Real production is undoubtedly rare, for it attracts parasites that immediately make it something common and banal. Real production is unexpected and improbable; it overflows with information and is always immediately parasited.

Michel Serres, *The Parasite*

The Biosphere of Machines: Enter the Parasite

The Living Energy of Machines and the Surplus

Behind technology, there is always energy – a surplus of living energy. Despite a few studies on the ‘materialist energies’ that constitute ‘media ecologies’, media theory today is predominantly the science of digital machines as a universe at a remove, or a world apart.¹ The digital has, consequently, become a hegemonic meta-model directed at organizing and arranging the whole of knowledge; the ‘language of new media’ has been articulated and software finally has gained its Software Studies. Nevertheless, an *energetic* understanding of the media economy remains absent from this theoretical trend, a focus on the *outside* of media, as they tend to be described only through internal languages and endogenic categories. It is not simply the classic McLuhanesque situation: ‘We shape our tools and thereafter our tool shape us.’ After decades of digital colonization, our tools have now begun to impose their own internal languages to describe themselves. Building an energetic interpretation of media means providing a description of the external energies traversing the machine, and in particular, a renewed concept of *surplus*: any system should be defined by the excess of energy operating it. Here, surplus is understood as the general form of all types of energy related to technology in its most fluid and turbulent state: electricity, data, information, communication, knowledge, imagery, money, labour, desire.

An important clarification, however, is needed to avoid misinterpreting surplus as simply a weak version of the philosophy of desire. If on one side of media studies we have the new philologists of digital code, on the other we encounter sociologists who celebrate the network as a ‘space of flows’.² *Code* and *flow* – essentially, the debate around media and networks can be summarized as a dialectic between these two concepts, reminiscent of those other terms from contemporary philosophy: *representation* and *production*. The notion of code inherits the modern gnosis of collective intelligence and the postmodernist cult of the simulation (think of *The Matrix*, where Baudrillard is cast as the philosopher of hackers). Conversely, the notion of flow is the bastard heir of French post-Structuralism, specifically, the philosophy of Deleuze and Guattari

(even despite the fact that Manuel Castells originally defined the 'space of flows' from the perspective of urban theory).³ *Flow* becomes – like *code* – an endless and abstract space of linear expansion; it is a cheap form of Spinozian ontology. Between *code* and *flow*, however, resides surplus. Surplus is the excess of energy, but also its accumulation. Most importantly, it always implies asymmetry, friction and conflict.

A new interpretation or contemporary revision of surplus is needed; a reading consistent with the classical definitions provided by Marx and Bataille, if something like a canonical tradition of the concept can be said to exist. In modern thought, the notion of surplus has been associated with both vitalism (as in excess of energy, desire and *élan vital*) and Marxism (as in surplus-value extorted from the workers and then capitalized). A general figure of surplus, however, can simply refer to different forms of energy traversing the machine. Contrary to the notion of *flow*, the concept of surplus can never be separated from its consumption, accumulation or sacrifice. Surplus includes its *negative*, rather than being an isolated *positive* process. A surplus of energy does not flow eternally – it is temporary like life, it breaks. If the academic interpretation of Deleuze and Guattari's philosophy of desire is still used to idealize network society as a space of endless flows, it is absolutely necessary today to illuminate the dystopian reality of this energy surplus.

In *The Accursed Share*, Bataille described society as the management of excessive energies that are constantly being reincarnated as new forms of the state and economy.⁴ From his perspective, even the contemporary mediascape can be framed as an ecosystem driven by the outgrowth of natural energies. Media are indeed feral habitats, whose underbelly is navigated daily by large torrents of pornography and whose surface becomes the battlefield for geopolitical warfare. Media are fed by the same excess energy that shapes economic and social conflicts. But has this media energy surplus ever been effectively described? If not, what understanding of energy is unconsciously utilized by traditions of media criticism? Bataille would perhaps be a perfect guide for an exploratory tour of the mediascape, but only after freeing him from the *academic expenditure* and *leisure subcultures* that have worked to neutralize his thought. Indeed, Bataille's vision of the world is not an accommodating one: he consistently maintained that living organisms manifested more energy than what was required to preserve a normal life.

Neither growth nor reproduction would be possible if plants and animals did not normally dispose of an excess. The very principle of living matter requires that the chemical operations of life, which demand an expenditure of energy, be gainful, productive of surpluses.⁵

An excess of energy (or wealth in the case of society) is intended for collective growth, but if the system can no longer grow, it is condemned to consume the excess 'gloriously or catastrophically'.⁶ What is the role of technology in contemporary production, consumption and the sacrifice of energy? To pose the question from a different angle: how can media culture be reconceived starting from a radical understanding of surplus? What is the place of surplus theory today and who are the radical thinkers capable of articulating these concerns?

To zoom out from the computer screen, the scenario appears vast and nebulous. The relations of surplus and excess are wide-ranging. The general economy of media is immersed in an accumulation of profits, capital and flows of surplus value, but also energy consumption and crisis, media violence and Internet pornography, the exploitation of online labour and digital alienation, massive file sharing and the entropy of blogs. There are multiple dark sides to the *technological contract*, but they appear as missing links in today's sanitized media debate.⁷ Even contemporary radical thought prefers accommodating descriptions and analysis of the real, with no room for uncontrollable energies. For this precise reason, Bataille's notion of 'general economy' is useful as a theoretical framework for considering the broad field of forces beyond traditional economic laws. Fluxes of money, workers and commodities should not be analysed from a quantitative point of view alone. Bataille recognized the productive forces behind the real economy, but to avoid any neo-romantic or conservative vitalism, he described them as 'biochemical energy'. Tearing media away from their abstract destiny in a digital matrix, communication can be re-inscribed into the metabolism of this biochemical paradigm. There is no 'Second Life', no autonomous cyberspace – all machines belong to the *bios*. Take the machinic exoskeleton of a car: it still requires biological energy to run, a fossil fuel. *Biochemical energy* or *living energy* is an anti-analytic concept that illuminates the unpredictable hypertrophy of media. *Living energy* as in *living labour* – to bridge the distance between (good) vitalism and Marxism, and break with any natural idealism.

The notion of living energy must be defended from simplistic readings of *biopolitics* (hyper-Foucauldian interpretations of Foucault), especially approaches that identify all forms of life with paranoid concretions of power. More importantly, living energy must be defended from the recent trend of *bioart*, an emerging field innocently supporting a dominant technological paradigm that reduces life to genetic and digital code. Academia and art circles honestly believe that life and technology can be progressively or critically merged while they play with DNA under the framework of popular genetic technologies. Interestingly, here the word *life* points always to *code* (the *logos*) but never to *energy* (the *bios*, in my interpretation). As life is trapped into a set of instructions, radical thought cannot escape the cage of a *born-again digital* scientism. ‘Data made flesh’ is both an artistic and neoliberal gnostic credo.⁸ The argument must be reversed to avoid both neo-scientism and obscurantism: how did the flesh start producing data? How did human evolution embrace the digital? Where does the living energy of machines flow? Some basic questions are necessary to inaugurate a ‘general economy’ of machines, and, hopefully, a new field of investigation for media culture and art.

More precisely, what kind of surplus are we looking for? Surplus of energy, libido, value, money or information? Machines are systems that both accumulate energy surplus and consume, transform and dissipate it. According to alternative media discourse, Bataille could only be enrolled to justify a sort of *digital potlatch*, a furious but ultimately sterile mass reproduction of digital copies. On the contrary, keeping with his theory of general economy, we must actually acknowledge how energy is maintained inside machines, crossing and feeding a multitude of devices. In *The Accursed Share*, Bataille himself considers labour and technology as an extension of life that accumulates energy and provides conditions for an enhanced reproduction of the species. Like ‘tree branches and bird wings in nature’, technology opens new spaces to be populated.⁹ Coincidentally, at the same time as Bataille’s writings, anthropologist André Leroi-Gourhan began to consider biological evolution as a model for technical development.¹⁰ *Anthropogenesis* necessarily implies *technogenesis*, as Bernard Stiegler reminds us, in a sort of ‘zootechnological determinism’.¹¹ But there is something more: technology accompanies the double movement of the excess of life – produc-

tion and dissipation. It must be said, however, from the greasy engines of early industrialization to the aseptic minimal design of the latest personal media, the living materiality of technology has been removed by 'Machinic Studies' – it has become but an unconscious everyday companion of the human libido.

What happens when information technologies and especially digital networks enter the mediascape and biosphere? What kind of energy do digital machines incarnate? Just a further extension of biochemical energy like the classical technologies that Bataille had in mind? My hypothesis is that digital machines are a clear bifurcation of the *machinic phylum*: the semiotic and biologic domains represent two different strata of evolution, and the digital machine a further bifurcation compared to analogue technologies. The energy of semiotic flows is not equivalent to the energy of material and economic flows. The separation of the digital stratum from the analogue was not a smooth transition. Digital technology developed an *intensive* scale of depth and a meta-modelling language that was completely missing in the analogue world.¹² From a political point of view, that separation implies that any attempt to directly translate the digital into the social only produces partial effects and confusion, if not disaster. Of course, the two spheres interact, but not in the symmetrical and specular way that digital culture is regularly conceived – an ideology that will be introduced as *digitalism*.

Michel Serres and the Cybernetic Parasite

Energy always flows in one direction. For those acquainted with the scenario of the network society and its celebration of the *space of flows*, a safari with Bataille along the ecosystems of excess is useful for rediscovering the dystopian nature of capitalism. In Bataille, economic surplus is strictly related to a libidinal excess, enjoyment and sacrifice. Yet between endless fluxes and their 'glorious expenditure',¹³ a specific explanatory model for the accumulation of surplus is still missing. Attuned to the undercurrents of French vitalism, Michel Serres captures the asymmetry of universal life in the conceptual figure of the *parasite*. In his influential book of the same title, Serres describes how the exchange of energy between organisms is never equal, but always constituted by a parasite stealing energy and feeding on another organism. From this basic premise, Serres builds a new universal economy:

‘The parasitic relation is intersubjective. It is the atomic form of our relations. Let us try to face it head-on, like death, like the sun. We are all attacked, together.’¹⁴

Cellular dystopia: at the dawn of the computer age (*Le Parasite* was originally published in 1980), the concept of the parasite becomes the pioneer of a materialistic critique of all the forms of thought based on a binary model of energy. For Serres, the elementary link is always ternary, involving a third element affecting the other two. Weirdly, the ‘semiconductors’ of Serres steal energy instead of computing:

Man is a louse for other men. Thus man is a host for other men. The flow goes one way, never the other. I call this semiconduction, this valve, this single arrow, this relation without a reversal of direction, ‘parasitic.’¹⁵

The dimension of energy excess can be either positive or negative, depending on the point of observation. If Bataille identifies the expenditure of energy after production, Serres demonstrates how ‘abuse’ has always been at work since the beginning of accumulation. ‘Abuse appears before use’ – with Marxist connotations, an *abuse-value* is introduced as preceding both *use-value* and *exchange-value*. In the language of Serres’ energy analytics, ‘it is the arrow with only one direction’. An asymmetrical arrow that absorbs and condenses energy in a natural continuum passing through organisms, animals and human beings: ‘the parasite parasites the parasites’, his mantra repeats.

In the early 1980s, the parasite made its appearance like a dystopian version of Deleuze and Guattari’s desiring machines: an endless exploitation of surplus is posited as a counterpart to the endless production of desire. The parasite is the anomalous molecular side of nature, society, economy and technology. It actually represents quite a serene account of human existence, despite Serres’ description of *The Parasite* as ‘the book of evil’. Serres places the human at the top of the parasitic hierarchy of ecology and environments, while society itself is inscribed within an implicit civil war of parasites.

History hides the fact that man is the universal parasite, that everything and everyone around him is a hospitable space. Plants and

animals are always his hosts; man is always necessarily their guest. Always taking, never giving. He bends the logic of exchange and of giving in his favour when he is dealing with nature as a whole. When he is dealing with his kind, he continues to do so; he wants to be the parasite of man as well. And his kind want to be so too. Hence rivalry.¹⁶

Serres describes society and economics as an extension of natural forces. His language even favours living figures to technological metaphors. Recognizing the Leviathan of both the collective and microparasites, Serres inaugurates a zoomorphic democracy. His philosophy is directed toward 'reversing anthropomorphism' and proposing 'an organic model for the members of a society', but without promoting a new totality through naturalistic nostalgia.

We parasite each other and live among parasites. Which is more or less a way of saying that they constitute our environment. We live in that black box called the collective; we live by it, on it, and in it. It so happens that this collective was given the form of an animal: Leviathan. We are certainly within something bestial; in more distinguished terms, we are speaking of an organic model for the members of a society. Our host? I don't know. But I do know that we are within. And that it is dark in there.¹⁷

In the end, are we confronted finally with a global scenario of pure parasitic life? Somehow, for Serres, the parasite is more a technical or neutral concept with no inherent political connotations. Parasites produce life: 'Everything ferments; everything rots. Everything changes.' In his history of humankind, the 'alliance with the parasites' is understood as being a constituent element of the process of anthropogenesis and the history of civilization (for instance, with food processing and health care: bread and wine are fermented and purified by good parasites, a fact widely accepted by modern science). Symbiosis with other organisms is a complex relation. Serres reveals how endo-colonization is a common practice of the relation between humans and nature.

Our relation to animals is more interesting – I mean to the animals we eat. We adore eating veal, lamb, beef, antelope, pheasant, or

grouse, but we don't throw away their 'leftovers'. We dress in leather and adorn ourselves with feathers. Like the Chinese, we devour duck without wasting a bit; we eat the whole pig, from head to tail; but we get under these animals' skin as well, in their plumage or in their hide. Men in clothing live within the animals they devoured. And the same thing for plants. We eat rice, wheat, apples, the divine eggplant, the tender dandelion; but we also weave silk, linen, cotton; we live within the flora as much as we live within the fauna. We are parasites; thus we clothe ourselves. Thus we live within tents of skins like the gods within their tabernacles. Look at him well-dressed and adorned, magnificent; he shows – he showed – the clean carcass of his host.¹⁸

The symbiosis with machines is complex too. Serres shares the same vitalism of Bataille, but additionally provides a revolutionary punctual model of the relation between material and immaterial, biologic and semiotic, economy and media. The organic model of the parasite is also embraced as the core concept of a new (organic) understanding of media ecosystems.¹⁹ Indeed, prophetically, Serres introduced cybernetics (and its extension, the network) as a late manifestation of the parasitic food chain.

The parasite invents something new. He obtains energy and pays for it in information. He obtains the roast and pays for it with stories. Two days of writing the new contract. He establishes an unjust pact; relative to the old type of balance, he builds a new one. He speaks in a logic considered irrational up to now, a new epistemology and a new theory of equilibrium. He makes the order of things as well as the states of things – solid and gas – into diagonals. He evaluates information. Even better: he discovers information in his voice and good words; he discovers the Spirit in the wind and the breath of air. He invents cybernetics.²⁰

After depicting the 'information revolution' as a truly emancipatory movement for decades, it is quite difficult to acknowledge its parasitic side. Furthermore, Serres applies the same parasitic model to intellectual labour and to the network itself (as *techné* is an extension of the deceptive nature of *logos*): 'This cybernetics gets more and more complicated,

makes a chain, then a network. Yet it is founded on the theft of information, quite a simple thing.²¹

Serres' opportunistic relation between intellectual and material production may sound traditionalist, but even when Negri and Lazzarato began to describe the 'hegemony of intellectual labour', the exploitive dimension of capital over mass intellectuality was clearly apparent.²² Today, the *immaterial parasite* (as the symbiosis of digital networks and immaterial labour can be interpreted) has become endemic – everyone is carrying an intellectual and cybernetic parasite. What then happens to the notion of multitude, intended as the self-organization of the general intellect into an antagonistic subject, when the parasite of intellectual labour enters the political arena? What happens to Free Culture, digital commons and peer-to-peer paradigms when the network infrastructure is itself portrayed as a vampiric tentacular creature? From this perspective, it is finally necessary to reintroduce a sharp asymmetry between the semiotic and the social, the technological and the biological levels – between the material and the immaterial. If network technology must be recognized as a new sociopolitical form, this can only be done on the basis of a dynamic and tactical alliance with an asymmetrical and dystopian economy.

The parasite re-orientates the energetic relation between machines and life. Without trying to rewrite the history of communication in one move, media have routinely been described according to particular recurring models: information channels, body prostheses, mimetic devices, desiring machines, virtual worlds, autonomous devices and, more recently, cooperative and social networks. Cyberpunk and cyborg subcultures (respectively, online and offline hybrid organisms) represented the founding mythologies of the new techno-multitudes, but their dystopian and parasitic nature has gradually been cleansed through a progressive technological fetishism. Deleuze and Guattari's concept of desiring machines has found a similar destiny, even if it represented a rigorous conceptualization of the machinic colonization of the biosphere against both vitalism and mechanicism. And a *binary representation* of the machine is still maintained today by legions of media artists and academics following this tendency. I want to stress the binary model of the cyborg as the real subtext of media culture since its foundation, binary because the notion of cyborg is ultimately

synthesized through a dualistic exchange of energy. The challenge is not to perpetuate anthropocentrism and techno-fetishism, but to reveal which understanding of surplus is unconsciously inscribed in these models of media. The founding figure of the cyborg does not provide any economic understanding of the biochemical energy exchanged through technology. To understand the parasitic dimension of the network, it is more useful to refer to Deleuze and Guattari's *apparatus of capture* developed in *A Thousand Plateaus*. For this concept, surplus is extracted according to the 'trinity formula' of rent, profit and taxation. However, the third age of technical machines also carries along its own unique forms of *machinic enslavement* and *social subjection*.²³ 'If motorized machines constituted the second age of technical machines, cybernetic and informational machines form a third age that reconstructs a generalized regime of subjection.'²⁴

A decade before in *Anti-Oedipus*, Deleuze and Guattari introduced three types of surplus value: code surplus, flow surplus and machinic surplus. Machinic surplus, in particular, is the surplus extracted by a machinic assemblage (freely composed by humans, tools, animals, and so forth). The merit of Serres is to encapsulate these conceptual elements in another elegant formula: the parasite.

After three decades of 'machinic' literacy, a move towards a dystopian *zoology of machines* must be established – even if only to rescue Deleuze and Guattari's thought from becoming a *technical language* or an academic *procedural knowledge*. However, this new 'animal' model for digital culture is also needed to fight the combinatorial model of genetics that has become the dominant toolbox whenever life is approached. Following Deleuze and Guattari's *geologism* and DeLanda's *new materialism* of morphogenesis, more effort should be focussed on a *new organicism*.²⁵ A partial or open organicism is required as an affective approach to the world of machines positioned against the dominance of *digitalism* (as I define the cult of the *code* against the materiality of *energy*). Organicism does not mean a new vitalism, but an acknowledgement of the dystopian reality driven by unstable cycles of surplus, entropy and negentropy. Capital, machines and organisms need surplus to breed. A natural or artificial ecosystem is never generous. There is always an asymmetrical arrow crossing it, an asymmetrical tension dividing the political field.

Through the conceptual figure of the immaterial parasite, I want to describe the transformation and exploitation of the *bios* by the technological and semiotic domain. Material energy and economic surplus are not simply absorbed or consumed by new semio-technologies, they are also reallocated in favour of specific nodes of the machinic network. Like a natural form of life, the immaterial parasite runs efficiently and consumes less energy than what it accumulates to function. The immaterial flow extracts surplus from material energies through continuous exchanges and assemblages between different domains. Electricity turns to data, data to communication, communication to desire, desire to money, money to knowledge, knowledge to technology, and so on. The media economy is a symbiosis of different strata, a continuum of horizontal and vertical exchanges, but it is certainly not a flat market based on purely cooperative exchanges.

The immaterial parasite initially functions as a spectacular device. Simulating a fictional world, building a collaborative environment or simply providing communication channels, the immaterial parasite forms a symbiosis of desire with its host. The biological definition of parasite is crucial since it always implies an *alliance* and *non-hostile relation*: the parasite never desires the death of its host. The parasite is not a vampire, but a symbiont. In this sense, the relation between the machine and the human is a relation of mutual desire, of seduction and fetishism. Similarly, even the economy of the immaterial parasite is not based on direct exploitation and profit extortion. On the contrary, economic rent becomes the dominant form of metabolism. The immaterial parasite always belongs to a diverse family and can survive in different kinds of habitat. Its tentacles, for instance, can innervate the metropolis (real estate speculation through the 'creative cities' hype), the mediascape (rent over material infrastructures and online space monopolies), the software industry (exploiting Free Software to sell proprietary hardware), the knowledge economy (revenue on intellectual property), the financial markets (stock exchange speculation on collective behaviour) and many other potential spaces.

Diagram of an Immaterial Parasite

The diagram of an immaterial parasite is not simply a topography of forces, but an economic balance of energies and surpluses. The im-

material parasite (more precisely a *digital parasite*, as portrayed figure 1 is a *dispositif* that extracts surplus through the technological infrastructure that connects the semiotic with the biological sphere. The concept of the immaterial parasite is conceived against the autonomy of the digital sphere. Borrowing the language of Deleuze and Guattari, who effectively described concepts in a materialistic and constructivist way, we may say an immaterial parasite is an *agencement* between digital life and everyday life, an apparatus that cuts through semiotic, technological and biological space. The opposition *material-immaterial* [1] should be introduced to describe the specific habitat of this interstitial organism, but in actuality, this opposition works to simplify a more complex stratification. The media ecosystem is composed by semiotic, technological and biological layers, and below that, by an energetic and nonorganic substratum (similarly, even computer network protocols have an architecture based on a stratification of layers).²⁶ The exchange of energy between these strata is never symmetrical and fluid: for instance, semiotic production through digital media consumes a small amount of bioenergy compared with material production proper. In fact, what really consumes energy and allocates surplus is the material substratum of the technological infrastructure, where the greatest amount of energy is exchanged (and money as well as physical labour and commodities) [4]. The online economy constantly manages offline surplus value.

Humans and animals feed on the same energy that drives technology: they are *biological machines*, to use a retroactive term that keeps them on the same technological level [2]. Biological machines represent the production and consumption of ‘wet’ energy – that is, living energy, including *living labour*. Similarly, intellectual labour can be considered living labour, since it requires the body and energy to be produced. But when digital media reach a critical mass, an anthropocentric shift occurs: immaterial labour becomes a fixation on software and digital communication, a complex that can be defined as *code fetishism*. This notion is proposed hypothetically as the last incarnation of commodity fetishism, and as the libidinal engine behind the radical aspects of digital life (such as the cognitive enjoyment of hackers for coding).²⁷ Software programs are actually a simulation of organisms and machines: in this sense, they are *digital machines* [3], even if they

are perceived as immaterial and do not directly exchanging bioenergy, but data. They establish a sort of fictional economy in the virtual matrix through the free and endless reproduction of information. Within the self-referential sphere of code fetishism, this online economy is presented as perfectly smooth and symmetrical, or equal and democratic when transposed into a social context. On the contrary, a differential of real energy (and social positions) is always exchanged through the hardware layer of computers and the technological infrastructure [4].

Digitalism is, for now, a basic designation for the widespread belief that Internet-based communication can be free from any form of exploitation and will naturally evolve towards a society of equal peers. From an economic perspective, advocates of digitalism believe that 'energy-free' digital reproduction can affect energy-expensive modes of material production. Digitalism is a catchall term for an attitude that persists to varying degrees throughout many contemporary subcultures, such as Free Software supporters, the Creative Commons initiative, the art world inspired by Open Source, Internet-based forms of activism, etcetera. In the digitalist paradigm, the notion of *peer production* has a central role: each node of the network has virtually the same power as any other. Digitalism adheres to a belief in the network as a horizontal democracy of nodes that produce and exchange on an equal basis. Peer production implies an abstract *binary model*, while the production always follows a *ternary model* [5], as Serres has shown. In the binary model of the network, there can be no room or explanation of surplus: two nodes both produce and exchange in a symmetrical way. Alternatively, a clear asymmetry is the key engine of the ternary model. In the actual economy, there is always a surplus produced since the exchange is never equal on the molecular scale. The ternary model is the diagram of Serres' parasite and the law of nature, constantly dominated by excess, entropy and negentropy. A 'socialism' of networks can only be established after managing the asymmetry of the ternary ecosystem, not by removing it through the abstraction of a binary circuit.

Ultimately, the *immaterial parasite* [6] is an assemblage of semiotic, technological and biological strata that extracts an energy surplus (in the form of labour as well as money or libidinal investments). The im-

material parasite functions through the material infrastructure and allocates a surplus to another economic entity (mainly private companies, but occasionally other users or state organizations). In economic terms, these parasitic dynamics do not point to the extraction of surplus via a direct profit (from labour) but through monopolistic rent, applied on the technological infrastructure or on the basis of a dominant market position [7]. The digital parasite is a specific case of technological rent: new monopolies applied on the material infrastructures that host Internet life and even the so-called digital commons. The consciousness of the parasitic economy behind network technologies is nothing more than a new *materialism*. However, the two terms *digitalism* and *materialism* do not form an easy binary opposition: a materialistic perspective foregrounds the asymmetry of the immaterial-material relation and the *arrow of surplus*. By implying the presence and influence of an immaterial layer, materialism can take the name of *meta-materialism*. Digitalism, on the other hand, claims the status and primacy of the informational over materiality.

A practical example of technological parasitism is the crisis of the music industry in the early 2000s, a situation provoked by the massive sharing of audio files over P2P networks. Here, the economic effect of digital reproduction is clear: 'fair use' on a global scale has now weakened the accumulation of intellectual property revenues. More accurately, file sharing over the Internet has killed the sales of the music medium itself (the compact disc), but at the same time, it has sustained a new generation of personal media like MP3 players and iPods. Economic interests were re-organized around a monopoly of physical media and infrastructure rather than intellectual property rights. P2P networks may have weakened the music industry, but the surplus has been reallocated in favour of companies producing new forms of hardware or controlling access to the Internet. It represents a passage from an economy based on IP to an economy based on the parasitic exploitation of a common space and shared resources (the legal or illegal status of these resources is not a crucial factor for major corporations). This relation between a cognitive product and its material medium, moreover, can broadly be applied to other cases, as will become clearer in the following section on economic rent and cognitive capitalism.

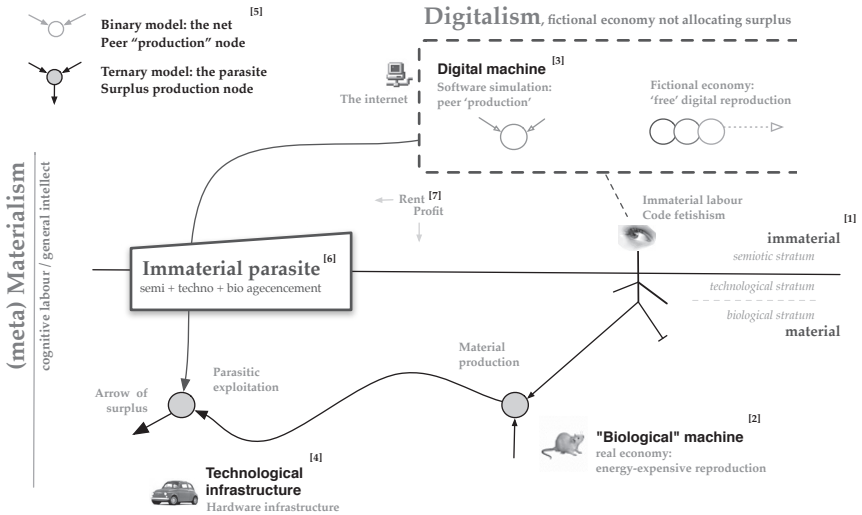


Diagram of an immaterial parasite

Intermezzo: Baudrillard in the Whirlpool of Sign

Baudrillard and media studies are a fatal liaison, and a good example of the weak characteristics of a particular tradition of radical thought (really, a *radical-chic thought*). To consistently map out the critical aspects of surplus theory, it might be useful to compare the digital culture of the 2000s with the reception of the information revolution in other cultural contexts. The removal of the ground of production (and implicitly of surplus) had a crucial role in the development of early postmodern thought, in particular, the work of Jean Baudrillard. His theoretical model was initiated in the early 1970s as a critique of Marxist conceptions of *use-value*, *exchange-value* and the 'ideology of production'. In effect, Baudrillard attempted to rewrite a theory of value by embracing the regime of broadcast television as the only existential and political horizon. Starting with Marx, his apocalyptic vocation took over and exploded in the early 1980s, a trajectory clearly visible in his books' titles: *For a Critique of the Political Economy of the Sign* (1972), *The Mirror of Production* (1973), *Symbolic Exchange and Death* (1976), *Seduction* (1979), *Simulacra and Simulation* (1981) and *Fatal Strategies* (1983).

Still influenced by the atmosphere of the 1960s, the early Baudrillard was obsessed by the semiotic value of the commodity. He then interpreted economic value as fatally destined to become pure semiotic meaning under the Empire of Signs, and so, a pure phantasm, ready for the long winter of the 1980s. Marx's industrial model of production was dismissed as no longer appropriate for deciphering the becoming-immaterial of the commodity. While surplus usually circulates through signs, media, commodities or factories, Baudrillard extracted value as an artificial flower without roots, as meaning without the surplus that constitutes it. On the contrary, value is not only immaterial, but always connected to a surplus across a more general ecology of excess. The value is created between a sign and a surplus. Yet according to Baudrillard in *A Critique for the Political Economy of the Sign*:

It is because the structure of the sign is at the very heart of the commodity form that the commodity can take on, immediately, the effect of signification: not epiphenomenally, in excess of itself, as 'message' or connotation, but because its very form establishes it as a total medium, as a system of communication administering all social exchange. Like the sign form, the commodity is a code managing the exchange of values.²⁸

Commodities themselves became media (but the process also followed another direction: the new episteme of mass media permeated the soul of old political thought where it was celebrated and valorised). Mass media projects around itself a highly material economy, but Baudrillard's interpretation followed a strictly immaterial line: they only project virtual surplus value. No flows of energy, electricity, desire, labour or bodies are involved. The fact that the material surplus was obliterated in this way, long before the rise of the network society and under a different media regime (when television screens rather than computer screens were dominant), reveals something about the difficult relation of radical thought with technology and its obsessions.

Baudrillard, however, represents the opposite side of this 'unconscious removal' of surplus: not the politically correct and serene plateaux of distributed collaboration, but the fatalistic apocalypse of multiplied simulacra. Cutting the ballast of material production, Baudrillard's

theory departs for the sphere of hyperreality. The power of signification, simulation and valorisation of the sign literally takes off from its grounded moorings and becomes a perfect self-referential economy. Like the digitalists, Baudrillard abandons all links to the productive machine and embraces the gnostic temptation of the sign. The simulacrum is to Baudrillard as the digital code is to the Free Culture. In *Symbolic Exchange and Death*, the *economic* revolution of simulacra is described like this:

A revolution has put an end to this 'classical' economy of value, a revolution which, beyond the commodity form, stretches value to its most radical form. . . . Gone are the referentials of production, signification, affect, substance, history, and the whole equation of 'real' contents that gave the sign weight by anchoring it with a kind of burden of utility – in short, its form as representative equivalent. All this is surpassed by the other stage of value, that of total relativity, generalized commutative, combinatory simulation.

This means simulation in the sense that from now on signs will exchange among themselves exclusively, without interacting with the real (and this becomes the condition for their smooth operation). The emancipation of the sign: released from any 'archaic' obligation it might have had to designate something, the sign is at last free for a structural or combinatory play that succeeds the previous role of determinate equivalence.²⁹

Instead of detecting the frictions and asymmetries of the new cultural economy, Baudrillard indulges in a dandyish necrophilia of the System. Like those moments in Marx where capital is cause to its own crisis, Baudrillard takes capital as the primal force and unique motor behind the cosmos of simulacra. Value becomes totally virtual, agency for social subjects is removed and any political gesture disappears as 'undecidable':

It is not the revolution that puts an end to all of this, but capital itself. Capital abolishes social determination through the mode of production, and substitutes the structural form of value for the commodity form. And it is capital that determines the current strategy of the system. This historical and social mutation can be observed at every level. The era of simulation is thus everywhere initiated by

the interchangeability of previously contradictory or dialectically opposed terms. Everywhere the same 'genesis of simulacra': the interchangeability of the beautiful and the ugly in fashion; of the right and the left in politics; of the true and false in every media message; of the useful and the useless at the level of objects; and of nature and culture at every level of meaning. All the great humanist criteria of value, all the values of a civilization of moral, aesthetic, and practical judgement, vanish in our system of images and signs. Everything becomes undecidable. This is the characteristic effect of the domination of the code, which is based everywhere on the principle of neutralization and indifference.³⁰

Baudrillard's pathetic conclusion is now famous: the political horizon of simulacra can logically terminate only with social apocalypse or suicide. The claustrophobia of code has no other possible exit strategy.

Is it thus necessary to play a game of at least equal complexity, in order to be in opposition to third-order simulations? Is there a subversive theory or practice more random than the system itself? An undetermined subversion, which would be to the order of the code what revolution was to political economy? Can we fight DNA? Certainly not with the blows of class struggle. Can we invent simulacra of an even higher logical (or illogical) order, beyond the current third order, beyond determination and indetermination? If so, would they still be simulations? Perhaps only death, the reversibility of death, is of a higher order than the code.³¹

The death of materiality is an effect of the abstract power of the sign. If the simulacrum is the extension of the virtualization already present in money and the commodity form, the political response should be to underline the conflict between the new order and the old; recognizing the asymmetries and the parasitic relations of the new semio-economy, rather than pursuing a 'higher logic' of greater abstraction. Throughout history, surplus remains placidly material, often organized through immaterial signs. Baudrillard revealed the radical economy of signs in unsuspected times, but was finally drawn into that seductive whirlpool. The consequences of that fatal attraction are still visible today.

Digitalism: The Impasse of Media Culture

The Flesh Is Made Code

Digitalism is a sort of modern, egalitarian and cheap gnosis, in which the religion of knowledge has been replaced by the Enlightenment cult of the digital network and its code. Erik Davis, for instance, extensively documented this mystical undercurrent of the information society in his book *Techgnosis*.¹ Like a transversal sect, the peculiar economic credo of digitalism has many followers in both the core apparatuses of power (the Californian Ideology) and the communities of political activists (the supporters of Free Culture).² In particular, the theoretical and political deployment of digitalism can be tracked through the work of a new generation of thinkers, such as Lawrence Lessig and Yochai Benkler. A summary is useful here to anticipate some general traits or characteristics.

Ontologically, the techno-paradigm of digitalism believes that the semiotic and biologic domains are positioned in parallel or *specular* to each other. As a consequence, the digital can easily render the offline world as a sort of Google-like utopia of universal digitization.³ A material event can be translated and mapped onto the immaterial plane, and *conversely*, the immaterial can easily be embodied in materiality. This second move – the ease of this transition – is the passage of a millenary misunderstanding that is traditionally described in terms of logocentrism (the power of the divine Word onto the world). Economically, digitalism states that this almost energy-free digital reproduction of data can affect energy-expensive material production, eventually taking it over and triggering social change. The idea of a ‘peer-to-peer society’ is based on such a virtuous circle supposedly governed by online *free cooperation*. Certainly, digital programming can dematerialize any communications technology and reorganize old media forms (email replacing mail, etcetera), but it cannot *easily* affect biomass production and, in particular, its surplus economy. Politically, digitalism believes in a mutual gift society. The Internet is supposed to be virtually free from any exploitation, tending naturally towards a democratic equilibrium and natural cooperation. Here, digitalism works as a disembodied politics

with no acknowledgement of the offline labour sustaining the online world (a *class divide* that precedes any *digital divide*). Ecologically, digitalism promotes itself as an environmentally friendly and zero-emission machine against the pollution of older Fordist modes of industrial production, and yet it is estimated that an avatar on Second Life consumes more electricity than the average Brazilian.⁴

Just as Marx emphasized commodity fetishism at the opening of *Capital*, code fetishism should be considered as the basis of the network economy. Indeed, a whole tradition has originated from Marx's foundational reading, inspiring media philosophers from Debord to Baudrillard. Today, however, the fetishism of code is shared by both alternative thought and neoliberal discourse. 'God Is The Machine', Kevin Kelly's digitalist manifesto, proclaimed these points distinctly: computation can describe all things, all things can compute, all computation is one.⁵ At the same time, code is the DNA of any virtual world, the substance of immaterial labour, the battlefield of intellectual property and the fuel for the collective intelligence of programmers. It is a sort of intelligent object that moves far beyond Marx's original premonitions on commodities:

There it is a definite social relation between men that assumes, in their eyes, the fantastic form of a relation between things. In order, therefore, to find an analogy, we must have recourse to the mist-enveloped regions of the religious world. In that world the productions of the human brain appear as independent beings endowed with life, and entering into relation both with one another and the human race.⁶

Actually, code may both represent and manage the productive relation between workers more effectively than the commodity form. Code as a form of language and machinery is fundamentally *relational* and can easily establish its own fictional economy (as Baudrillard already observed). The commodity fetishism of the nineteenth century has become the code phantasmagoria of the twenty-first century, to the extent that the materiality of the commodity is effectively removed. According to the quasi-religious tradition mentioned before, code fetishism incarnates again the credo of the supremacy of the Word over material production.

Digitalism is one of those political models influenced by technological evolution and not social conflict – as McLuhan repeatedly stated: ‘We shape our tools, and afterwards our tools shape us.’⁷ The Internet, in the beginning, was fuelled by the political dreams of the American counterculture of the 1960s. Today, according to the tradition of post-Operismo, the Network is simultaneously the form of Empire and the tool for the self-organization of the Multitude.⁸ Only in Anglo-American culture, however, do we find a faith in the primacy of technology over politics. If activists today apply the Free Software model to traditional artefacts and talk of a ‘GPL society’⁹ and ‘P2P production’,¹⁰ this is a consequence of the belief in a pure symmetry of the technological over the social.

In this sense, the definition of Free Culture gathers together all those subcultures that have established a fundamental political agenda around the free reproduction of digital files. The kick off was the slogan ‘information wants to be free’, launched by Stewart Brand at the first Hackers’ Conference in 1984. (Interestingly, the original statement contained a much more nuanced meaning in context: ‘On the one hand information wants to be expensive, because it’s so valuable. The right information in the right place just changes your life. On the other hand, information wants to be free, because the cost of getting it out is getting lower and lower all the time. So you have these two fighting against each other.’)¹¹ Later, the hacker underground boosted the Free Software movement and a new chain of keywords was generated: Open Source, Open Content, Gift Economy, Digital Commons, Free Cooperation, Knowledge Sharing and other do-it-yourself versions like Open Source Architecture, Open Source Art, and so on. *Free Culture* is also the title of a famous book by Lawrence Lessig, founder of the Creative Commons initiative.¹² Rather than focussing on the social value and crucial battles of the Free Software movement within the digital sphere, however, what should finally be addressed is the possibility of an offline application of this paradigm.

There is an old saying that still resounds: *the word is made flesh*. A religious unconscious seems to be at work behind the contemporary technological credo. In his book *Words Made Flesh*, Florian Cramer clearly illustrates the genealogy of code culture in the ancient traditions of the West belonging to Judaism, Christianity, Pythagoreans, the Kabbalah and Hermeticism.¹³ As Serres would suggest, however, the primordial

adage should be reversed to unveil its hidden dimension or underside: *the flesh is made code*. The knowledge itself is the parasitic strategy of the flesh. The spirit proceeds from the animal. The flesh comes first, before *logos*. There is nothing digital in the digital dream. Enmeshed with a global economy, every bit of 'free' information carries its own microslave like a forgotten twin.

The Ideology of Free Culture

Free Culture and Creative Commons are the two leading keywords for both progressive institutions and activist counterculture during the first decade of the 2000s. Literature on *freeculturalism* is vast, usually divided in two fronts: libertarian supporters and neoliberal conservative critics.¹⁴ If Lawrence Lessig's *Free Culture* is the manifesto, Andrew Keen's *The Cult of the Amateur* is the reactionary response.¹⁵ From another perspective, however, the literature on freeculturalism can be critically examined through the issue of *surplus* and the underlying model of surplus-value that remains invisible or unacknowledged. Starting from the main authors like Stallman and Lessig, a fundamental question would be: where does the surplus production reside in the so-called Free Society? Is the Free Society a society liberated from the contradictions of surplus? The whole battle for Free Software and Free Culture has been established around issues of *property rights* rather than *production*. However, on closer examination, the spectres of surplus always re-emerge as a persistent concern. In *Free Culture*, Lessig articulates the Creative Commons initiative in terms of Anglo-American rights-based discourse, where the right to *free speech* is directly associated with the rights of the *free market*:

We come from a tradition of 'free culture' – not 'free' as in 'free beer' (to borrow a phrase from the founder of the free-software movement), but 'free' as in 'free speech,' 'free markets,' 'free trade,' 'free enterprise,' 'free will,' and 'free elections.'

Throughout the book, Lessig implicitly embraces the credo of a universal digitization of culture (that is, *digitalism*). The Internet infrastructure that makes this 'free' reproduction possible is never questioned, but conceived in terms of 'technology in transition', a movement towards

the further digitization of life.¹⁶ Lessig takes inspiration from copyleft and hacker culture, specifically quoting the seminal essay 'Free Software, Free Society' by Richard Stallman.¹⁷ Although Stallman refers primarily to software, Lessig extends his paradigm to the entire spectrum of cultural artefacts. In other words, software is conceptualized as a universal political model. While the book offers a useful critique of the current regime of copyright, it also represents an apology of sorts for the generic freedom of digital media – at least until Lessig finally invokes a great evil for any libertarian, interestingly, only at the conclusion of the book: *taxation*.¹⁸ Searching for a practical economic model to legitimize Free Culture after the digital tsunami has thrown the music and film industries into crisis, Lessig has to provide an *alternative compensation system* to reward creators for their works.¹⁹ To solve the financial predicament of the content industry, therefore, he modifies a proposal originally offered by Harvard law professor William Fisher, and later expanded on in the book *Promises to Keep*.

Under his plan, all content capable of digital transmission would (1) be marked with a digital watermark Once the content is marked, then entrepreneurs would develop (2) systems to monitor how many items of each content were distributed. On the basis of those numbers, then (3) artists would be compensated. The compensation would be paid for by (4) an appropriate tax.²⁰

That the solution to the media industry crisis for the 'tradition of free culture' is a new form of *taxation* sounds strangely paradoxical. The tracking of Internet downloads and their charge would imply a strong centralized public intervention that is quite unusual for neoliberalist countries such as the USA – the system is realistically imaginable only, for instance, in a Scandinavian social democracy. Indeed, the actual implementation of this scheme remains unclear. Another passage, meanwhile, discusses this dilemma more explicitly, but suggests that intellectual property must be finally sacrificed in order to gain a more expansive Internet. Here, Lessig's intuition is correct (for capitalism's sake): he is aware that the market needs a self-generative space to establish new monopolies and new types of rent. A dynamic space is more important than a lazy copyright regime. Lessig provocatively asks:

Is it better (a) to have a technology that is 95 percent secure and produces a market of size x, or (b) to have a technology that is 50 percent secure but produces a market of five times x? Less secure might produce more unauthorized sharing, but it is likely to also produce a much bigger market in authorized sharing. The most important thing is to assure artists' compensation without breaking the Internet.²¹

'Without breaking the Internet': the protection of the new frontier is the utmost priority before all else. In this sense, Creative Commons licences help to expand and ameliorate new spaces of the market. Or as John Perry Barlow puts it: 'For ideas, fame *is* fortune. And nothing makes you famous faster than an audience willing to distribute your work for free.'²² Despite its political aspirations, the friction-free space of digitalism actually accelerates towards an even more competitive scenario. From this perspective, Benkler is wrong when he claims that 'information is non-rival' in *The Wealth of Networks*.²³ The non-rivalry of information is another important postulate of *freeculturalism*. Lessig and Benkler both assume that free digital reproduction will not cause competition, but cooperation. Of course, rivalry is not produced by digital copies, but by their friction with real economy, material contexts and limited resources. For example, attention is crucial for the consumption of any kind of 'cognitive commodity' such as music, but it is a limited and material resource. Digital bonanza becomes competition when it has to access the very small window of human 'uptime'. In his book, Benkler celebrates 'peer production' as the source of new social wealth, but actually refers only to the easy *immaterial reproduction*. Predictably, Free Software and Wikipedia are over-quoted as the main examples of 'social production' (this definition, again, covers exclusively the *online* 'social production'). Throughout the entire book, materiality remains in the background, like a 3D effect of a cheap hologram image from a postcard.

Against the Creative Anti-Commons

In the mid-2000s, after an initial honeymoon period, the Creative Commons (CC) initiative started to face growing criticism, especially from radical European media culture. Scanning the articles from this period, two strands of critique can immediately be distinguished in the progressive field: those who claim the institution of a real commonality

against Creative Commons restrictions (non-commercial, share-alike, etcetera) and those who point out Creative Commons complicity with global capitalism (and underline labour exploitation, value accumulation and the social conflicts behind any IP domain). As an example of the first trend, code theorist Florian Cramer provides an in-depth and thorough analysis in his text, ‘The Creative Common Misunderstanding’:

To say that something is available under a CC license is meaningless in practice. . . . The objections are substantial and boil down to the following points: that the Creative Commons licenses are fragmented, do not define a common minimum standard of freedoms and rights granted to users or even fail to meet the criteria of free licenses altogether, and that unlike the Free Software and Open Source movements, they follow a philosophy of reserving rights of copyright owners rather than granting them to audiences.²⁴

Berlin-based Neoist Anna Nimus (alias Dmytri Kleiner and Joanne Richardson) agrees with Cramer that Creative Commons does not provide the regulatory conditions for a real common to emerge. According to Nimus, the CC licences protect only the producers, while the consumer rights are relatively undefined: ‘Creative Commons legitimates, rather than denies, producer-control and enforces, rather than abolishes, the distinction between producer and consumer. It expands the legal framework for producers to deny consumers the possibility to create use-value or exchange-value out of the common stock.’²⁵ Nimus endorses the total freedom for consumers to produce use-value out of common stock (like in the model defended by the Free Software foundation), but more importantly, to also produce exchange-value – which means a freedom of commercial use. For Nimus, a commons is defined by its productive consumers, not merely by its producers or passive consumers. She claims that CC licences limit the commons through multiple restrictions rather than opening it up to productivity. In short, they become ‘Creative Anti-Commons’.

The public domain, anticopyright and copyleft are all attempts to create a commons, a shared space of non-ownership that is free for everyone to use. . . . By contrast, Creative Commons is an attempt to

use a regime of property ownership (copyright law) to create a non-owned, culturally shared resource. Its mixed bag of cultural goods are not held in common since it is the choice of individual authors to permit their use or to deny it. Creative Commons is really an anti-commons that peddles a capitalist logic of privatization under a deliberately misleading name.²⁶

Nimus points out an interesting *class composition* that has evolved from the historical transformation of the anti-copyright underground: ‘The dissidents of intellectual property have had a rich history among avant-garde artists, zine producers, radical musicians, and the subcultural fringe. Today the fight against intellectual property is being led by lawyers, professors and members of government.’²⁷ These forces have been co-opted by capitalism precisely through the Creative Commons framework that attempts to introduce private property into the public domain, rather than questioning the notion of copyright itself:

What began as a movement for the abolition of intellectual property has become a movement of customizing owners’ licenses. Almost without notice, what was once a very threatening movement of radicals, hackers and pirates is now the domain of reformists, revisionists, and apologists for capitalism. When capital is threatened, it co-opts its opposition.²⁸

Both Nimus’ and Cramer’s critiques (taken as an example of a broader trend) remain closer, at least in these texts, to the libertarian tradition with few accounts of the surplus-value extraction and macroeconomic forces behind intellectual property regimes (in any form: copyright, copyleft or CC). Alternatively, among Autonomist Marxists, a stronger critique is presented against the ideology implicitly pushed by Free Software, Creative Commons and other forms of *digital-only commonism*. For instance, political activist Martin Hardie believes that ‘FLOSS currently resides within a particularly American vision of freedom which seems to be spreading virus-like in its quest to smooth the space of the globe’.²⁹ Hardie criticizes FLOSS precisely because it never questions its relations with the forces of production or the manner in which it is captured by capital.

The logic of FLOSS seems only to promise a new space for entrepreneurial freedom where we are never exploited or subject to others' command. The sole focus upon 'copyright freedom' sweeps away consideration of the processes of valorisation active within the global factory without walls. . . . FLOSS appears as a somewhat 'a-historical' form of freedom, in the sense that its logic locates its particular genealogy within a transcendental and ever present notion of foundational legal principle, rather than any material, historical or productive forces.³⁰

Compared to Nimus, Hardie enlarges the *class composition* behind the IP battles into a broader global *corporate composition*. Real forces behind CC and Free Software do not simply belong to a new generation of reformist lawyers and NGOs, but specifically the ITC corporations whose business depends on the distributed 'factory without walls' of free developers.

FSF legal counsel Eben Moglen, has commented upon what they envisage as the key to the GPL's success. He acknowledges that the lack of adversarial situations arising in respect of the GPL is in part because the large organisations which use the software are 'the major players building information technology systems' who 'understand the benefits from free software'. From this point of view the apparent force of law of the GPL receives its support not from legal principle or freedom, but from the very fact that major corporations involved in the ITC economy depend upon innovation and production occurring in a networked environment. Large corporations depend upon the existence of the factory without walls and the apparent force of law of the GPL is a result of its instrumentality in this environment.³¹

A tactical notion of *autonomous commons* can be imagined as encapsulating these new tendencies against the hyper-celebration of the Creative Commons political model and the extreme drift towards *digitalism* more generally. To provide a hypothetical schema or potential mapping, autonomous commons: 1) allows not only passive and personal consumption but a *productive* use of common stock – implying commercial use by single workers; 2) questions the role and *complicity* of the com-

mons within the global economy and places common stock out of the exploitation of large companies; 3) is aware of the *asymmetry* between immaterial and material commons and the impact of immaterial accumulation on material production (for instance IBM utilizing Linux); 4) considers the commons as an hybrid space that must be dynamically constructed and dynamically defended. As will become apparent later, the new commons (digital or otherwise) must be described as a tactical and contextual entity, as a multiple matrix of forces, and not simply an abstract space of friction-less freedom.

Towards the Autonomous Commons

In many critiques of Free Culture, there is a direct appeal for a tangible commons driven by a desire for more friction with the materiality of labour and the everyday economy. Among all the appeals for *consistent commons*, however, only Dmytri Kleiner's idea of a Copyfarleft license attempts to transform the core of the conflict into a pragmatic proposal and break the flat paradigm of Free Culture. In his article 'Copyfarleft and Copyjustright', Kleiner begins by noting a *property divide* that is more crucial and determining than any digital divide: 10 per cent of the world population owns 85 per cent of global assets against a multitude of people who own barely anything.³² This material dominion of the proprietary class is actually extended as a result of copyright control over immaterial assets, so that digital objects can be owned, controlled and traded. In the case of music, for example, intellectual property is more significant today for the proprietary class of owners than for musicians, as cultural producers are often forced to resign control over their own works along with their rights as authors. In the hands of a musician, intellectual property is no longer the same thing when it is accumulated by a large corporation.³³ However, in many cases, the digital commons does not provide a better habitat for artists. Authors are generally sceptical that the copyleft solution can earn them a living. At the end of the day, the wage conditions of authors within cognitive capitalism seem to follow the same laws as a traditional industrial economy. On this point, many reasonable supporters of copyleft are ready to provide a long list of alternative and sustainable economic models that contemporary authors should follow to safeguard both personal income and free culture. Kleiner, on the contrary, looks at the question from a

more general perspective, framing it against the broader ecosystem of the contemporary capitalist economy. Moving from Ricardo's definition of rent (an income that the owner of a productive asset can earn just by owning it, not by doing anything) and the so-called 'Iron Law of Wages', Kleiner develops the 'iron law of copyright earnings'.³⁴

The system of private control of the means of publication, distribution, promotion and media production ensures that artists and all other creative workers can earn no more than their subsistence. Whether you are biochemist, a musician, a software engineer or a film-maker, you have signed over all your copyrights to property owners before these rights have any real financial value for no more than the reproduction costs of your work. This is what I call the Iron Law of Copyright Earnings.³⁵

Kleiner recognizes that both copyright and copyleft regimes (and everything between like CC licenses) constantly keep workers' earnings below average sustainable requirements. In particular, copyleft does not assist either software developers or artists since it exclusively real-locates surplus and rent in favour of major corporations and the various owners of material infrastructural assets. Drawing up a balance sheet for the first decades of the copyleft movement, the rise of the Creative Commons model carried along the unexpected colonization of economic rent onto free cultural capital.

Copyleft, as developed by the free software community, is thus not a viable option for most artists. Even for software developers, the iron law of wages applies, they may be able to earn a living, but nothing more, owners of property will still capture the full value of the product of their labour. Copyleft is thus not able to 'make society better' in any material sense, because not only is it not viable for many kinds of workers, but the majority of the extra exchange value created by producers of copyleft information is in every case captured by owners of material property.³⁶

According to Kleiner, capital needed to move from a strict copyright regime to a *copy-just-right* regime (aka Creative Commons) to coopt the

energies of the copyleft movement and reintroduce a rent system on a molecular scale, just as capital extended rent across the collective intelligence of free software developers and kept them under an 'iron law of copyright earnings'.

Thus, just as capital joined the copyleft software movement to reduce the cost of software development, capital is also joining the copyright dissident art movement to integrate filesharing and sampling into an otherwise property-based system of control. As copyleft does not allow the extraction of rent for the right to copy, and what owners of property want is not something that will challenge the property regime, but rather to create more categories and subcategories so that practices like filesharing and remixing can exist with the property regime. In other words, copyjustright. A more flexible version of copyright that can adapt to modern uses but still ultimately embody and protect the logic of control. The most prominent example of this is the so-called Creative Commons and its myriad of 'just right' licenses. 'Some rights reserved,' the motto of the site says it all.³⁷

Kleiner reaches a radical position: neither copyleft, copyright or copyjustright can overcome this iron law of copyright earnings and assist the real producers: the 'working class'. So why are we still arguing about alternative intellectual property licenses if they cannot help us? The solution for Kleiner is *copyfarleft*, a license with a hybrid status that recognizes class divisions and allows workers to claim back the means of production. Copyfarleft products are free, but can be used to make money only by those who do not exploit wage labour (like other workers or cooperatives).

For copyleft to have any revolutionary potential it must be Copyfarleft. It must insist upon workers ownership of the means of production. In order to do this a license cannot have a single set of terms for all users, but rather must have different rules for different classes. Specifically one set of rules for those who are working within the context of workers ownership and commons based production, and another for those who employ private property and wage labour in production.³⁸

In this model, those who exploit wage labour and private property on a large scale cannot use copyfarleft materials, but normal workers and producers can freely share and profit by applying their own labour to mutual property. For example: 'Under a copyfarleft license a worker-owned printing cooperative could be free to reproduce, distribute, and modify the common stock as they like, but a privately owned publishing company would be prevented from having free access.'³⁹ Copyfarleft is quite different from the 'non-commercial' use supported by some CC licences since they do not distinguish between *endogenic* (within the commons) commercial use and *exogenic* (outside the commons) commercial use. Both are forbidden. Kleiner suggests introducing an asymmetry: endogenic commercial use should be allowed while keeping exogenic capitalist use forbidden.

A copyfarleft license must allow commons-based commercial use while denying the ability to profit by exploiting wage labour. The copyleft Non-Commercial approach does neither, it prevents commons-based commerce, while restricting wage exploitation only by requiring the exploiters to share some loot with the so-called original author. In no way does this overcome the iron law for either the authors or other workers. 'Non Commercial' is not a suitable way to describe the required endogenic/exogenic boundary. Yet, no other commons license exists that provides a suitable legal framework for commons-based producers to use. Only a license that effectively prevents alienated property and wage labour from being employed in the reproduction of the otherwise free information commons can change the distribution of wealth.⁴⁰

Interestingly, this is the correct application of the original institution of the commons, which was strictly related to material production (even reiterating this characteristic in today's cultural debate sounds grotesque to many). The commons were land used by a specific community to harvest or breed their animals. If someone could not send cows to pasture and produce milk on it, it would not be considered a real commons. Kleiner argues that if money cannot be made from it, a cultural work does not belong to the commons: it is still private property.

The Poverty of Networks

After cultural artefacts, the next challenge for digitalism has been to apply the Free Software model to social production *tout court*. To concentrate on surplus can again demonstrate how, besides Free Culture, there is always an Ideology of Free Production. As Tiziana Terranova has clearly explained in her book *Network Culture*, Free Production is actually always sustained by a massive outlay of Free Labour:

It is important to remember that the gift economy, as part of a larger digital economy, is itself an important force within the reproduction of the labor force in late capitalism as a whole. The provision of 'free labor' . . . is a fundamental moment in the creation of value in the digital economies.⁴¹

A testimony of this tendency is Yochai Benkler's book *The Wealth of Networks*, where he glorifies the rise of the Internet-based peer-to-peer anti-copyright movement of volunteers 'which is changing the world economy': he calls it *social production*.⁴² In his account, labour exploitation, surplus accumulation and economic rent are always kept off the radar. Benkler, accordingly, claims that social production is good for business. Take the 'excellent example' of IBM that has been 'one of the firms most aggressively engaged in adapting its business model to the emergence of free software'.⁴³ On the other side of this profit margin, workers are invited to simply enjoy the success of Wikipedia. In this sense, Dmytri Kleiner has polemically entitled his review of Benkler 'The Poverty of Networks':

The wealthy network exists within a context of a poor planet. The root of the problem of poverty does not lay in a lack of culture or information (though both are factors), but of direct exploitation of the producing class by the property owning classes. The source of poverty is not reproduction costs, but rather extracted economic rents, forcing the producers to accept less than the full product of their labour as their wage by denying them independent access to the means of production.⁴⁴

As the previous paragraphs have tried to show, the central issue is to critically unveil the asymmetries of the real economy, the breaking point between the digital and material domain, the parasitic relation

accumulating and distributing material wealth in real life. In Benkler's scenario, the information commons appears as a friction-less roundabout pivoting on a gigantic greased engine that nevertheless remains constantly censored and beyond critique. Even here, the commons that Benkler constantly mentions are purely digital domains – that is, these fictional commons have no relation with the actual potential of real productive commons. In Marxist terms, Kleiner observes that if there are no reproduction costs but a free exchange of free digital copies, it is impossible to gain an exchange-value to acquire material goods.

If commons-based peer-production is limited exclusively to a commons made of digital property with virtual no reproduction costs then how can the use-value produced be translated into exchange-value? Something with no reproduction costs can have no exchange-value in a context of free exchange. Further, unless it can be converted into exchange-value, how can the peer producers be able to acquire the material needs for their own subsistence?⁴⁵

Actually, exchange-value exists, but it is produced along with the rent applied over the material infrastructure and the virtual spaces of the commons (the Internet itself, the tons of hardware around us, the proprietary social networks, the online advertisement, etcetera). According to Kleiner, through the notion of social production, Benkler offers another alibi to the private sector for exploiting the immaterial commons and giving nothing back in return.

Whatever exchange value is derived from the information commons will always be captured by owners of real property, which lays outside the commons. For Social Production to have any effect on general material wealth it has to operate within the context of a total system of goods and services, where the physical means of production and the virtual means of production are both available in the commons for peer production. By establishing the idea of commons-based peer-production in the context of an information-only commons, Benkler is giving the peer-to-peer economy, or the competitive sector, yet another way to create wealth for appropriation by the property privilege economy, or the monopoly sectors.⁴⁶

Within the business community, Benkler's vision has been criticized by the pragmatic prophecy of Nicholas Carr in terms of the imminent monetization of Internet-based peer production: amateurs and volunteers will be soon paid in cash to produce content.⁴⁷ An awareness of the parasitic dimension of the Internet is just beginning. The following chapters will demonstrate how the new theory of rent developed from the theoretical tradition of Autonomist Marxism can be useful for unveiling the illusions of techno-ideology and fully understanding the role of the immaterial or technological parasitism. In doing so, however, we should always remember that Marxism can be misused to promote a digital-only 'social revolution', and that radical thought itself can become a playground for the digitalist agenda.

A Parasite Haunting the Hacker Haunting the World

A Hacker Manifesto by McKenzie Wark is a remarkable attempt to develop a Marxist critique of the information society and the digital economy.⁴⁸ Wark, nevertheless, still remains trapped in a form of digitalism. Here, the term *hacker class* is introduced as an attempt to synthesize Marxist thought and the new autonomous movements of Internet-based workers and activists, traditionally allergic to any kind of Marxism especially in the Anglo-American context. 'Hacker class' is the *Californian* translation of all those continental terms, like immaterial workers, cognitariat, multitude and so on, that have descended from the older Marxist concept of the general intellect. Wark's hacker class is, therefore, specifically defined by the power of *abstraction* (the ability to shape new ideas, or the creative act) rather than the living labour or cooperation between brains found in the Autonomist Marxism of Negri, Lazzarato or Virno.

All classes fear this relentless abstraction of the world, on which their fortunes yet depend. All classes but one: the hacker class. We are the hackers of abstraction. We produce new concepts, new perceptions, new sensations, hacked out of raw data. Whatever code we hack, be it programming language, poetic language, math or music, curves or colorings, we are the abstracters of new worlds.⁴⁹

Despite an avant-garde style that resembles Debord's *Society of the Spectacle*, the theoretical core of the book is actually the crisis of property.

Wark believes that the hacker class can reopen the question of property more effectively than any previous social struggle. Surprisingly, he does not make any distinction between material and immaterial property: property on signs and ideas, as opposed to property on material goods or biochemical energy. Wark believes implicitly that the free reproducibility of *digital* data will eventually undermine *material* property itself. A soft Marxism defines the hacker class: where Marx proposes the abolition of private property and the re-appropriation of the means of production as a revolutionary solution, here, there is only the gesture of the gift as a silent rebellion. The gift economy is advanced as the real threat to the property system and to the power of the 'vectorial class' (the class owning the media infrastructure), precisely as P2P networks are undermining the music and movie industries. Yet this form of sabotage remains predominantly digital.

The declarative style of the book is principally locked in a binary scheme. Wark does not recognize that capitalism has already found a third way and many business models are already based on the 'gift economy' (IBM parasiting Free Software, Google providing free services, etcetera). On the contrary, Wark believes that the 'vectorial' class is still committed to a reactive concept of scarcity and has not repositioned itself into a more competitive scenario, where the notion of property itself has become more dynamic and negotiated. Squeezing a Marxian messianic narrative into the matrix, Wark believes that the vectorialist class will be erased by the 'contradiction' that it assisted building: the Internet. In other words, the endless reproduction of desire (Deleuze and Guattari stretched out again!) triggered by digital media cannot be fatally stopped.

But short of seizing hold of a monopoly on all vectors for producing and distributing information, the vectorialist class cannot entirely limit the free productivity of the hacker class, which continues to produce yet more fuel for the free productivity of desire.⁵⁰

In a specific chapter, Wark attempts to connect the question of property to the notion of surplus. Even here, he refers implicitly to *digital surplus* alone and to the low-cost monodimensional reproduction of bits. He makes no distinction between digital surplus and the concepts of sur-

plus value in Marx or excess in Bataille; even if Wark alludes to Bataille within the text: 'The history of life on earth is mainly the effect of a wild exuberance, the dominant event is the development of luxury, the production of increasingly burdensome forms of life.'⁵¹ Can the wild nature of Bataille seriously grow out over the network? As noted at the beginning of this text, the energy of digital flows is not equivalent to that of material flows and this misunderstanding should not be maintained any longer. If in Bataille energy excess fuels the economy, and specifically its dark sides, many scholars continue to fetishize an overly abstract and finally undisruptive conception of such excess.

The hack produces both a useful and a useless surplus. The useful surplus goes into expanding the realm of freedom wrested from necessity. The useless surplus is the surplus of freedom itself, the margin of free production unconstrained by production for necessity. As the surplus in general expands, so too does the possibility of expanding its useless portion, out of which the possibility of hacking beyond the existing forms of property will arise.⁵²

Without resolving the question of surplus, and the cognitive and technological rent fuelled by the hacker class, Wark fails in developing a consistent political paradigm. Wark believes that the conflict between the vectorialist and hacker class is real and that 'abstraction', the knowledge accumulated by the hacker class, is the contested issue.⁵³ However, such a willing conflict only operates on the immaterial level, with no acknowledgement of the material parasite operating from outside the digital sphere directly *on* such a conflict. The struggle of the hacker class appears as a videogame played on the incorporeal vectors of the Internet and paid for by the global working class. Interestingly, on this point, Wark advances the hacker class as a legitimate political model for the farming and working class themselves; however, keeping in mind the criticism against Free Culture, it is clear that digital commons are unable to produce and organize wealth equivalent to the original commons (that were at least productive of milk, meat, cereals, etcetera):

What the farming, working and hacking classes have in common is an interest in abstracting production from its subordination to ruling

classes who turn production into the production of new necessities, who wrest slavery from surplus. What the farming and working class lack in a direct knowledge of free production the hacking class has from direct experience. What the hacking class lacks is the depths of an historic class memory of revolt against alienated production. This is what the farming and working classes have in spades.⁵⁴

Following Serres and his bucolic stories, the farming class seems significantly more appealing as a political avant-garde with its robust notion of the commons. Moreover, in light of the current energy crisis and related hysterias, the information society is evidently going to lose its priority on the collective agenda. Climate change, energy resources and food production are becoming the political issues of the present and media culture is already being reshaped on a less digital and more dystopian basis. Perhaps *bioenergy* will become the central paradigm instead of *biocode*. From this perspective, Wark opens his book to an allusion that arrives too late: 'A double spooks the world, the double of abstraction.' Behind digital abstraction and economic neoarchaism, a parallel evolution is already taking place in the interstitials of media ecologies. The next section will show how parasites grow stronger under cognitive capitalism. Indeed, 'a parasite is haunting the hacker haunting the world'.

Rent: The Dystopian Parasite of Cognitive Capitalism

Rent is the New Profit

How does cognitive capitalism make money? Where is surplus extracted and allocated in a digital economy? While the late public of digerati and activists are stuck to the glorification of ‘free’ and ‘peer’ production, good managers – and also good Marxists – are totally aware of the profits made on the shoulders of the collective intelligence. The school of post-Operaismo, for instance, has a dystopian vision of the *general intellect* produced by post-Fordist workers and the digital multitudes: the accumulation of collective knowledge is potentially liberating but constantly absorbed before becoming a true form of social autonomy. Since the 1960s, the ontology of Italian Autonomia has always foreground the innovative force of the working class, in contrast with Anglo-American Marxism which preferred to recognize capital as the primary social driving force and the working class as merely a prosthesis or structural effect.¹ In a similar way, the network is celebrated by *freeculturalists* as an innovative force in itself, with no particular social subject prior to it. On closer analysis, however, network culture itself belongs to the last stage of a long process of the socialization of knowledge and education, begun after the Second World War and evolving into the post-Fordist factory, crossing the counter-cultures of the 1960s and then the pioneering hacker movement: a collective and social process, built up gradually, that has now reached its entropic turn. While initiated as an autonomous movement, in the end, network-based cooperation has not improved the life conditions of most digital workers. Online ‘free labour’, for instance, appears to be far more dominant than the ‘wealth of networks’. A further insight is needed to understand clearly how surplus is distributed through networks and who benefits from it.

Traditional economics and the new schemes submitted by the supporters of Free Culture and peer production provide only a partial understanding of the digital economy, as they focus on the alleged virtuosity and autonomy of the network form. However, the theory of rent recently advanced by post-Operaismo reveals the parasitic dimension of cognitive capitalism from a much clearer perspective. Autonomist

Marxism has become renowned for shaping a new toolbox of political concepts for late capitalism (such as Empire, multitude, immaterial labour, biopolitical production, and so on). In an article published in November 2007 in *Posse* magazine, Negri and Vercellone go a step further: they establish rent as the central mechanism of the contemporary economy, and illuminate a new field of antagonism in the process.² Traditionally, Autonomist Marxism has focussed on the transformations of labour conditions (following the evolution of post-Fordism), rather than the new parasitic modes of surplus extraction. In classical economic theory, rent is distinguished from profit. Rent is the *parasitic* income an owner can earn just by possessing an asset and is traditionally associated with land property. Profit, on the other hand, is meant to be *productive* and is associated with the power of capital to generate and extract surplus (from commodity value and the workforce). As Vercellone explains in a previous study:

According to a widespread opinion in Marxian theory that stems from Ricardo's political economy, rent is a pre-capitalist inheritance and an obstacle to the progressive movement of capital's accumulation. On this premise, real, pure, and efficient capitalism is capitalism with no rent.³

Vercellone criticizes the idea of a 'good productive capitalism' by highlighting the becoming rent of profit as the central trait of the contemporary economy: beyond the hype of technological innovation and the 'creative economy', the whole of capitalism is breeding a subterranean parasitic nature. Vercellone, accordingly, provides an apt slogan for the nature of cognitive capitalism: 'Rent is the new profit'. Rent is parasitic because it is orthogonal to the line of classic profit. *Parasite* etymologically means 'eating at another's table,' sucking surplus in a furtive manner, rather than directly. Whenever we produce freely in front of our computers, somebody has their hands in our wallet.

Post-Operaismo has developed the theory of rent by upgrading Marx's notion of the general intellect. If in Marx the general intellect was embodied in the fixed capital of machinery, today knowledge producing value is rooted in the distributed cooperation of brains that exceeds the boundaries of the factory. Profit is to the Fordist factory as rent

is to the diffuse 'social factory'.⁴ Contrary to the theory of information revolution and network society, Vercellone claims that the mutation of labour cannot be explained by the technological determinism of ICT. The power of ICT does not originate from the vitalistic force of capitalism, but from the social networks of knowledge that are prior to any technology. Cognitive capitalism emerges later in the form of a parasite: it subjects social knowledge and inhibits its emancipatory potential. Rent is the other side of the commons – it was once cast over the common land, today over the network commons.

The becoming rent of profit means a transformation of management structures and the cognitive workforce. Not surprisingly, the autonomization of capital has grown in parallel with the autonomization of cooperation. Managers now deal increasingly with financial and speculative tasks, while workers are in charge of distributed management. In this evolution, the 'cognitariat' is split into two tendencies. On one side, high-skilled cognitive workers become 'functionaries of the capital rent' and are co-opted within this system through stock options (a parasitic type of wage that partially absorbs the worker into proprietary capital itself).⁵ On the other side, the majority of workers face a declassing (*déclassement*) of life conditions despite their skills being increasingly knowledge rich. It is no mystery that the New Economy has generated more McJobs: temp-workers are proliferating coincidentally with the rise of the 'wealth of networks'. Production went social, but wages are still trapped within the cage of labour as the only access to income. The effect is a stagnation of income and the precarization of labour, while rent accumulates energy on a parallel level. This model can be easily applied to the Internet economy and its *workforce*, where users are placed in charge of content production and web management, but do not share any profit. Major corporations like Google, for instance, make money over the attention economy of user-generated content with its services AdSense and Adwords. Google provides a light infrastructure for advertising that infiltrates websites as a subtle and mono-dimensional parasite, extracting profit without producing any content. Of course, a small part of the value is shared with users, and Google programmers are paid in stock options to develop more sophisticated algorithms, so we are placed in the belly of a benevolent parasite; to a certain degree, it is still comforting and paternalistic.

In this interweaving scenario, Negri and Vercellone advocate the final collapse of Marx's trinitarian formula of profit, rent and wages. For them, rent is the new antagonism between capital and labour in the age of the general intellect. The theory of rent, therefore, at last opens to the actual multiplicity of late capitalism and its molecular strategies of valorization, since there are heterogeneous kinds of rent at work concerning finance, real estate, knowledge, wages, and so forth. Moreover, according to the 'emergence of immaterial labour' outlined by Negri and Hardt in *Empire*, cognitive labour lies at the centre of the valorization process and, consequently, can break the mechanisms of capitalist production more easily.⁶ Along this conceptual line, however, the notion of multitude has been kept rooted by its own production force, but with few strategies of self-defence. The theory of rent finally illuminates the new fields of conflict and sabotage in terms of value accumulation, which become crucial for producing and defending the new commons.

Rent is the Other Side of the Commons

If the central axis of valorization is the 'expropriation of the commons through the rent' within cognitive capitalism, a key tendency is clearly the transformation of common knowledge into a commodity. For Negri and Vercellone, this explains the ongoing pressure for a stronger Intellectual Property regime: copyright is one of the strategic evolutions of rent to expropriate the commons and reintroduce artificial scarcity. Real estate and financial rent are usually referred to as central examples: they played a major role in the twentieth-century speculation crises and, conversely, in the dismantling of the welfare state. Today, according to Negri and Vercellone as well as many other authors, speculation is directed towards intellectual property, forcing artificial costs on cognitive goods that can paradoxically be reproduced or copied virtually for free. Yet post-Fordist rent enters a complex scenario, with multiple ways of exploiting capital, along with more advanced strategies of targeting new types and spaces of the commons, many of which are beyond the scope of Negri and Vercellone's analysis.

The composite case of intellectual property must be examined, as rent may not necessarily arise from the new knowledge enclosures, but also from the exploitation of a common cognitive space. Here, an initial

clarification must be established regarding the different nature of patents, copyrights and trademarks. Patents are *machinic*, they are used to produce new commodities, to organize the workforce, to control other machines and generate profit exponentially. They represent a dense concretion of machinic knowledge (*cognitive labour*) and, as a consequence, must be kept as an industry secret. Alternatively, a cultural artefact protected by copyright like music, for instance, is a reproducible commodity for the widest audience (*immaterial consumption*): its valorization follows the laws of celebrity and so it needs to be multiplied as much as possible. However, the exchange-value of popular music products has been felt vertically in the digital age, as multiplication has run out of control. Maintaining rent over the intellectual property of music is no longer easy and the music industries have had to change their strategies, turning to live events and non-reproducible entities. Additionally, software programs cover both realms, as a *becoming-immaterial* of machines. They are both machinic and easily reproducible, yet they require hardware to function and a material world to interface. Even proprietary programs are occasionally left to be reproduced 'out of control' to establish new standardized monopolies or a dominant market position for a specific hardware device. For Free Software, on the other hand, a hybrid strategy has always been advanced: the program is free, the manual is not. Finally, trademarks operate to simply protect a brand, but their value relies on the largest possible exposure (in response, avant-garde activism has developed *meta-brands* precisely to subvert the immaterial rent of the brand economy).⁷ This very brief overview of the digital economy demonstrates how different types of rent have respectively risen from patents, copyrights or trademarks following different evolutions and strategies, where material conditions still play an invisible yet essential role. Interestingly, political battles are fought by *freeculturalists* around software patents, but not so much around *hardware patents* (and there is not the same pressure on 'wetware' monopolies, such as pharmaceutical patents). Open Source Hardware, for instance, receives almost no media attention. Indeed, digitalists like Stallman are not interested at all in machinery, having explicitly proclaimed: 'I see no social imperative for free hardware designs like the imperative for free software.'⁸ In the meantime, rent is constantly gnawing away on its cheese, hidden in a dark corner.

Markets need constant expansion. Digital technologies have opened new dynamic spaces and broad networks to apply rent in novel ways, specifically on the infrastructure that makes digital communication and free reproducibility possible. New forms of rent are increasingly generated from this property-commons dialectic, such as the rent over the attention economy of web advertising or the rent of ICT companies over Internet bandwidth. Rent, more so than private property, is the flip-side of the knowledge commons. So who is the enemy of the commons? The question deeply affects the current political stakes if the answer is property or rent. The traditional anti-copyright movement is inclined to work solely from the first option. Indeed, exceeding the paradigms of Free Culture, rent does not even care about maintaining the status of private property. As the digital economy threatens the status quo of property, rent does not ask for a stronger Intellectual Property regime, but simply moves forward and adapts itself to this dynamic space, for instance, by establishing alliances with the Free Software movement and Creative Commons. Rent becomes rent over a flow, 'property' of a speed differential. Financial markets are the most radical example of this virtualization of value: in stock exchange circuits, money accelerates its semiotic nature towards the monetization of future events.⁹ If Vercellone detected the becoming rent of profit, I advance the idea that property is becoming fluid, monopolies are becoming temporary and rent grows on speed differentials and dynamic spaces. A further complex matrix is running out there.

The Fourth Dimension of Cognitive Capitalism

The digital revolution made the reproduction of immaterial objects easier, faster, ubiquitous and almost free. However, as the Italian economist Enzo Rullani points out, within cognitive capitalism: 'Proprietary logic does not disappear but has to subordinate itself to the law of diffusion.'¹⁰ Intellectual property (and so rent) is no longer based on space and objects, but on time and speed. Besides copyright, there are many other modes to extract rent. In his book *Economia della conoscenza*, Rullani discusses how easily reproducible cognitive products must immediately undergo a process of diffusion in order to maintain a degree of control or ownership.¹¹ Since an entropic tendency affects any cognitive product, it is not recommended to invest in static proprietary rent. In

actuality, there is a rent produced on the multiplication of uses and a rent produced on the monopoly of a secret. These are two opposite strategies: the former is recommended for cultural products like music, the latter for patents. Rullani is inclined to suggest that free multiplication is a vital strategy within cognitive capitalism, as the value of knowledge is fragile and tends to rapidly decline. Immaterial commodities (that populate any spectacular, symbolic, affective, cognitive space) suffer a strong entropic decay of meaning. At the end of the curve of diffusion, banality is waiting for any meme, especially in today's emotional market, which is constantly searching for unique or singular experiences.

Rullani, therefore, provides an expanded and detailed description of a cognitive capitalism that is often described in generic terms. For Rullani, the value of knowledge (extensively of any cognitive product, artwork, brand, information) is given by the composition of three drivers: the value of its performance and application (v); the number of its multiplications and replica (n); the sharing rate of the value among the people involved in the process (p). With a bit of mathematics, the economic value of knowledge is less mysterious, pragmatically described by a formula: $V = v, n, p$. Knowledge is successful when it becomes self-propulsive and pushes all these three forces: 1) maximizing the value, 2) multiplying effectively, and 3) sharing the value that is produced. Of course, in a dynamic scenario, a compromise between the three drivers is necessary, as they are interrelated and competitive: if only one improves, the others get worse. Furthermore, to control, accelerate or slow down a driver, there are three different types of mediators: interpretative, multiplicative and institutional. For example, Creative Commons licenses may be considered both multiplicative and institutional mediators: they extend the uses of a work as far as possible by protecting it from unwanted applications, but they rely on the strength of legal institutions (also, without reallocating value, by the way). Rullani's model is fascinating precisely because intellectual property has no central role in extracting surplus: in other words, rent is applied strategically and dynamically across the three trajectories, along different regimes of intellectual property. Knowledge is, therefore, projected into a less fictional cyberspace, a sort of invisible material landscape, where cognitive competition can only be described by new space-time coordinates.¹² Rullani, therefore, describes his model as three-dimensional, but

it could more accurately be considered as four-dimensional, since it also includes time. As the financial markets constantly illustrate, rent valorization often has the nature of a temporal gap.

The cognitive economy is strictly related to time, if only because knowledge remains an irreversible and dissipative process. Knowledge curves temporal registers: yesterday's production techniques are irreversibly changed by today's innovations. Time, therefore, becomes the competitive arena of valorization:

The faster the entropic decline of knowledge (or the chance to lose its proprietary control), the faster its propagation must be. . . . All the actors of knowledge economy are engaged in a *race against time*, where running is necessary simply to maintain the same position and not fall behind.¹³

Within cognitive capitalism, a monopolistic rent is applied along temporal coordinates. The initial position establishes a monopoly: the first model of a MP3 player, the initial book on a given topic, the pioneering piece of software and so on. Value is a matter of good timing: not too early, not too late, at a proper rate of dissemination. Similar to fashion, rent is applied through a provisional hegemony along a temporal coordinate.

Meanwhile, knowledge changes the context of distribution, continuously transforming and expanding its immaterial space. Knowledge is produced in an original context β , and then applied to a final context β , and disseminated throughout all the points between. Knowledge (and any new form of technology) produces new social spaces that are later populated and monopolized as they reach a critical density. The Internet, for example, is a stratification of different spaces and flows, each dominated by a differential density of technology, communication, interaction and content. These various domains (produced by a new software application, an innovative commercial service, a spontaneous social network, etcetera) provide an arena for both the new commons and for new types of rent.

The dynamic model provided by Rullani is more interesting than, for instance, Benkler's rather plain notion of 'social production', but it is not yet utilized by radical criticism and activism. In Rullani's per-

spective, material conditions cannot simply be replaced by immaterial production, despite the hypertrophy of digital enthusiasm. There is a general misconception that the cognitive economy is an autonomous and virtuous space. On the contrary, according to Rullani, knowledge exists only through *material vectors*. The nodal point represents the friction between the free reproducibility of knowledge and the non-reproducibility of the material. The immaterial generates value only if it grants meaning through a material process. A music recording on CD, for example, has to be physically produced and consumed. We need our body and especially our time to produce and consume music. And when the CD vector is dematerialized thanks to developments in digital media reproducibility and P2P networks, the body of the artist is forced into a more competitive situation. Have digital media galvanized more competition or cooperation? This is a key question for critical Internet theory today.

A Taxonomy of Immaterial Parasites

In order to describe cognitive capitalism in detail, a detailed taxonomy of the immaterial parasites of rent is required. In this case, taxonomy is not merely used as a metaphor, since cognitive systems tend to behave like living systems, continually producing greater forms of biodiversity.¹⁴ While Vercellone describes cognitive rent as a particular technique of extraction maintained by intellectual property (patents, copyrights and trademarks), Rullani contextualizes these new forms of rent as a situation based on competition and speed. He demonstrates how rent can be extracted dynamically along very mobile and temporary micromonopolies, skipping the limits of intellectual property regimes.

In either case, the possibility of cognitive rent is strictly determined by the technological substratum. Digital technologies have opened new spaces of communication, socialization and cooperation that are only virtually 'free'. The surplus extraction is channelled generously through the material infrastructure needed to sustain an immaterial 'Second Life'. Technological rent is the fee applied on the ICT infrastructures when they establish a monopoly on media, bandwidth, protocols, standards, software or virtual spaces (including recent social networks like MySpace and Facebook, for instance).¹⁵ Technological rent is, therefore,

composed of many different layers: from the materiality of the hardware and electricity to the immateriality of the software running a server, a blog or an online community. Technological rent is fed by general consumption and social communication, by P2P networks and 'free' reproducibility, along with all the activism of Free Culture. Technological rent is different from cognitive rent, as it is based on the exploitation of (material and immaterial) spaces and not only knowledge. Similarly, the attention economy can be described as a rent on attention applied to the limited resource of the consumer time-space.¹⁶ In the society of pervasive media and the spectacle, the attention economy is responsible for commodity valorization to a significant degree. The attention time of consumers is like a limited piece of land that is constantly under dispute. Technological rent is, finally, the central element of the energetic metabolism sustaining the techno-macroparasite.

It is well known today how the dream of the new economy was a driver for the financial rent over stock markets that eventually led to the dot-com crash. The bubble exploited a spiral of virtual valorization channelled across the Internet, through the hype produced by new spaces of communication and an accelerated competition that forced start-ups out of any realistic business plan. Similarly, financialization has become the first vector used to parasite domestic savings.¹⁷ Wages are now directly enslaved by a rent mechanism: workers are given stock options as a part of their fee, fatally co-opting them into the destiny of proprietary capital. Besides financialization, the fundamental concept of land rent has also been updated by cognitive capitalism. As the relation between the artistic underground and gentrification demonstrates, real-estate speculation is strictly related to the 'collective symbolic capital' of a given physical place (as defined by David Harvey in his essay 'The Art of Rent').¹⁸ Land rent becomes profitable through symbolic capital, as in major urban centres where the scarcity of land is valorized by the symbolic dimension and no longer through physical necessity. Today, both historical symbolic capital (as in the case of Berlin or Barcelona) and artificial symbolic capital (like that in Richard Florida's 'creative cities' marketing campaigns) are used for real-estate speculation on a massive scale.

All these forms of rent represent immaterial parasites. The parasite is *immaterial* since the rent is produced dynamically along the virtual

extensions of space, time, communication, imagination and desire. The parasite is, however, doubly *material* as the value is transmitted through vectors such as media and commodities in the case of cognitive and attention rent; infrastructure in the case of technological rent; real estate in the case of the speculation on symbolic capital, and so on (financial speculation only appears virtually as a dematerialized machine of value, since its material consequences are actualized in time sooner or later). The awareness of this parasitic dimension of technology should eventually inaugurate the decline of the old digitalist *media culture* in favour of a new *dystopian cult* of the techno-parasite.

The Bicephalous Multitude and the Grammar of Sabotage

Many of the subcultures and political schools that have emerged around knowledge and network paradigms have not adequately acknowledged cognitive capitalism as a conflict-ridden and competitive scenario. Paolo Virno, as discussed in the preceding chapter, is one of the few critical thinkers to underline this dystopian ambivalence of the multitude, whose nature is cooperative as well as aggressive.¹⁹ The *Bildung* of an autonomous network is not immediate or straightforward. As Geert Lovink and Ned Rossiter put it: 'Networks thrive on diversity and conflict (the *notworking*), not on unity, and this is what community theorists are unable to reflect upon.'²⁰

Cooperation and collective intelligence have their own grey areas, especially in terms of the passivity that dominates online everyday life, as Lovink and Rossiter point out. It is likely there are other diseases intrinsic to network societies. Can digitalism itself be considered a sort of psychopathology of the collective mind; an autistic desire for a parallel universe without conflict, friction and gravity? The term 'psychopathology' is not derogatory, but is used to underline how our controversial and fluid relation with technology is open to different becomings. Digitalism can be described as a sublimation of the collective desire for a pure space and, at the same time, as the obscure accomplice of a parasitic megamachine.

A new theory of the negative must be established around the missing political link of digital culture: its disengagement with materiality and its uncooperative nature. Networks and cooperation do not always fit each other. Geert Lovink and Christopher Spehr ask more specifically:

when do networks stop functioning? How do people begin to un-cooperate? Freedom of refusal and not-working are advanced by Lovink and Spehr as the very foundation of any collaborative effort (with an echo of the Autonomist *refusal to work* and the concept of exodus).

Spehr's key concept is that everyone should have the freedom to dissolve collaboration at any given time. . . . The option to bail out is the sovereign act of network users. Notworking is their a priori, the very foundation all online activities are built upon. If you do not know how to log out, you're locked in. . . . Key to our effort to theorize individual and collective experiences, is the recognition that there must be a freedom to refuse to collaborate. There must be a constitutive exit strategy.²¹

Free uncooperation is the negative inverse ontology of *free cooperation* and may provide the missing link that unveils the relation with the consensual parasite. Moreover, the right to sabotage should also be included within the notion of uncooperation, if only to finally clarify the individualistic and private gesture of 'illegal' file sharing. The Creative Commons discourse, for instance, is concerned primarily about the *legal* status of digital file sharing and its possible copyright infringement – the *political* dimension of the sabotage of intellectual property revenues and capital accumulation affecting large media corporations is too problematic to be publicly confronted. Obfuscated by the ideology of the Free, a new toolbox is needed to see clearly beyond the age of the digital screen. If the positive gesture of cooperation has been overextended, made banal and digitalized as a neutral act, only a new definition of sabotage fits the political space specular to the neo-parasite of rent. If profit has taken the impersonal form of rent, its social by-product is a form of immaterial vandalism and anonymous sabotage. A new theory of rent demands a new theory of resistance, before pursuing any discussion of organizational forms, as rent changed largely the coordinates and forms of exploitation. What kind of sabotage is the new 'social factory' affected by? Under cognitive capitalism, competition is said to be more intense, but for precisely the same reason, sabotage is easier, as the relation between the immaterial (value) and the material (goods) has become even more fragile.

The indefinite multitude of online users is learning a very simple grammar of sabotage against capital and its concrete revenues, but for the first time along the conflict between material and immaterial. To describe the empty gesture of downloading the latest Hollywood blockbuster as Free Culture sounds rather like armchair activism. Labelling it as the sabotage of Hollywood capital accumulation may open up a more interesting perspective. However, if radical culture is established through real conflicts, then a more direct question can be posed: does 'good' digital piracy produce conflict, or does it simply sell more hardware and bandwidth? Is piracy an effective venture against real accumulation or does it help other kinds of rent accumulation? Alongside any digital *commonism*, accumulation still operates. Nevertheless, within the current hype, there is no room for a critical approach or a negative tendency. The pervasive density of digital networks and computer-based immaterial labour is not suspected of bringing about any significant countereffect. Maybe, as Marx pointed out in the 'Fragment on Machines', a larger dominion of the (digital) machinery may simply bring about entropy within capitalist accumulation.²² A shadow of doubt remains: is the digital and knowledge economy simply slowing down capitalism, rather than fulfilling the self-organization of the general intellect of the multitudes? The two processes might be influencing each other.

Critical points of capitalist accumulation, however, can be found beyond the cognitive rent of the music and film corporations. The previous taxonomy of cognitive parasites reveals how symbolic and immaterial rent influences everyday life on different levels. The displaced multitudes of the global cities, for instance, are beginning to understand how gentrification is related to the new forms of cultural production and symbolic capital. In the novel *Millennium People*, Ballard prophetically described public riots originating within the middle class and targeting cultural institutions like the National Film Theatre in London. While less fictional and violent, new tensions are rising today in East London against the urban renovation in preparation of the 2012 Olympics. In recent years in Barcelona, a significant movement has been fighting against the gentrification of the former industrial district Poble Nou following the 22@ plan for a 'knowledge-based society'.²³ Similarly, in East Berlin the Media Spree project is attempting to attract

big media companies and ‘creative class’ in an area widely renowned for its cultural underground.²⁴ It is no coincidence then the Kafkaesque saga of Andrej Holm – an academic researcher at Humboldt University – who was arrested in July 2007 and accused of terrorism because of his research on gentrification in Germany.²⁵ As real-estate speculation is one of the leading forces of parasitic capitalism, these types of struggles and their connections with cultural production are far more interesting than any Free Culture agenda for revealing a concrete terrain of action.

The link between symbolic capital and material valorization is symptomatic of a phenomenon which digitalists are not able to identify or describe. The constitution of autonomous and productive new commons does not pass through traditional forms of activism, and certainly not through digital-only modes of resistance or online knowledge-sharing. The commons should be acknowledged as a hybrid space that is constantly configured through the friction between material and immaterial dimensions. If the commons becomes a dynamic space, it must be defended in an equally dynamic way. Due to the immateriality and anonymity of rent, a grammar of sabotage can be the only *modus operandi* of the multitudes trapped within network societies and cognitive capitalism. The sabotage of the immaterial value accumulation (that has indeed very material and productive consequences) is the only possible gesture specular to rent – it is the only possible gesture to build and defend the new commons.