



## Is it written in the stars? Global finance, precarious destinies

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### abstract

This paper explores an artwork - Black Shoals Stock Market Planetarium, by Lise Autogena and Joshua Portway - as a visual metaphor of the conditions of digital labour in the contemporary financial sphere. The experience of networked trading, the nature of the meta-commodity that is bought and sold, and the aesthetic of the 'creative city' that has grown up around the electronic exchanges are shown to cohere into the larger pattern of a predatory society, where 'super-empowered individuals' eat away the social framework that spawned their own increasingly precarious existence. Such is the destiny of the flexible personality. In conclusion, the paper inquires into the philosophical principles, scientific calculations and aesthetic figures that could chart another future.

### Introduction

On AT&T Plaza in Chicago's Millennium Park stands a giant stainless steel sculpture in the shape of an indented ellipsoid, 66 feet long, 33 feet high, weighing 110 tons and glistening in the sun like a drop of liquid mercury. Entitled *Cloud Gate* by the British artist Anish Kapoor and nicknamed 'the Bean' by locals, it cost 11.5 million dollars and immediately became what it was always intended to be, an urban attraction photographed by endless tourists, the world-renowned symbol of a creative city. Stand below the arching mass of the sculpture and gaze upwards at the *omphalos* or navel: your body multiplies into drunken curves, improbably fat and impossibly thin, like in a funhouse mirror. Look back at the sculpture from a few steps away: your diminutive image is crowned by a ring of skyscrapers, their outlines etched against a blue horizon.

Returning home from a recent trip to Detroit and a string of other half-devastated cities, I realized viscerally what I knew intellectually: that Chicago is the incomparable winner of the region, the Midwestern capital of the global economy. It's the city that pioneered both commodity and financial futures, and after a recent round of mergers it is now home to the world's largest futures and options network, the GLOBEX trading platform run by the Chicago Mercantile Exchange Group (the 'Merc'). Elite knowledge workers are making tremendous amounts of money in this city. Yet our neighborhood just a few miles from the lakeshore is full of boarded-up houses and lives that have been foreclosed by the crisis. Twenty percent of the inhabitants have fallen beneath the poverty line and a quarter of the population has no health insurance. The municipal

housing projects have been destroyed for private development, and over thirty percent of the high school students will not graduate.<sup>1</sup> On a sunny day you can see the bright blue sky through the rust-eaten girders of the elevated transport system.

This essay describes the workings – and indeed, the *work force* – of a variety of capitalism that has spread outwards from its Anglo-American core to reshape the entire planet. At the center of contemporary capitalism is a set of financial instruments called *derivatives* and a group of people called *traders*. The text draws links between their highly abstract formulas and the aesthetics of lived experience in the world's major cities. It inquires into the emergence, over the past thirty or forty years, of a *predatory culture* built up around global finance, and into the *precarious destinies* that result from that culture. It begins not with the azurean blue, but with the curve of a dark horizon.

## Unstable constellations

Imagine the night sky as an overarching dome, filled with thousands of shimmering points of light. Like celestial messengers they glitter and gleam as they drift across the face of the heavens. Each of these bright stars represents the stock of a publicly traded corporation. The intensity of their luminous presence varies in real time according to the frequency of trading. If one star co-varies with others – that is, if a pattern emerges between the rates at which certain stocks are bought and sold – then the flickering points of light draw slowly together, forming unstable constellations.

The illuminated dome is an artwork by Lise Autogena and Joshua Portway, entitled *Black Shoals Stock Market Planetarium* (see figure 1). It refers both to the financial economy and to ancient astrological techniques for the calculation of human destinies. For its London installation it was connected to a Reuters news feed; in Copenhagen it was wired directly to the local exchange. At first glance it might resemble dozens of other stock-market visualizations, remarkable only for the astrological metaphor. But there is a further element to this piece, which transforms it into an existential allegory of contemporary social relations.

To create *Black Shoals*, the artists worked with artificial-life researcher Cefn Hoile, who developed computer algorithms for the generation of 'creatures' that would feed off nutrient energies released by the traded stocks. On the basis of the programmer's genetic codes, populations of creatures are born, grow, reproduce and die, developing unique survival strategies that cannot be predicted in advance. Like traders, they form vast alliances or operate warily on their own, display tremendous mobility or remain fixed in one position, focus solely on particular stocks or cast their nets across the entire virtual universe. And like traders, they are affected both by the fluctuations of the market in general and by the strategies of their rivals. A photo documenting the work shows a dense cloud of tiny A-life agents. The caption reads: 'These creatures would breed voraciously when they found food, causing huge swarms which would spread

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1 Cf. Amy Terpstra, Amy Rynell, and Andrew Roberts (2009) *2009 report on Chicago region poverty*. Chicago: Heartland Alliance Mid-America Institute on Poverty. [<http://www.heartlandalliance.org/research>]

across the dome eating everything in their path and eventually dying out when nothing was left to eat'.<sup>2</sup>



Figure 1: *Black Shoals Stock Market Planetarium*, Lise Autogena and Joshua Portway [<http://www.blackshoals.net>]



If this allegory of the trader's condition can be termed 'existential' it is not because the creatures are alive in any natural sense, but instead because their artificial world is decisively shaped by a complex flow of data streams whose relations continually border on chaos. But does the allegory apply only to the denizens of the global exchanges? In his *General Theory*, Keynes famously used the image of 'animal spirits' to evoke the affective enthusiasms that motivate market behavior. Drawing on that image, the underground cultural critic Matteo Pasquinelli has compiled an entire bestiary of postmodern parasites whose life-support depends on the surplus values generated by electronic trading (Pasquinelli, 2008: ch. 1). He suggests that the form of our cities, the organization of our labour, the content of our entertainment and, I would add, the rules of our lawbooks and the teleological principles of our arts and sciences are all dependent on the greed, fear and irrational exuberance that drive the denizens of the electronic markets. They provide the common underpinning – both the affective and the monetary basis – for contemporary urban existence. Seen from this perspective, the 'stars' of global finance gleam with dangerous passions, and hyper-competition rules our creaturely destinies.

2 This and the following quote can be found in the extensive documentation at [<http://blackshoals.net>]

As proven by the series of crises that have surged through the world economy over the last thirty years, nothing has more powerful effects at ground level than the shifting map of the financial stars above. The artists put it like this:

Because the stock market has the kind of cybernetic properties of biological systems and other complex phenomena (feedback loops etc.), it can be studied in the same way as biological systems. This tends to give rise to a sense that the market is somehow a 'natural' expression of some fundamental forces. One of the lessons we learned in our long journey to understand something about the operations of big finance is that the market is only a natural expression of the particular artificial world model that it embodies – in the same way that the artificial life creatures in *Black Shoals Stock Market Planetarium* are natural expressions of the computer program that they exist in.

*Black Shoals* is a great work because it asks two fundamental questions. First, what is the 'artificial world model' that contemporary civilization has come to embody, under the decisive influence of speculative finance? And second, will the 'creatures' of this particular world – not only the traders themselves, but all the cultures of global circulation that have sprung into existence over the last thirty years – now have to dramatically change survival strategies, or perhaps even die out and disappear in the wake of the current crisis?

## Mirror maze

Writing in 1986, Susan Strange described the extreme volatility of the financial sphere as 'casino capitalism'. While investment bankers made fortunes, risk and instability arose to dominate everyday experience: 'The great difference', Strange writes, 'between an ordinary casino which you can go into or stay away from, and the global casino of high finance, is that in the latter we are all involuntarily engaged in the day's play' (Strange, 1997). By the mid-1980s, the continually rolling dice had disrupted the entire international system for the production and exchange of goods and services. The United States retained the central role in economic governance that it had won with WWII, but its hegemony was now founded on the management of chaos.<sup>3</sup>

The casino age began with the breakdown of the Bretton-Woods fixed exchange-rate scheme in the years 1971-73. The new regime of floating rates required the hedging of international payments by purchasing a whole range of foreign currencies, to offset potential devaluations in any of the monies actually being used. Already in 1971, Milton Friedman wrote a paper arguing for the necessity of trading currency futures, which soon replaced pork bellies as the mainstay of the Chicago Mercantile Exchange.<sup>4</sup> The appearance two years later of the first networked currency trading system, called the Reuters Monitor, marks the departure point for the ongoing proliferation of financial

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3 See the prescient book by Michael Hudson (2003 [1972]) *Superimperialism: The Origin and Fundamentals of U.S. World Dominance*. London: Pluto Press, as well as Peter Gowan (1999) *Global Gamble*. London: Verso, 3-138.

4 For an account of Friedman's intervention, commissioned by the Chicago Mercantile Exchange, see Bob Tamarkin (1993) *The Merc: The Emergence of a Global Financial Powerhouse*. New York: HarperBusiness, ch. 19; also see Leo Melamed (1988) 'Evolution of the International Monetary Market', *The Cato Journal* 8(2) [<https://www.cato.org/pubs/journal/cj8n2/cj8n2-7.pdf>].

information networks.<sup>5</sup> What became crucial in the trading pits was the relation of the speculating individual to the ciphers of opportunity flickering on the screen. As Urs Bruegger and Karin Knorr Cetina explain in an article on ‘The Global Lifeform of Financial Markets’: ‘The screen is not simply a “medium” for the transmission of messages and information. It is *a building site on which a whole economic and epistemological world is erected*. The world-character of this site also comes about through the performative possibilities of the dealing systems implemented on screen’ (2002: 395).

1973 also saw the publication of the Black-Scholes option-pricing formula. Exactly when the stability of the welfare state began to falter, two University of Chicago professors, Fischer Black and Myron Scholes, proposed its financial replacement – or its neoliberal derivation. Their aim was to find out how to accurately price a formerly obscure instrument known as a ‘European call option’. That’s a privately sold contract granting the right, but not the obligation, to buy shares of a stock for a guaranteed price at a future date. The difficulty was to know how much the guarantee should sell for. Their strategy was to assemble a fictional portfolio of stocks and options, and develop a technique of ‘dynamic hedging’ to continually buy and sell shares, balancing out the fluctuations in price among the separate elements of the portfolio in order to maintain an overall value. The price of the option would then be equal to the cost of continually hedging against possible changes in the value of the underlying stock; and the key predictive variable for estimating this cost would be the stock’s average volatility, or its standard deviation from its historical mean, which they calculated with a formula borrowed from the physics of Brownian motion. What they created was both a mathematical proof and a theoretically risk-free trading technique that used a carefully weighted constellation of values to distribute randomly occurring fluctuations back into the statistically regular equilibrium of the market as a whole. A third colleague, Robert Merton, added a piece of stochastic calculus called ‘Ito’s lemma’ – which actually came from Japanese rocket science – in order to allow for high-speed computer processing. Together they had invented the contemporary derivative.

The success of the formula touched off an explosion, or if you will, a *supernova* of derivatives trading. It has continued expanding up to the present, reaching a potential or ‘notional’ value of \$683.7 trillion in mid-2008.<sup>6</sup> To attain this impossible sum – roughly ten times global GDP – the option-pricing formula had to be rewritten for an enormous variety of contracts, including both specialized over-the-counter deals and standardized products whose costs and profits could be calculated instantaneously in the trading pits by means of networked computer devices. As Edward LiPuma and Benjamin Lee explain:

The model was extended to encompass increasingly abstract forms of risk that went beyond simple commodities options pricing into the much more sophisticated world of complex financial derivatives.... In ensuing years, mathematical statistics would work not so much in concert with

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5 Cf. Walter Wriston (1992) *The Twilight of Sovereignty: How the Information Revolution Is Transforming Our World*. New York: Charles Scribners’ Sons, p. 42: ‘Reuters and similar services provided by other companies have wrought a greater transformation in world financial markets in fifteen years than those markets had undergone in the previous centuries’.

6 [[http://www.bis.org/publ/otc\\_hy0905.pdf](http://www.bis.org/publ/otc_hy0905.pdf)]

but rather alongside those who fabricated and marketed derivative products. Computer pricing programs and the in-house technicians who designed them would functionally and socially mediate their relationship. Eventually traders could run the pricing programs with little technical, never mind real mathematical, expertise or understanding. The result was the evolution of parallel but barely connected worlds... (2004: 79-80)

As the key discovery behind derivatives, the Black-Scholes formula can be placed at the origins of the ‘artificial world model’ of finance capitalism. But it is also the source of a fundamental disconnect between the informational sky above our heads and the existential ground beneath our feet. On the one hand, the expertise of the ‘hardest’ natural science, physics, provides the bedrock of quantitative certainty that alone can quell the anxiety of government regulators and secure the confidence of investors. On the other, the ‘performative possibilities of the dealing systems implemented on the screen’ are what actually generate the profits, pumping the animal energy of the trader’s passions into the financial stars above our heads and sparking the positive feedback loops of bubble economics.<sup>7</sup> Never mind that the bedrock of certainty – the so-called ‘efficient market hypothesis’ – would later prove to be a chimerical fiction.<sup>8</sup> For the cycle of profit-taking and reinvestment to continue recirculating indefinitely without any reference to material production – that is, for the sky above to take on a life of its own – just one further element was needed: systemic corruption that could subvert the checks and balances designed to prevent speculative bubbles. This corruption takes the form of what William K. Black calls ‘control fraud’, or the ability of corporate officers to suborn the regulatory instances, both internal and external, that are supposed to keep the system in balance. Corruption at the top can transform control functions – accounting firms, ratings agencies, even Greenspan’s Fed itself – into delusional devices for the maintenance of confidence, despite the obvious signs of market failure (Black, 2005). A type of derivative known as a credit-default swap (CDS) served as exactly this delusional device, providing mathematical guarantees for the inflation of the monumental real-estate bubble whose collapse precipitated the insolvency of the global financial sector at the same time as it revealed the impoverishment of the former American middle classes.

The word ‘speculation’ comes from the Latin verb *specere*, which means to look, in this case, to look into the future. But it is also related to *speculum*, or mirror. What the world model of financial capitalism does at ground level is to transform select living environments into grotesquely magnified reflections of the primary relation between the

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7 For an introduction to the way that positive-feedback theories of the economy developed as an unintended consequence of work by Ilya Prigogine and Isabelle Stengers, see my text (2009) ‘Guattari’s Schizoanalytic Cartographies’, *Escape the Overcode: Activist Art in the Control Society*. Zagreb/Eindhoven: WHW/Vanabbemuseum, esp. pp. 366-70. Also see the discussion in Melinda Cooper (2008) *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*. Seattle: University of Washington Press, ch. 1.

8 Justin Fox (2009) *The Myth of the Rational Market: A History of Risk, Reward, and Delusion on Wall Street*. New York: Harper Collins, p. 320: ‘The efficient market hypothesis, the capital asset pricing model, the Black-Scholes option pricing formula, and all the other major elements of modern rationalist finance arose toward the end of the long era of market stability characterized by tight government regulation and the long memories of those who had survived the Depression. These theories’ heavy reliance on calmly rational markets was to some extent an artifact of a regulated, relatively conservative financial era – and it paved the way for deregulation and wild exuberance’.

grasping trader and the profit-making opportunities flickering on the screen. The gentrification process that reached global scale in the mid-2000s has transformed entire cities into glittering mirrors of the narcissistic desire to gaze into an ever-more opulent future.<sup>9</sup> Art, in the instrumentalized form of the 'creative industries', has been an important vector of this total makeover. Take one example of the results: the construction of flashy postmodern casinos in the impoverished core of Detroit, as a predatory regeneration strategy for a ruined city. No longer a production zone, the urban environment has become a stage for an infinite variety of speculative performances. Evoking the supposedly unlimited potential of human capital, these performances seek to justify future investment – in oneself, the land, a product, an algorithm, a business. Yet they take place under highly ambiguous circumstances, where the performer is often a 'mark', the target of someone else's strategy.

The texts by the artists of *Black Shoals Stock Market Planetarium* suggest the existence of self-reinforcing ties, or positive feedback loops, between the A-life creatures and their objects of financial desire. But the programmer, Cefn Hoile, tends to portray his creations as victims of a financial universe beyond their ken: 'The creatures' relationship with their artificial world of stars is a mirror image of our relationship with the financial markets – they strive to survive, competing with each other in a world whose complexity they are too simple to fathom'.<sup>10</sup> By accentuating the victim's role, the allegory largely misses the predatory nature of creaturely existence. For not only do real-life traders prey on each other and on the assets or savings of smaller, more gullible investors, and not only do the banks and the great corporations prey upon each other and on consuming populations. In addition, the entire bestiary of financialized civilization gradually becomes imbued with the relations between hunter and hunted that the American sociologist, Thorstein Veblen, first described a century ago in his *Theory of the Leisure Class*. Today, the passion for the hunt has spread throughout the body politic. It lays the affective basis for what James K. Galbraith calls 'the predator state': a form of governance without any notion of solidarity, which encourages everyone to aspire to the condition of the hunter while at the same time delivering them over to the opposite fate of the prey (Galbraith, 2009). As Pasquinelli points out, representations of such base passions are rarely to be found in the idealizing images of contemporary art, which tend either to bow before the overarching logic of code or to exalt the febrile flights of desire. For an image of the predator society I am tempted to look back, not all the way to Veblen's time, but to the 'Magic Mirror Maze' of Orson Welles' film noir classic, *The Lady from Shanghai*, released in 1948 at the very outset of America's rise to hegemony. The surreal closing scene of the movie offers a prescient glimpse of the distorted realities generated by the spectacular power-brokers of the neoliberal democracies.

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9 For an overview of the theories of speculative urbanism, see my article 'Megagentrification: Limits of an Urban Paradigm' [<http://brianholmes.wordpress.com/2008/12/06/megagentrification>].

10 Cefn Hoile (undated) 'Black Shoals: Evolving Organisms in a World of Financial Data', available at the author's website [<http://cefn.com/cefn/?BlackShoalsPaper>]. A similar image of popular powerlessness is offered by Rita Raley (2009) in her book *Tactical Media*. Minneapolis: University of Minnesota Press, p. 149: 'While we may hold to the illusion of our agency in relation to the market, the illusion of our capacity to individually manage the market, we are always caught within a paradigm that is too complex and that in effect manages us'.

The hero of the film is the working-class Irishman Michael O'Hara, played by Welles himself. Following a chance encounter in New York, O'Hara is lured by his own greed and sexual desire into the intrigues of a rich American couple who sail him across the Panama Canal in a private yacht, embroiling him in a complex murder plot that finally leads to the mirror-maze of a San Francisco funhouse. Drugged and disoriented, he witnesses a wild shootout between the rich but impotent trial lawyer, Arthur Bannister, and his exotic wife Elsa, a high-class Caucasian prostitute born in China, played by Welles' estranged wife Rita Hayworth. Faces and bodies multiply in a baroque confrontation of proliferating images, before the first shots ring out. As the mirrors shatter and the labyrinth of reflections falls away in broken shards, the husband and wife finally kill each other, fulfilling what the film portrays as their destiny. The Welles character escapes from the world of distorted spectacle into the open air, wondering how he will forget, how he will live on into the future.

## Ask why

Today it is the mirror-maze of the speculative economy that lies in ruins, and the question is how to forget the impossible desires projected from the financial stars above, how to imagine other destinies. Yet what seems likely, if the current political passivity continues to reign, is that the multitudes of artificial life forms that flourished briefly in the glass-house environments of the financial capitals will now just fade away like the swarms of lesser creatures in *Black Shoals*, leaving the major predators with their weapons intact, still firing at each other. The danger is that the present crisis – with a magnitude comparable at least to that of the 1970s, if not the 1930s – will be resolved by those at the top of the social hierarchy, who are now attempting to reboot the speculative economy. In that case, the profound reshaping of social institutions required to end the crisis will be decided exclusively by them. If we want to make an egalitarian change in our world model, it's urgent to understand what happens in the boom-bust cycles – before they are used against us once again.

'Ask why' was the slogan of the former energy-trading corporation Enron, whose opaque financial strategies, illegal business maneuvers and extensive support in Washington made it an exemplar of control fraud at the turn of the millennium. An advertisement aired just before bankruptcy in 2001 shows three businessmen with seeing-eye dogs and the heads of mice, wearing dark glasses and tapping the ground with white canes. The off-screen voice explains: 'Enron Online... is creating an open, transparent marketplace that replaces the dark, blind system that existed'. Another ad promotes weather derivatives to protect against unforeseen climate events; the CEO who doesn't buy them is shown as a sitting duck at a carnival sideshow, easily picked off by any kid with a BB gun (or more likely, a PC and a broadband connection).<sup>11</sup> As for the slogan itself, it's a classic symptom of the speculative economy: an injunction to know that reverses into its opposite. 'Why ask?' is the real message. At stake here is the function of the veil, which turns sophisticated knowledge, indeed visibility itself, into a weirdly transparent cloak of secrecy and denial. Visible blindness is the underlying formula of financial governance.

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11 The ads are archived at [www.rtmark.com/enron](http://www.rtmark.com/enron).

Perhaps the insight we're missing is the answer to a simple question: What is a derivative? We know that it is a fungible contract, created by applying a mathematical formula to an underlying asset or commodity whose price is susceptible to fluctuation on volatile markets. By assembling constellations of values that statistically tend to fluctuate in opposite directions, derivatives were supposed to mitigate the risks of globalization with the highest degree of efficiency. The idea was that that all risks, including collective ones, should be made into salable products, formatted for the market by private actors in search of a profit. Yet although it is salable, the derivative cannot be understood as an ordinary commodity of the industrial era. Marx described the commodity as that product of human labour whose exchange value, seemingly animated with a life of its own, acts to render invisible the social relations that produced it. Derivatives, however, have nothing directly to do with production; instead they are conceived to manage the environmental risks that weigh on the future of speculative activity. In this sense they are *meta-commodities* that govern the unfolding of the contemporary economic model. Their fascinating appearance acts to conceal the private deliberations that effectively shape the environment in which any productive or consumptive activity can take place.<sup>12</sup>

The life form of the financial markets is now animated by these meta-commodities, which lend the new cityscapes their dazzling character. But what the pulsating lights of the central business districts hide is the privatization of the social state – indeed, the privatization of government. Gentrification is the fetishism of severed democratic relations. Meanwhile, as Lee and LiPuma point out, the proliferation of derivatives actually *increases* the risks that they are supposed to mitigate.<sup>13</sup> Yet the breakdown, when it comes, can also have its payoffs. Consider the way that Enron's manipulation of energy markets led first to rolling blackouts in California, then to the recall of the Democratic governor Gray Davis and the election of Arnold Schwarzenegger, who has used the credit crisis as an historic chance to destroy public services.<sup>14</sup> In the name of future prosperity for the middle-class citizens of California, the 'Governator' is terminating public funding for the socialized university system that allowed so many Californians to achieve middle-class status.<sup>15</sup> What European activists call 'precarity' – that is, a condition of generalized uncertainty regarding education, employment, housing, health care, retirement and other life chances – now appears as a destiny, rising up against horizons blocked by the advancing threat of climate change. The supernova has finally imploded, leaving black holes in the future.

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12 For a parallel treatment of the metacommodity, see Brian Holmes and Claire Pentecost, 'The Politics of Perception: Art and the World Economy', in *What Keeps Mankind Alive? The Texts*, catalogue of the 11<sup>th</sup> Istanbul Biennial, curated by the What, How & for Whom collective (Sept. 12-Nov. 8, 2009), pp. 344-55; available online at [<http://brianholmes.wordpress.com/2009/09/26/the-politics-of-perception>].

13 'The very process that prices and commodifies also conceals its own social character, making more difficult the task of visualizing the systemic risk'. LiPuma and Lee, *Financial Derivatives and the Globalization of Risk*, op. cit., p. 55.

14 See the documentary on Enron by Alex Gibney, *The Smartest Guys in the Room* (2005), where the anatomy of control fraud is retraced from the sinews to the bone.

15 Consult the many weblinks in my review of the first U.C. walkout on September 24, 2009, at [<http://brianholmes.wordpress.com/2009/10/01/the-u-c-strike>].

As the sociologist Daniel Bell wrote in 1973, ‘the “design” of a post-industrial society is a “game between persons” in which an “intellectual technology”, based on information, rises alongside of machine technology’ (Bell, 1999: 116). This is the formula of neoliberal finance. Can we finally ask why the citizens of the world’s democracies accept to play such strange games between persons, where they are alternately the hunter and the hunted? In the great hall of Chicago’s Merc or in the proliferating electronic spaces of the GLOBEX network, derivatives traders hold up a distorting but oddly faithful mirror to the wider worlds of so-called ‘digital labour’.

At the outset of this decade, in a text entitled ‘The Flexible Personality’, I identified a widespread desire among the new knowledge workers to mix their labour with their leisure in an enticing or even eroticized atmosphere of free play (Holmes, 2002). A hilarious image from the Yes Men, showing a corporate executive in a skintight ‘Management Leisure Suit’ with an electronically networked ‘Employee Visualization Appendage’ rising like a golden phallus from his hips, served to make the point. The kind of ‘play-labour’ celebrated by the pundits of Web 2.0 may have had transgressive connotations in the 1960s, but today it is only a grotesque parody of Huizinga’s *homo ludens*, and a woeful caricature of the sublimated sexuality that Marcuse envisioned in his revolutionary book, *Eros and Civilization*. What has disappeared from the networked cultures of casino capitalism is the willingness to engage in political conflict – even while the civilizational forces of Thanatos, or unbridled aggression, bear down on the biosphere. Now it is those aggressive drives that must be sublimated and channeled into a necessary struggle. Rather than draping aesthetic and epistemological veils over blatant expropriation, shouldn’t artists and knowledge workers seek political confrontations with those who set the rules of the game?

The struggles against privatization that began unfolding in September 2009 within the University of California system (and therefore at the heart of what autonomous Marxist theorists long ago identified as ‘cognitive capitalism’ (Corsani et al., 2001)<sup>16</sup> have finally opened up a significant grassroots challenge to the logic of the predator state and the financial world model that it incarnates. The California outbreaks were preceded by major student movements in France, Italy and Croatia, and followed about a month later by parallel events in Austria – only the latest in a worldwide wave of cycle of protests refusing the instrumentalisation of higher education.<sup>17</sup> These struggles are important, because the university has become the crucial laboratory of neoliberal management and financial engineering, in addition to its traditional role as R&D center for the industrial war machine.<sup>18</sup> Only far-reaching changes in the ways that knowledge is elaborated and made productive can reorient our complex societies away from the suicidal pathway of

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16 For an introduction in English, see Carlo Vercellone (2007) ‘From Formal Subsumption to General Intellect: Elements for a Marxist Reading of the Thesis of Cognitive Capitalism’, *Historical Materialism* 15: 13–36 [[http://www.generation-online.org/c/fc\\_rent5.pdf](http://www.generation-online.org/c/fc_rent5.pdf)]. References to the Italian literature can be found in *Animal Spirits*, op. cit.

17 See the map created by the Counter Cartography Collective in Chapel Hill, North Carolina, online at [<http://tinyurl.com/university-struggles>]

18 See Brian Holmes, ‘Disconnecting the Dots of the Research Triangle: Corporatization, Flexibilization and Militarization in the Creative Industries’, *Escape the Overcode*, op. cit.

climate chaos and generalized warfare, steering them instead toward a sustainable and survivable future.

Addressing himself to European artistic vanguards steeped in the heritage of Italian Autonomia, Pasquinelli calls for 'the sabotage of creative value' and 'the explosion of the social relations enclosed in the modern commodity'.<sup>19</sup> In the university, that would mean trashing the concept of individual market freedom and prying open the meta-relations of governance that are concealed in abstruse mathematical formulas. Such an explosion has become urgent. We need a different world model, which cannot be abstracted from price information analyzed by computers. But it will take more than critical insights to gain anything concrete. Beneath the curve of the night sky there awaits, not only occupations of public buildings and demonstrations on the streets, but also an existential struggle for the quality of our dreams. Critical intelligence and the radical imagination will have to merge with the animal spirits of political conflict, to chart new paths through the fateful spaces where symbolic constellations are etched on living skins.

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