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The Speculative Performance

Art's Financial Futures

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So you were shocked by the prices at Art Basel – the one in Miami, I mean? There is nothing new under the Florida sun. Since the heyday of "tulipomania" in Holland, financiers have been speculating on aesthetics. Their blooming folly way back in the 1620s seems to confirm a remark by Cornelius Castoriadis, on the dysfunctional yet determinant nature of the stock market with respect to real production. "Why must a society seek the complement necessary to its order in the *imaginary*?" asks the Greek political theorist. "Why do we find in every case at the heart of this imaginary and in all of its expressions something that cannot be reduced to the functional, an original investment by society of the world and itself with meaning – meanings which are not 'dictated' by real factors, since it is instead this meaning that attributes to the real factors a particular importance and a particular place in the universe constituted by a given society?"[1]

Speculation is essential to the "imaginary institution" of the capitalist world-system. Yet until today, nobody ever thought to make market information into raw material for art. That leap has now been taken, with the exhibition "Derivados, Nuevas visiones

financieras," mounted in the summer of 2006 at the Casa Encendida in Madrid. The organizing group, Derivart, brought together a select bouquet of works to celebrate the birth of "Finance Art." What they claim to achieve is "an artistic exploration and critical analysis of stock markets and financial agents."[2]

At the heart of this new genre is an aesthetics of information, an "infosthetics": the transformation of data streams into visual or sonic representations, by way of computer algorithms.[3] The most impressive work (represented only through video documentation) is entitled *Black Shoals*. That's a reference to the Black-Sholes option-pricing formula, which is at the origin of the little financial miracle called hedge funds. The piece takes the form of a planetarium, a veritable universe, whose myriad stars represent thousands of stocks, twinkling and glowing in real time as they are traded at greater or lesser intensities. Each trade gives off a numerical value (analogous to money) which serves as "food" for a population of freely evolving computer-generated creatures. Over the course of the exhibition they develop more-or-less effective survival strategies (lying dormant in wait, gathering around active constellations, ranging footloose and predatory ...). As the curators remark in the catalogue: "Visualization characterizes the experience of stock-market professionals today. An original representation allows you to interpret the data differently and see opportunities that the others ignore."

A few months after the exhibition, members of Derivart tried their own experiment in visualization, with the performance "Tickerman." A pseudo-heroic artist wields paint pots and brushes, his slapdash strokes and jabs relaying the rhythms of a "stock-market melody." Financial data translated into sound becomes visible again on the canvas, whose aesthetically trivial quality opens

up the real question: where do the most interesting opportunities lie, in the music, in the gesture that transcribes it for the eye, in the pictorial object that results, in the aura of parody that surrounds it, or in the distribution of the whole performance over YouTube? This is what the specialists call *arbitrage*: because it all depends on which aspects of the work you want to invest in.

Avid for profits but jittery about the risks, contemporary arbitrageurs know how to double up their bets, by playing both sides of an equation. The economist of the Derivart, Daniel Buenza, describes their strategy with great precision: "In contrast to corporate raiders, who buy companies for the purpose of breaking them up to sell as separate properties, the work of arbitrage traders is yet more radically deconstructionist ... they attempt to isolate such qualities as the volatility of a security, or its liquidity, its convertibility, its indexability and so on ... Derivatives such as swaps, options, and other financial instruments play an important role in the process of separating the desired qualities from the purchased security. Traders use them to slice and dice their exposure, wielding them in effect like a surgeon's tools – scalpels, scissors, proteases to give the patient (the trader's exposure) the desired contours."[4]

Derivart claims to produce not only artistic curves, but a critical analysis of the market. If we understand critique as a purely deconstructive operation, then a performance like "Tickerman" can be critical, just as arbitrage operations can be considered an "art" in the text by Daniel Buenza. But if we understand critique according to its etymology, as the attempt to intervene at the moment of a life-threatening crisis, then maybe we should look elsewhere for a critical art – far from the data-bodies and abstracted surgeries of infosthetics.

What constitutes the imaginary of finance? How has it autonomized itself from what Castoriadis calls "social functionality," to become the dominant institution of contemporary capitalism? Can a critical art help us to understand the power it exerts over the human psyche? Above all, can art help to institute *another imaginary*? Michel Foucault's work on neoliberalism has brought to light the degree to which speculation on one's own human capital has become a major vector of subjectivation – that is, one of the primary paths that society offers you for becoming.[5] The need to intervene along that pathway to the future has become critical since the stock-market krach of 2000, which brought neoliberal expansionism to its crisis-point, ushering in the new regime of warfare.[6]

This article will examine two performances, both of which engage their authors in an embodied reflection on the financial markets. What can be expected of such experiments? The anthropologist Victor Turner gives a clear idea: "Performative reflexivity is a condition in which a sociocultural group, or its most perceptive members acting representatively, turn, bend or reflect back upon themselves, upon the relations, actions, symbols, meanings, codes, roles, statuses, social structures, ethical and legal roles, and other sociocultural components which make up their public 'selves.'"[7] Just one more thing: later on we'll have to distinguish between reflections in the mirror, and the chance to intervene.

Trading on the Double Edge

In October of 2002, Michael Goldberg, an Australian artist of South African origin, made a series of decisions that would allow him to "behave as a day trader" while simultaneously analyzing the underlying structures of the computerized financial markets. With

an initial capital of AUD $50,000, lent by a so-called “Consortium” of three veteran day-traders whom he won over to his project through conversations in a specialized chat room, Goldberg set out to deal artistically in derivatives of a single stock: News Corp., the global media empire of the right-wing billionaire Rupert Murdoch.

The performance took place over a period of three weeks at the Artspace Gallery in the city of Sydney in Fall 2002.[8] It extended onto the Internet via a website featuring art and market information, daily balance sheets and an IRC channel for conversation; there was also a dedicated call-in line to the artist in the gallery. The title was “Catching a Falling Knife” – financial jargon for a risky deal. In effect, the context of the piece was a market still battered by the failure of the new economy and the collapse of giants such as Enron, WorldCom and Vivendi-Universal. The use of derivatives, rather than actual News Corp. shares, allowed Goldberg to play on either a rising or a falling value, with the latter appearing much more likely in the bear market of 2002. Here is how he describes the set-up in the gallery:

> “The viewer enters a space devoid of natural light. Three walls reflect the glow of floor to ceiling digital projections – real-time stock prices, moving average charts and financial news. The values change and the graphs move, unfolding minute-by-minute, second by second in a sequence of arabesques and set moves. They respond instantly to constantly shifting algorithms pumping in through live feeds from the global bourses. A desk light and standing lamp in the viewers’ lounge reveal a desk and computer, armchairs, and a coffee table with a selection of daily newspapers and financial magazines. Opposite, high on a scaffold platform another desk lamp plays on the face of the artist as he stares at his computer

> screens. He's talking into a phone, placing or closing a trade. Below him there's the continual sweep of the LED ticker declaring current profit and loss. In the background the audio tape drones. The voice of the motivational speaker, urges you 'to create a clear mental picture of just how much money you want to make – and to decide just how you will earn this money until you are as rich as you want to be.'"[9]

By projecting software readouts and Bloomberg news flashes on the walls, Goldberg sought to immerse the visitor in the pulsating world of information that constantly confronts the trader on his screens. The decision to use a phone-in brokerage service rather than online orders allowed for vocal expression of the fear and greed that animate the markets. Daily reports to the consortium of lenders – who had contractually agreed to take all the risk, but also the potential profit – added the pressure of personalized surveillance and obligation, analogous to what a professional trader confronts in a major financial institution. The real-time charts served to graphically translate the market volatility that is technically known as "emotion." In an earlier performance, Goldberg even undertook to paint such graphically rendered emotion on the gallery wall, thus underscoring the link between individual expression and market movements.[10] By reflexively performing his real role as a day trader within an exaggerated gallery environment, Goldberg made a public event out of the intimate interaction between the speculative self and the market as it coalesces into presence on personal computer screens.

What's at stake in such an interaction? The Swiss sociologists Urs Bruegger and Karin Knorr Cetina define the global financial markets as "knowledge constructs." They arise by means of individual interactions within carefully structured technological and

institutional frames, and they always remain in process – forever incomplete, forever changing.[11] The constant variability of these "epistemic objects" makes them resemble a "life form," one that only appears on the trader's screens (or more precisely, for the professional currency changers that Bruegger and Knorr Cetina have studied, via his full equipment set, including a telephone, a "voice broker" intercom, two proprietary dealing networks known as the Reuters conversational dealing system and the EBS Electronic Broker, and various other news sources and internal corporate databases, including time-charts displaying the evolution of each individual's recent positions).[12] As the sociologists stress, "*the screen is a building site on which a whole economic and epistemological world is erected*." And it's a world which you can plunge into, which you can manipulate, from which you can emerge "victorious." The responsive flux that appears on the screens makes possible what the two researchers call "postsocial relationships."

The term "postsocial" is obviously a provocation – one with huge implications, given the continuing multiplication of screens in both domestic and public space.[13] However, Bruegger and Knorr Cetina do not consider the postsocial relationship as humanity's total alienation to an electronic fetish. Well aware of the economic anthropology developed by Karl Polanyi, they demonstrate how the flux of the currency-exchange market is constructed, at least in part, by relations of reciprocity between traders, notably via email conversations over the Reuters dealing system. They also observe how individuals working at great spatial distances come to feel each other's copresence through temporal coordination, since everyone is simultaneously watching the evolution of the same indicators. And at the same time as they illustrate the relative autonomy that traders enjoy within their field of activity, they show how the chief

trader controls and carefully manipulates the parameters, both financial and psychological, within which each individual on the floor makes his deals. In these ways, the interaction that animates the global market is "embedded" in an expansive tissue of social relations, composing a "global microstructure."[14] Nonetheless, what the researchers claim is that the paramount relationship of the trader is with the flux itself, that is, with the informational construct, or what early cyberpunk theory called the "consensual hallucination." This is what they call the postsocial relationship: "engagements with non-human others." The key existential fact in this engagement is that of "taking a position," i.e. placing money in an asset whose value changes with the market flux. Once you have done this, you are *in* – and then it is the movements of the market that matter most of all.

Goldberg's performance displays exactly this anxious relation to an ungraspable object, something like a jostling crowd of fragmentary information, its movements resolving at times into ciphers of opportunity, then dissolving again into panic dispersal. In an interview, he explains that real day traders have little concern for so-called fundamentals, but constantly seek instead to evaluate each other's movements: "They'd rather be looking at what the charts are telling them about how punters are behaving on the market each day, each minute, each second. Get an accurate picture of where the crowd is moving and you jump on for the ride – uphill or downhill – it doesn't matter."[15] He uses an image from a popular film to evoke the plunge of taking a position, then closing it out for a profit or a loss, with all the attendant emotions of fear, greed, and panic desire: "I'm reminded of a scene in Antonioni's *Blow Up* where the character played by David Hemmings mixes in with rock fans as they fight over the remains of a guitar, trashed on stage at the end of a concert and flung into the waiting crowd. He

emerges the victor, only to discard the prized relic moments later as so much trash – the adrenaline rush of the pursuit having been the only real satisfaction to be gained."

Similarly, the two sociologists reflect on the intensities of an ultimately void desire, claiming that "what traders encounter on screens are stand-ins for a more basic lack of object." To characterize the postsocial relation, Knorr Cetina and Bruegger recall Jacques Lacan's concept of the mirror stage, where the speechless infant is fascinated by the sight of its own body as a whole entity, and at the same time disoriented by the inward perception of a morcellated, untotalizable body-in-pieces. They stress that "*binding (being-in-relation, mutuality) results from a match between a subject that manifests a sequence of wantings and an unfolding object that provides for these wants through the lacks it displays*."[16] The rhythm of the market on the screens is a way of capturing and modulating the subject's desire. Yet once again, this postsocial tie is not portrayed as total alienation, but as a reflexive culture of coping and dynamic interchange, extending beyond the simple goal of money-making toward what the anthropologist Clifford Geertz, in a discussion of Balinese cock-fighters and their high-stakes gambling, called "deep play."[17]

Could Goldberg's piece be taken as a celebration of this "deep play" in the finance economy – an aestheticized exploration of the actions and gestures unfolding within a global microstructure, without any regard for the macrostructures on which it depends? The baleful presence of a wall-sized portrait of Rupert Murdoch at the entryway to the performance space argues against that reading. The artist's earlier work had been primarily about the institutions of the British empire in Australia. Here, by speculating exclusively on the value of News Corp. stock, he situates the interactions of a small-time day-trader within an arc of power that extends from

Australia to the United States, via Murdoch's extensive holdings in Italy and England. In America, Murdoch is the owner of the bellicose Fox News channel, but also of the *Weekly Standard*, the insider publication of the neoconservatives in Washington. He is a direct supporter of the Anglo-American war coalition, and a transnational entrepreneur who stands only to gain from further extensions of US-style capitalism. As a key player in the construction of satellite TV systems with global reach, he has helped build the infrastructure of a new imperial politics. The billionaire mogul is the master of a postsocial relationship writ large: the relationship of entire populations with the proliferating media screens that structure public affect, through a rhythmic modulation of attention that is orchestrated on a global scale.[18] The reference to Murdoch therefore situates the gallery device within an overall imperial power structure, adding implicit meaning to the military vocabulary that the artist affects when speaking of the day-traders (he calls them "battle-hardened veterans of the tech-wreck," and notes that he prefers this kind of expression). The critique here is tacit, deliberately understated; but it is clear nonetheless. The strength of this carefully conceived gallery performance is to reveal the electronic market, with its relation between face and screen, between desiring mind and fluctuating information, as the fundamental device of control within the wartime economy of neoliberalism in crisis.

The work, then, is no mere illustration or celebration of "deep play" in the financial markets. However, there is a more telling question to ask about its performative intentions. Was Goldberg just hedging his bets with his tacit critique, which in the worst of cases could always serve as a kind of blue-chip value on the intellectualized end of the art world? In other words, was this another arbitrage operation? Because it was clear that in the best of

cases, a dazzling string of profitable trades would generate media attention, draw crowds of visitors and create a *succès de scandale*, allowing the artist to win on both the intellectual and commercial levels. And Goldberg was definitely not in it to lose (even though, as mentioned, any monetary profit would go to his backers). An Australian critic described *Catching A Falling Knife* as a "two-edged" proposal, because of the ethical contradiction it staged between the worlds of finance and art.[19] Yet it could also have marked a bid to take two strong positions, to occupy the leading edges of both worlds. What cuts to the quick is the question of the artist's political role, the way his or her own production orients collective desire. How to confront the link between art and finance, without succumbing to the latter's attraction? How to engage a relation of rivalry or artistic antagonism within the most fascinating capture-devices of contemporary capitalism?

At this point – precisely when we could begin to speak about the operations and limits of the artistic device – the performance seems to fall silent and to withdraw into its analytic dimension. Goldberg may have wanted to answer exactly the questions I have asked, seeing them as the highest challenge. Or he may not have seriously considered them. We can't be sure, because reality offered no opportunity to put the matter to the test. He lost money on the sequence of trades – due quite ironically to the fact that instead of falling, the News Corp. stock tended to rise. And so we can only judge his intentions from his final word, which to his credit he issued *before* the outset of the performance itself: "I believe that the real value of the project will emerge in the form of interrogations from the dark recesses of its implausibilities and not from the spectacle of successfully meeting its expectations."[20]

Cartography off the Tracks

To describe the presence of social power in the psyche, Castoriadis speaks of an “instituted imaginary,” whose stability and apparent naturalness he contrasts to the act of political creation, or the "instituting imaginary." We have now observed the operations of the complex device that institutes the imaginary of finance as the truth and indeed the very future of our societies. How could we rediscover the implausibility (the fiction) of such an institution? Only then would we have a chance to intervene artistically (or to exercise an instituent power). Yet the intervention itself has to be formulated within the real conditions of the present.

This is what Castoriadis himself does not seem to have taken into account, even as late as 1987 when he offered a definition of the political act: “*Create the institutions which, when internalized by individuals, most facilitate their accession to their individual autonomy and their effective participation in all forms of explicit power existing in society.*”[21] The question that must be asked is how such institutions could exert their influence, or indeed, *who* could create them, if the very process of internalization no longer works?

In a text that develops her reflection on postsocial relations, Karin Knorr Cetina goes so far as to speak of an eclipse of the “social imagination.” By this she means a decline of the *I-you-me* scenario theorized by psychosociologists such as Freud, Peirce or Herbert Mead, who showed how the individual gains assurance through the capacity to internalize a figure of the other as inner censor, idealized as a positive norm to be fulfilled in one’s own person, or rejected as a constraining limit to be transgressed and overcome. The traditional relation to an inner completeness is replaced in our time by an infinite quest for partial figures, exterior aspects of a perpetually deferred self-identity. The sociologist enlarges the notion of the unfolding object, developed in the studies of the financial markets, to cover all kinds of knowledge-based prosumer

goods that present themselves in endless series (changing fashions, continuously modified software tools, updated work routines etc.). Such processual objects prolong in the everyday environment the function of the mirror where the child desires the completed image of itself, without ever being able to obtain it. "In a nutshell, the argument is that the incompleteness of being which I have attributed to contemporary objects uniquely matches the structure of wanting by which I have characterized the self."[22] The Lacanian concept of a "lack-in-being" proves strangely pertinent when it comes to drafting a structural cartography of the relations of subjectivation in capitalist societies. But in such societies, wouldn't an *instituting imaginary* also have to be processual? And wouldn't it also have to be fundamentally exterior to the subject?

Rather than fixing the structural laws of subjectivation so as to arrive at eternally true statements (like "*les noms du père/les non-dupes errent*," to quote Lacan one last time), Felix Guattari's schizoanalytic cartographies were designed to help people sketch mental models of processes whose parameters are open-ended, and can be altered by whoever participates.[23] His four-part diagrams show how individuals or groups on a given existential territory (T) come to mobilize the rhythmic consciousness of poetic, artistic, visual or affective fragments – the virtual refrains of what he called "universes of reference or of value" (U) – in order to deterritorialize themselves, so as to leave the familiar world behind and engage in new articulations. These take the form of actual energetic flows (F), involving economic, libidinal, and technological components: flows of money, signifiers, sexual desires, machines, devices, architectures, etc. Finally, the diagrams indicate how those flows are continually transformed by the abstract phyla of symbolic codes (Φ), including juridical, scientific and philosophical knowledge. The point was to understand the complex assemblages in which

one is involved, body and soul – assemblages that Guattari called "machines."

To intervene, under these conditions, is to help create the many-faceted, continuously unfolding mirror where a subjectivity in motion continually grasps for its own externalized image. But to intervene is also to expose oneself to the risks of the machine – that is, the risks of the contemporary unconscious, or of being-in-society.[24] What's prefigured in this way is the possibility of experimental research collectives, or rather, vehicles for the investigation of the crisis. In the world of schizoanalysis, the imaginary is fabricated like spare parts for a dysfunctional machine. And exactly that activity is an attempt to reconfigure a possible institution.

A speculative project points its own curious pathway toward the future. In the summer of 2005, artists, researchers, activists and alternative media producers were invited to put their discourses and practices to the test of movement beyond familiar borders, by joining a conference and art event on the rails between Moscow and Beijing, in the corridors, berths and dining cars of the Trans-Siberian train. The event was organized by collectives associated with the web-journal of the *ephemera* group, devoted to "theory & politics in organization." Its title was *Capturing the Moving Mind: Management and Movement in the Age of Permanently Temporary War*. I quote from the call to participation:

> "In September 2005 a meeting will take place on the Trans-Siberian train from Moscow via Novosibirsk to Beijing. The purpose of this meeting is a 'cosmological' one. We would like to gather a group of people, researchers, philosophers, artists and others interested in the changes going on in society and engaged in changing

> society as their own moving image, an image of time."[25]

This "organizational experiment" begins from the state of existential anxiety and ontological restlessness that ensues with any suspension of the production imperatives that normally act to channel the hypermobility of flexibilized individuals. What would happen to a multiple mind inside the long, thin, compartmentalized space of a train snaking across the Siberian wasteland? What forms of intellectual discourse and artistic practice would arise between the members of a linked and disjointed collectivity? These were the questions that the travelers sought to raise, in direct counterpoint to the "new form of control and organization" that weighs on the cognitive workers of our times: "It operates without institutional legitimation or its logic and foundations seem to change from day to day: it is power without *logos*, that is, arbitrary power or pure power, power without any permanent relation to law, to norm, or to some particular task."[26] Not surprisingly, they conceive this new figure of arbitrary power in relation to the fluctuation of money on contemporary financial markets: "Whereas discipline was always related to molded currencies having gold as a numerical standard, control is based on floating exchange rates, modulations, organizations of the movement of currencies. In short, it tries to follow or imitate movements and exchanges as such, paying no attention to their specific contents. The knowledge economy is the continuance of capitalism without a foundation, and arbitrary power is its logical form of organization." Finally, they observe that the "capture of the moving mind" occurs in the context of a "permanently temporary war," where the neoconservative doctrine of the preventative strike appears as an extreme attempt to guarantee a sovereign identity against any possible risk.

Faced with the inexorably *logical* character of this doctrine, the trip became a flesh-and-blood speculation, relayed and reflected by the gestures, images and concepts that could be invented along the way, among some forty participants. Papers were presented in the dining car; a micro-radio transmitted between the berths; works were created by various participatory processes; a "Mobicasting" platform was deployed to send text and images to a webserver back in Finland; encounters with Russian and Chinese academics were organized in Moscow, Novosibirsk and Beijing. The implausible character of the research gave rise to a few spontaneous performances, whereby the participants tried to embody meanings that were escaping in all directions: a silent demonstration at the Russo-Mongolian border; a collective psychodrama at an art gallery in China. The clanging of metal wheels on endless rails stood in for incomparably vast man-machine relations, the ones that constitute the social unconscious of globalized capital: the real risk of the future.

It's difficult to evaluate the results of such an experiment.[27] From one angle of view, seen as a punctual meeting of heterogeneities, it resembles an attempt to abstractly model and then replay the strategies of temporary convergence at a given point in time and space – strategies which allowed far-flung activist networks to become what was known as the antiglobalization movement, during the tumultuous cycle of counter-summits around the turn of the century. If this is true, the trans-Siberian event would be something like pure research (research without ends) into the ethico-practical domain of political mobilization. What's clear, in any case, is the desire to work with the material elements of an imaginary in motion.

Will there be institutional consequences? Some of the Finnish participants in the project have just put together a collective under

the name of Research Station General Intellect, with the goal of carrying out investigations from a base in the economics department of the university of Helsinki. The associated work of the Polemos printing collective continues along similar lines, as well as multimedia experimentation (http://megafoni.kulma.net) and the beginnings of precarious political organization. In this case, the ruses of arbitrage seem impossible: no one knows what will emerge. Invisible maps of territories still undreamed.

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[1]Cornelius Castoriadis, *The Imaginary Institution of Society* (MIT Press, 1987/1975 for the French edition), p. 128. The remark on the stock market itself comes just before, as part of the same questioning of social functionality, pp. 123-24: "In particular, there are a wide number of logical consequences following from the rules posited that were not made explicit at the outset and yet play a real role in social life. They thus contribute to 'shaping' social life in a way that was not required by the functional nature of social relations, one that does not directly contradict it but that can draw society into one of several different directions left undetermined by functionality, or even create effects that have a rebound effect on the latter (the stock market represents, in relation to industrial capitalism, essentially this sort of case)."

[2] See the catalogue of the exhibition, published online: www.derivart.info/material/derivados/DERIVADOS_final.pdf. The "Tickerman" project, discussed below, is also presented on the website.

[3] For a wide range of such procedures, see http://infosthetics.com.

[4] D. Buenza et D. Stark, "Tools of the Trade: The Socio-Technology of Arbitrage in a Wall Street Trading Room", in *Industrial and Corporate Change*, 13/2, 2004, pp. 369–400. Online Version: www.stern.nyu.edu/mgt/seminars/downloads/tools_of_the_trade.pdf.

[5] Michel Foucault, *Naissance de la biopolitique. Cours au Collège de France, 1978-79* (Paris: Gallimard/Seuil, 2004). For a resume of these courses in English, see Thomas Lemke, "The Birth of Bio-Politics," *Economy and Society* 30/2 (May 2001), available on the author's website: http://www.thomaslemkeweb.de/engl.%20texte/The%20Birth%20of%20Biopolitics%203.pdf.

[6] For the general idea, see Phillipe Zarifian, "Pourquoi ce nouveau régime de guerre?" *Multitudes* 11, Winter 2003: http://multitudes.samizdat.net/article23.html; for an economist's explanation, see Shimshon Bichler and Jonathon Nitzan, "Dominant Capital and the New Wars," *Journal of World-Systems Research* 10/2 (2004): http://bnarchives.yorku.ca/1/02/040813BN_Dominant_Capital_&_the_New_Wars_(1PageView).pdf.

[7] Victor Turner, *The Anthropology of Performance* (Baltimore: Johns Hopkins UP, 1987), p. 24.

[8] The original website, www.catchingafallingknife.com, has been taken down; but various documents are available at the artist's site, www.michael-goldberg.com.

[9] Michael Goldberg, "Catching a Falling Knife: a Study in Greed, Fear and Irrational Exuberance," lecture at the Art Gallery of New South Wales, Sydney, Sept. 20, 2003; available at www.artgallery.nsw.gov.au/aaanz03/__data/page/2974/Michael_Goldberg.doc.

[10] Entitled *NCM open/high/low/close,* the performance staged the fluctuating values of Newcrest Mining corporation stocks, but without any real-time trading. It was part of the show *Auriferous: the Gold Project* at the Bathhurst Regional Art Gallery, New South Wales, April 22 - June 10, 2001; documentation in the "Projects" section at www.michael-goldberg.com.

[11] Karin Knorr Cetina and Urs Bruegger, "Traders' Engagement with Markets: A Postsocial Relationship," in *Theory, Culture & Society* 19/5-6 (2002).

[12] Interestingly, the first networked price-display screen, the Reuters Monitor, was introduced in 1973 – exactly when the Bretton-Woods fixed-rate currency system was scrapped and floating exchange rates were introduced, leading to the tremendous volumes of trading that now prevail (on the order of $1.5 trillion *per day*). Today "the Reuters dealing community consists of some 19,000 users located in more than 6,000 organizations in 110 countries worldwide having over one million conversations a week." See http://about.reuters.com/productinfo/dealing3000/description.aspx?user=1&.

[13] Cf. "Urban Screens: Discovering the potential of outdoor screens for urban society," special report in the online journal *First Monday* (February 2006); http://firstmonday.org/issues/special11_2.

[14] For the concept of "embeddedness," see Knorr Cetina and Bruegger, "Global Microstructures: The Virtual Societies of the Financial Markets," in *American Journal of Sociology* 7/4 (2002).

[15] Geert Lovink, interview with Michael Goldberg, "Catching a Falling Knife: The Art of Day Trading," posted on the text-

filtering list Nettime on Oct. 16, 2002; http://amsterdam.nettime.org/Lists-Archives/nettime-l-0210/msg00080.html.

[16] Knorr Cetina and Bruegger, "Traders Engagements with Markets," op. cit.

[17] "Traders not only confront lacks, they turn 'lacking' into a sophisticated game or practice, a domain of shifting, increasing, decreasing, predicting, hiding, delaying, and trying to live with lack." Op. cit.

[18] For the modulation of affect through the use of screen technologies, see Nigel Thrift, "Intensities of Feeling: Towards a spatial politics of affect," *Geografiska Annaler*, 86B/1 (2004).

[19] See David McNeill, "Trading Down: Michael Goldberg and the Art of Speculation," in *Broadsheet*, 32/1 (2003); available at www.cacsa.org.au/publish/broadsheet/BS_v32no1/32_1.html.

[20] Lovink, interview with Goldberg, "Catching a Falling Knife: The Art of Day Trading," op. cit.

[21] C. Castoriadis, "Power, Politics, Autonomy," in *Philosophy, Politics, Autonomy: Essays in Political Philosophy* (Oxford University Press, 1991),p. 173. I have slightly modified the translation for both sound and sense, compare the original in C. Castoriadis, *Le Monde morcelé. Les carrefours du labyrinthe 3* (Paris: Seuil, 1990), p. 170: "*Créer les institutions qui, intériorisées par les individus, facilitent le plus possible leur accession à leur autonomie individuelle et leur possibilité de participation effective à tout pouvoir explicite existant dans la société.*"

[22] K. Knorr Cetina, "Postsocial Relations", in G. Ritzer et B. Smart (eds), *Handbook of Social Theory*, (London: Sage, 2001), p. 530 et sq.

[23] F. Guattari, *Cartographies schizoanalytiques* (Paris: Galilée, 1989).

[24] The text where Guattari defines his notion of the unconscious as the machine, in distinction from Lacan's linguistic structuralism, is "Machine et Structure" (1969), in F. Guattari, *Psychanalyse et transversalité* (Paris: Maspero, 1972).

[25] "Call for abstracts and proposals," available at www.ephemeraweb.org/conference/call.htm.

[26] "Capturing the Moving Mind: An Introduction," available at www.ephemeraweb.org/conference/Intro.pdf (the text is anonymous, but largely the same as "The Structure of Change: An Introduction," by Akseli Virtanen and Jussi Vähämäki, in *ephemera* 5/10, op. cit.).

[27] I tried to nonetheless, in a long text which served as the basis for this one, "The Artistic Device," published in *ephemera* 6/4, at http://www.ephemeraweb.org/journal/6-4/6-4holmes.pdf.