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On Microperformativity

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ISSUE EDITORS : JENS HAUSER & LUCIE STRECKER

1 Editorial : On Microperformativity
JENS HAUSER & LUCIE STRECKER

8 Epistemes of Performativity
CHRIS SALTER

.....
BIOLOGICAL AGENCY

12 Microperformativity and Biomediality
JENS HAUSER

25 Living Ashes : Associated milieus and distributed agencies
CAROLINA RAMIREZ-FIGUEROA, LUIS HERNAN & PEI-YING LIN

32 *Labor* : The post-anthropocentric body 'at work'
PAUL VANOUSE

38 Microorganisms on Stage : Winogradsky columns as performative displays in art and science
MARIANA PÉREZ BOBADILLA & RODRIGO GUZMÁN SERRANO

45 My Name is Sculpture : For we are many
THOMAS FEUERSTEIN

50 Non-terrestrial Material Agency
JUAN M. CASTRO & AKIHIRO KUBOTA

.....
OPENING UP EXPERIMENTATION

56 *Microbial Keywording* : Towards material speech acts
KLAUS SPIESS & LUCIE STRECKER
WITH BOZHIDAR BALTOV, JÜRGEN ROPP, OLEG SOULIMENKO,
K T ZAKRAVSKY & MARK RINNERTHALER

63 *One Suppository* : A para-medical insertion [artist's pages]
K T ZAKRAVSKY / ZAK RAY

65 'Agency is Everywhere' : an encounter with Hans-Jörg Rheinberger
JENS HAUSER & LUCIE STRECKER

72 *Culturing <Paper>cut* : Cyanobacteria against scientific objectivity [artist's pages]
HIDEO IWASAKI

74 Exploring the Aesthetic Potential of AMB's MOC and AAM : 'Is there a droplet inside a droplet?' [artists' pages]
AGNES MEYER-BRANDIS & LIUDMILA VOROPAI

77 Anatomical Minutiae and Cannular Self-experimentation
ANA MARÍA GÓMEZ LÓPEZ

.....
STAGING MULTI-SCALED AGENCIES

83 *STILLEBEN* with Symbionts
IRINI ATHANASSAKIS & DAVID BERRY

88 Transgenesis as Art, Art as Infection : The case of Adam Zaretsky
POLONA TRATNIK

95 Microbiospherians : Leveraging microbes in Biosphere 2
KARMEN FRANINOVIĆ & ROMAN KIRSCHNER

104 Neuronal Acts
CHRIS SALTER

114 Contingent Claims : The performativity of finance, or how the future materializes in technocapitalism
GERALD NESTLER

.....
(MICRO)GESTURES

123 (Micro-)Performing Ancient Weaving in the PENELOPE project
GIOVANNI FANFANI, DAVID GRIFFITHS, ELLEN HARLIZIUS-KLÜCK, ANNAPURNA MAMIDIPUDI & ALEX MCLEAN

131 Audiencing Slowness : Tiny ontologies and the post-human turn
JOANNE 'BOB' WHALLEY & LEE MILLER

137 Emersive Microperformativity : On physiological mediation in Yann Marussich's 'immobile' performances
BERNARD ANDRIEU, ANAÏS BERNARD, GIORGIO CIPOLETTA, YANN MARUSSICH & PETRUCIA DA NOBREGA

.....
THE OTHER AND THE PATHOLOGICAL

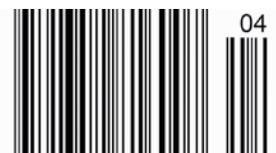
145 Genes, Memes and Dots
NIGEL HELYER

153 Embodiment of Pakshi Kolam : Performing the molecular human
M R VISHNUPRASAD

158 Art and the Microbiome : New Places for Microperformativity in the Work of Art Orienté Objet
MARION LAVAL-JEANTET

.....
164 Speaking with Viruses
TAGNY DUFF

167 Notes on Contributors





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Contingent Claims

The performativity of finance, or how the future materializes in technocapitalism

Gerald Nestler

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Contingent Claims

The performativity of finance, or how the future materializes in technocapitalism

GERALD NESTLER

Whatever this mode of production is, that it eats brains as well as bodies seems key to how it works and how it is made.

(McKenzie Wark cited in Caroline 2019)

Technocapitalism today needs to be analysed with regards to its obscured, data-driven engine – referred to as black box – whose micro-performative mechanisms escape human cognition and sense perception. Automated finance and corporate surveillance are both characterized by proprietary tools operating in the invisible realm of microseconds. While their immediate agency colonizes the future at present, it escapes our phenomenological scope. Financial performativity has very material consequences on our real biological and social lives. While the imperceptible reality of the technocapitalist speed dream tears open new horizons below the threshold of human perception, it causes social anaesthetization. We are losing our senses in more than one way. In order to reveal and resist these tendencies, the performative arts are well situated to create participative situations and alliances to allow for embodied awareness of these hidden, nevertheless fatal, infrastructures. However, such art needs to translate technocapitalism beyond cognition, speech and rationality. Since financial microperformativity has a real impact on bodies, performance art needs to include sensory perception, affect and physical experience to make sense of such complex concepts, and develop new qualities of sensing through hybrid bodies with human and non-human organs.

How do we move and see through the maze of finance performativity? Here, our lead is the term *resolution* because its semantic field subsumes perception and cognition, visualization and knowledge production, problem solving and (joint) decision making. To claim an agency in which all the *senses* of

resolution come to bear, however, we need to transgress the realm of critique, as it remains passive in the face of black box non-transparency. Instead, we propose *renegade activism* as a strategy of resistance that makes the black box speak from within.

The technopolitical perspective advanced in this article is based on a *post-disciplinary* reading¹ of the *derivative*, a crucial financial instrument, whose performativity has implications for all fields related to capitalism, including the arts. In simplified terms, the derivative traces the performance of an ‘underlying’ asset, and thus uncertainty as to whether its value goes up or down. Volatility – the name for the dispersion of these swings – therefore measures risk ahead in the market microstructure. But the derivative does not only anticipate, it claims the future, a fact reflected in its other term, ‘contingent claim’. In technopolitical terms, the derivative constitutes the powerful metadata of market performance and is thus the central operation of algorithmic governance, an exploitation as obscure as it is immediate and profound.

What can we take away from this thumbnail sketch? Before we relate to art, a spoiler on our discussion of technocapitalism: The derivative is the paradigmatic *technowledge*² as it transforms the language of power from representative to performative speech. How does this relate to art? The dancer, performance theorist and political activist Randy Martin connects the derivative to dance:

Derivatives are associated attributes of some underlying value that are deployed to manage risks but wind up generating volatility: they move forces of production into swirls of circulation. Finance lacks the means to register these mobilizing forces and their attendant principles of kinesthetic sovereignty, which become sensible in dance. (Martin 2011: 39)

¹ I use the term post-disciplinary in the sense that art is not a discipline but a *praxis* that to the advantage of difference and multiplicity opens to other research and practice including disciplinary ones; it is about forms and forums of thinking and making in-between artistic, theoretical, scientific and political engagement.

² *Technowledge* is a term I coined to distinguish bot-coded and automated acquisition of knowledge. An example is Google's PageRank algorithm: by exploiting data for profit – a main feature of technocapitalism – it revolutionized online search and leveraged Google's market share.

INSTANTERNITY. A BLACK BOX BODY CULT

April 2017, visitors gather for a lecture performance in a dimly lit space stripped of all theatricality, except the technical equipment typical for a contemporary performance space. Wandering around, they notice illuminated sheets of paper on the floor, marked with terms, short descriptions, graphs and other information on high-frequency trading. Another sheet is mounted on a wall, and although in the spotlight, it is blank. There is no stage and so the audience assembles near the sheet as if it was a beacon of what they came to witness. Spread out across the bare space, the visitors set in motion the 'divorce' between stage and audience as if this artificial separation had a natural cause. Mapping the space in linear relation to the paper on the wall, each visitor finds their distance of relative safety or ease to the exposure of what they assume to be the centre of the action. Instinctively, they fulfil the normative framework of representation by which 'artistic performance, that risky and always unstable practice ... takes place in front of a spectator' (Chris Salter, in his contribution to this issue, 2020).

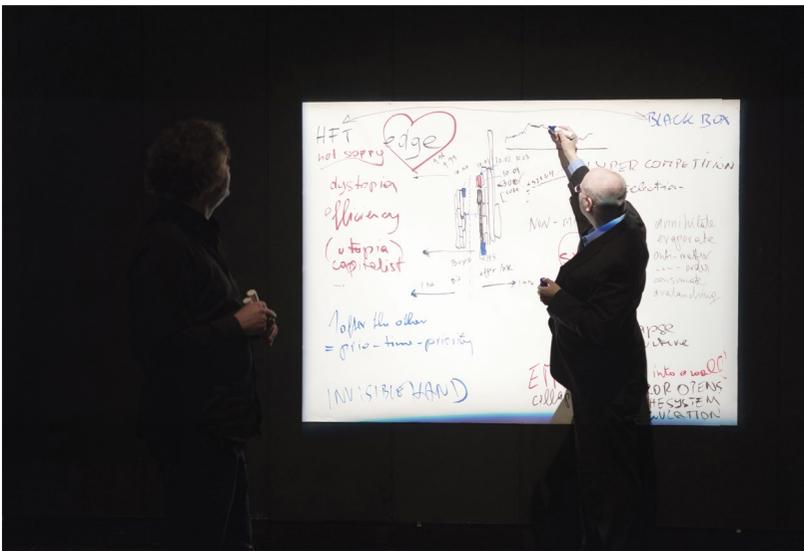
Entitled *Instanternity. A black box body cult*, the performance is an experiment in transferring the abstract complexities of algorithmic finance to the scope of physical experience. The audience is part of an artistic trial that tests whether symbolic representation can be suspended by performatively disorienting the closed conceptual, perceptual and spatial linearity of spectator/audience. *Instanternity*⁵ is a series of artworks that explore whether the body, and not the brain/mind alone, can be addressed as a canvas of perception, sense and cognition. And, if so, whether we can reconceive the body as a vital agent in the effort to *resolve* the adverse effects of technocapitalist exploitation that translates bodies into data.

The performance begins. *Prima facie*, it is a lecture by the high-frequency trader and whistleblower Haim Bodek, along with the author, who together map contemporary finance and its technocapitalist dispositive. They explain how algorithmic markets operate and gain competitive advantage thanks to regulation arbitrage and highly asymmetric applications of information, technology, rules and narratives. In parallel to

the abstract conversation, information is laid out on the wall-mounted paper. Additionally, a text animation by artist Sylvia Eckermann projects financial terms and concepts directly on the audience and the space. Meanwhile, three dancers move throughout the space, intersecting the discursive event in *real-time*. Seemingly unrelated to the conversation, their 'random walk' nevertheless translates core elements of financial logics into spatial, physical and affective equivalents. Not reined in by choreography, intensity increases, and the bodies of the performers engage ever stronger with the space and the bodies of those present. Swirling, jumping, piling up, jostling, bouncing and clashing, the dancers cause trouble; the non-linear volatility they produce distracts, disturbs and disorients the audience. As a consequence, the artificial separation between stage and auditorium slips away. Whether they choose a remote spot, react against or are drawn into the action, the spectators turn into performers, and thus into actors. The performativity at stake, and at play, is one of the *seismographic* qualities of the body, its (self-) appreciation from spectator to actor on the plane of sensing. What characterizes *Black Box Body Cult* is a speculative drive towards the complexities of making (*poiesis*), rather than contemplation. What the performance offers is a kind of pedagogy that breaches the tacit contract separating stage and audience, object and action. At the same time, it forks financial concepts into separate strings of experience: an intellectually challenging lecture and an equally challenging physical exposure (figs 1–3).

Applying finance terminology, *Black Box Body Cult* mobilizes the derivative to leverage volatility. It does so by *projecting* finance performativity on the bodies present. On the expert level of the conversation, terms at the core of finance – such as derivative and underlying, volatility and leverage, edge and volume, price-time versus price-order priority, latency and speed – bounce off one another. At the same time, the performers reflect the *discursive dance* back on the visitors in physical and behavioural form. In contrast to Antonin Artaud's Theatre of Cruelty, this *attack* does not summon the unconscious; quite the opposite, it aims at elevating to body-related cognition the imperceptible reality of

⁵ *Instanternity* is an artistic research project on automated finance by the author with Haim Bodek (Nestler *et al.* 2018).



technocapitalism whose social anaesthetic hides both below the threshold of human perception and behind the ‘double Dutch’ of its isolated language. The performers act as (non-directional) derivatives that intervene with the spectators as the (directional) underlying. The decentring and disordering performance addressed bodies, rather than minds, as receptive participants. The unfamiliar choreography has an intellectual, emotional and physical effect. While for some the experience is unusual or irritating, others enjoy the opportunity to be in the ‘midst of the action’, and some even try to swap from ‘underlying’ to ‘derivative’ and join the ‘dance’ – in vain, because while the audience can behave as they want, the performers are instructed not to engage with them, as conceptually they are on discrete planes of reference and time.

In the sense that it reflects reality, the work is *still* symbolic; however, it crosses the line to actuality, because the *reflections* become physically palpable and therefore real in an intimate and provocative sense. The situation is open in a risky sense and the only thing the performance ‘locks in’ is a setting that provokes and at the same time embraces the unexpected, the uncertain. What it hopes to release *in actuality* is the body’s potential for sensing and resolving. The dispositive of perception, visualization, cognition, knowledge-production and decision-making – the *apparatus of resolution* – is not necessarily a techno-scientific platform. Rather, aesthetics of resolution conveys the urgency to revalue and take into account the body’s intelligence vis-à-vis the myriad (bot) agents unleashed by financial automation, big data and artificial intelligence (AI) systems. Because the *space* of resistance against a violence acting in the micro-political spaces below the threshold of perception necessarily involves all spectrums of sensing, processing, engaging and resolving. *Black Box Body Cult* raises the question: can sensory perception as physical experience *make sense* of concepts, terms and processes in whose face the mind is so often at a loss? Is body sensitivity more adapt than pure rationality to *resolve* the performative speech of technocapitalist biopower, which we feel so acutely but without fully apprehending it? Because, in a sense, the body *knows* already. It follows that the shift in

perspective – which makes all the difference for resolution to sense and decipher algorithmic (micro)performativity – ultimately requires taking risk and taking it together. As Randy Martin once put it: ‘Perhaps the standard polarity of smart minds and dumb bodies would need to be reversed if risk would again seem to be a gambit worth undertaking’ (2011:39).

But before we address resolution and resistance as artistic-activist practices, let us consider the derivative and its (micro)performative layers.

As Martin remarked, the

notion that a derivative ruptures the enclosure of its established value is not simply a feature of finance but goes to the etymology of the term *derive*, which means to flood over the banks and create flows or drifts of generative volatility. (Martin 2015:377)

A financial market crash affecting economies and politics is, for instance, merely the tip of an iceberg sitting on the ‘continental shelf’ of neoliberalism with economic, political and social volatilities ‘attached’ to it. Michel Foucault once described *counter-conduct* as ‘the art of not being governed quite so much’ (2007:45). When finance impacts social and material relations, the question remains how finance performativity turns into the performative speech of biopower. And what kind of resolution does it take to build resistance in the age of technocapitalism?

DERIVATIVE PERFORMATIVITY

The derivative is a contract without intrinsic value operative within contingencies of time.

Derivatives, such as options, futures or swaps, are used to hedge (insure against risk), speculate (get higher risk exposure) or increase leverage (at a fraction of the cost of the underlying asset, they magnify the latter’s movement; cutting both ways, leverage increases reward and risk potential). In its contemporary form it is a quantitative measure, primarily but not exclusively based on stochastic calculus (such as Itô’s lemma), theoretical physics (Monte Carlo simulations) and biology (like Brownian motion).⁴ It is ‘innately’ performative in that it acts on the future. In terms of J. L. Austin’s speech act theory, it is an utterance that is not true or false, contingent upon further action (1962:70). Austin uses the example of the promise, which in principle pertains to the derivative. But more to

the point, and more radically so, the derivative is a claim on the future. It can be traced back to mathematical and technological innovations, contractual and institutional changes, economic modelling and infrastructural expansions. But we can also tell its history by those who revolutionized finance. In our case, the biography of Edward Oakley Thorp is especially instructive: In 1959, Ed Thorp ventured to Las Vegas to make some money. But his gambling spree was not an end in itself, as he was not your typical gambler. Rather, Thorp was a young mathematics professor at the Massachusetts Institute of Technology (MIT) with a knack for applying theory in practice. Hence, he was out to gather data for a scientific hypothesis on games of chance. Two years later, in 1961, Thorp published *Beat the Dealer* and the book became an instant bestseller. It made him an urban legend because for the first time someone delivered evidence that the house advantage of a casino can be overcome. Thorp had proven that math wins Blackjack consistently. In order to beat Roulette, a harder challenge, he teamed up with a colleague at the MIT, Claude Shannon, the father of information theory. Together, they constructed the first wearable computer, with their wives Vivian Thorp and Betty Shannon wired-up to improve their odds in Las Vegas.⁵ Due to technical issues, Shannon and Thorp didn’t succeed, and so Thorp began to look out for new mathematical challenges. And he found one worthwhile in an ecosystem that dwarfed the casino industry. Thorp decided to leave academia and make use of his knowledge in the arena of global finance. At the time, scientific reasoning, probability theory and stochastics were all but commonplace in market making. Thus, the investment vehicle Thorp co-founded in 1969 became the first quantitative hedge fund in finance history. Today, in a world of data-driven automation and black box algorithms this might go unnoticed, but here we are at the root of the quantitative ‘revolution’ in financial speculation, which has inspired generations of mathematicians, physicians and other scientists to leave research and academia for finance. The scientist who beat Blackjack and built the first wearable computer became an innovator of finance by inventing the modern-day quantitative hedge fund. Today, Ed Thorp is dubbed ‘the father of quants’ (a shorthand for quantitative analyst).

■ (opposite page)
Figures 1 – 3:
INSTANTERNITY. Black Box
Body Cult. A performative
cartography of algorithmic
perception. Gerald Nestler
with Haim Bodek, Sylvia
Eckermann (animation),
Davide De Lillis, Eva Müller,
Sebastian Collado
(performing artists).
Vorbrenner 2017. Innsbruck,
Austria. Photos LACHS GRAU

⁴ Brownian motion was detected by the botanist Robert Brown (1827), first with pollen and later with inorganic particles. Albert Einstein made use of it to prove the existence of molecules and atoms (1905). Already in 1900, Louis Bachelier introduced Brownian motion for the stochastic analysis of stock options. His doctoral thesis, ‘Théorie de la spéculation’ (The Theory of Speculation), marks the first application of advanced mathematics on finance.

⁵ Computers weren’t banned from gambling venues in the early 1960s because no-one had thought of it: computers were room-size, weighed tons and had to be installed by a host of experts over several days.

⁶ Friedrich Hayek was arguably the most influential figure for the turn to neoliberal policies. Among other things, he argued that the centrally planned economy was less efficient than the spontaneous order in the decentralized market, which he described as an information processing system that competitively coordinates individually limited knowledge with market prices.

This is the dawn of the neoliberal condition. And Thorp is its crystal image, a scientist-entrepreneur-philanthropist engaged in Hayekian information markets,⁶ exploiting probability to shape risk into a (or rather *the*) productive force. At the time of Keynesian welfare politics and international (that is, mainly Western) interdependence headed by the USA, this condition sets off from ideas of post-war corporate progress, Cold War cybernetics and game theory, information and communication technologies and a global economic world order exceeding national sovereignty. Neoliberalism was a catalyst away from asserting itself, and markets were to be its defining force. The year of the sea change is 1973, when US president Richard Nixon terminated the Bretton Woods agreement because the USA could no longer sustain the Dollar-gold fix. As a result, currencies became fiat, with floating exchange rates, and thus markets entered murky waters with risk lurking everywhere. In the same year, the mathematician Fisher Black and the economist Myron Scholes proposed a theoretical model expanded by Robert Merton that allows calculating the volatility of an option (a typical derivative) and thus gives risk a price. Right on time, Black-Scholes-Merton (BSM) introduced an algorithm that compensated the new uncertainty prevailing in markets.⁷ Also in 1973, the trading of derivatives was institutionalized in the first derivatives marketplace. With the help of the Chicago School economist Milton Friedman, the Chicago Board Options Exchange (CBOE) was founded. This 'switch' is not to be underestimated: Before 1973, derivatives were considered mere gambling, an immoral, corrosive, even unpatriotic activity. After 1973, derivatives turned finance upside down, and in their wake, the globalizing economy, because from this moment on 'it wasn't speculation or gambling; it was efficient pricing' (MacKenzie 2005: 158).

The year proved a historical turning point on a global scale for politics, the world economy and the environment (with the shake-up of the oil crises and the Club of Rome's 'The Limits of Growth'). It also brought derivative finance to the fore as a new 'science' to navigate and negotiate risk in real-time. Microchip switching met Brownian stochastics, bonded with probabilistic

valuation regimes and travelling along electronic communication highways. Introduced by economics, BSM sparked a 'revolution' in finance, a fact that thirty-five years later led the sociologist Donald MacKenzie, drawing on the work of Michel Callon, to give this transformation its name: 'performativity'. As Elena Esposito explains: 'the success of the Black-Scholes formula and its influence on the expansion of financial markets depended on performativity. Since the future does not yet exist, the present expectations about the future contribute to its production' (2013: 106).

Although BSM was a theoretical work, it hit a nerve. The new *technowledge* supported the 'random walk' on uncharted waters where price emerged as performative truth. Traders learnt to 'surf' the contingent waves of volatility, a highly somatic, adaptive, flexible and results-based performance within adverse environments. The financial engineer and philosopher Elie Ayache once likened the derivative to a 'time capsule': 'The future changes every day, but you need to be immersed in the market as a trader with all the derivatives to be able to at least approach the event in one way or other' (Nestler 2012). What Ayache's words herald is the performativity of the derivative. Acting quasi in parallel to the future, the trader is less a producer than a co-performer. But in order to *make this happen*,⁸ complex, heterogeneous and cherished qualities in life have to submit to the flat ontology of quantification.

I do not mean the value that actors in the market attach or deny to the derivative for whatever subjective, ethical, or political reason. Against value as given by the valuation models, I argue for the immanence of the market and, consequently, that price is all there is. (Ayache 2015: 5)

In the market, price is the *other* of value in the absolute sense of the separation of the qualitative from the quantitative: value collapses into price immediately and in any instance.

With this decoupling we are now close to the performative *edge* from which we can take stock of the micro-performative penetration we are exposed to. However, this edge cuts both ways. In the case of algorithmic finance, the micro-performative environment unfolds in microseconds. The wars on margin and latency (speed) turn competition into hypercompetition.

⁷ In contrast to Thorp, the first quant, Black, Scholes and Merton were theorists. The 1997 Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel was awarded to Scholes and Merton (Black had died before). Thorp claims he used a model years before BSM but had stopped publishing to protect investor interests.

⁸ 'Performativity is not about creating but about making happen' (Callon 2006: 22).

Therefore, order and profit margins ('edge' in financial vernacular) become wafer-thin and unsustainable. As a significant collateral damage, one of the arguments of neoliberal economics hits the wall, namely that low margins signal market efficiency. As reality shows, such a market can hardly exist except by bending rules because market-makers cannot earn money by what they are supposed to facilitate in the first place: trading. At the financial core, the derivative operation, on the other hand, the micro-performative sneaks in through the backdoor. It emerges with the urgency to reverse-engineer BSM due to a flaw in the model's layout of volatility, which led to the 1987 crash. To understand how microperformativity plays out in finance, we need to unpack the term 'implied volatility'. In contrast to statistical – or historical – volatility, which measures standard deviation of past asset prices, implied volatility turns the production of the market around. Instead of modelling the derivative from the underlying asset whose volatility cannot be known (it is 'transcendent', as Ayache says), the reorganization computes asset volatility, and thus its risk, from the order flow of derivatives. With every micro-move, the whole interconnected universe of derivative prices (all expectations traded) recalibrate the momentary resolution of the asset market. The market is not defined, as one would expect, by the stock or bond market or so, but by the fleeting surface of derivative trading. Implied volatility is how the market forecasts and thus produces the future. This is its performativity.

It should become clear at this point that finance performativity, by acting on the future, permeates wider economic, political, social and cultural realms. Lacking any stake in representation, the derivative turns global capitalism into performative power; because ultimately, a project, an education, a career, a life is a speculation on one's future; at some point down the line it is attached to the derivative's *dynamic hedging* regime that leverages, rolls over or liquidates future optionality (Nestler *et al.* 2018). Within a larger context, its historic dimension is linked to scientific-technological shifts from human to algorithmic agency, from a market suffused in human 'imitation and control' (Arnoldi and Borch 2007) to black box hypercompetition. In

the microseconds of algorithmic trading, visibility collapses into immediacy, colonizing the future at present. This extreme asymmetry affects agency because those who master the resolution *technowledge* command a present that to everyone else is an imperceptible future. It is deeply disturbing that this asymmetric resolution means that the black box not only takes possession of the future but also annexes the present, which is the space in which the future is born in the first place. By 'reverse-engineering' from fundamental premises to micro-performative instances of *crowd contingency* (the market), derivative metadata become a powerful tool to exploit micro-behaviour across the board. Technocapitalist resolution does not make us see and know; it makes us seen and known.

DECENTRED BODIES. PERFORMATIVITY AND TECHNOCAPITALISM

In finance, the perception, evaluation and efficacy of volatility – in other words, its resolution – is supplied by scientific modelling and mathematical data analysis. As the *derivative condition* includes all data traded in their complex interrelations, the market regime escalates to wider business areas, social media and politics. This point refers not only to the prognostic role of finance in the economic realm. Rather, the way people-as-data are treated, and subjectivity is produced, is based on the derivative paradigm. Long before data-driven platforms like Google and Facebook appeared on the world stage of proprietary digitization, the introduction of scientifically endorsed derivative contracts and algorithms prompted waves of black box data extraction. This is not only a source for what was later dubbed Big Data. Derivatives performatively pre-structure the modes of how capitalism exploits the unknown (future) and volatility (risk). It is the model for how data are made productive – in other words, how the future is made productive. In our volatile world, black box *technowledge* forms the framework of algorithmic governance, the regimes that performatively evaluate, surveil and enforce social automation, recognition and control.

Investigating AI systems and how they intervene in visual culture, AI theoretician Kate Crawford found that 'machine-learning

■ (opposite page)
Figures 4–6: MAKING THE
BLACK BOX SPEAK. Episode
3, The Future of
Demonstration, Season 2,
2018. Atelier Augarten,
Vienna, Austria. Photo Sylvia
Eckermann and Gerald Nestler
Watch a video of the project
on the PR YouTube channel:
<https://bit.ly/3b5gcOy>



⁹ On the level of individual
bodies, the ‘quantified self’
exemplifies how plasticity
is turned into the ever
flexibly recalibrating
data-body of neoliberal
self-colonization.

¹⁰ More on the art series
can be found here:
<https://bit.ly/3l0IrP9>

¹¹ Quoted from the project
website:
<https://bit.ly/2Qb21tW>

¹² C. F. Arnold quotes
a whistleblower about his
co-workers: ‘I think people
must kill a part of
themselves to remain part
of the system’ (Alford 2002
119).

systems use algorithms and statistical models to automate the performance of discrete tasks ... to make predictions or decisions’ (Crawford and Paglen 2019:05:58). And she concludes that we are confronted with ‘far-reaching consequences that may go even further than ... the invention of perspective in the 15th century, which was rapidly and widely accepted across Western Europe to be an infallible method of representation’ (06:58). ‘Predator vision’, as Crawford calls the regime, is an artificial intelligence that operates on the massive scale of data recalibration ‘largely without our consent or knowledge’ (32:12). Escalating volatility, that is, increasing risk, is the neoliberal objective ‘to make money, to extract value from the collection and interpretation of images’ (32:00). As all values turn into price, the question of resolution, and the access to it, reverberate in these lines both in the struggle for meaning and rights as well as self-representation.

Crawford refers to a shift in the insurance industry based on the idea that ‘your insurance premiums are constantly fluctuating based on the insurance company’s real-time assessment of the level of risk of your behaviours’ (24:40). Here we see the paradigmatic function of the derivative and its performative momentum, which the author defines as its performative, technological speech. By exploiting volatility, the regime attempts to leverage, or pre-empt, effects on its business model by all costs. Micro-performative invasiveness displays the paranoia of hypercompetition; attempting to monopolize (and not just capitalize on) every movement, turn or impulse; it annihilates the potential for a future that could have been different. The Chinese social credit score system, which is in implementation phase for the entire population, expands the model further. By transferring recalibrated evaluation to the population, representation and self-representation turn into an automated system of performative participation on the level of the nation state. By mandatory user participation, billions of micro-agents, formerly known as citizens, are turned into contingent claims constantly recalibrating what can only euphemistically be called their ‘value’. In the midst of an *invisible spectacle*, all but the surface layer of engagement is hidden from the labour of human cognition and

communication. Derivative performativity organizes the correlated, micro-performative *participation* at any moment. The (self-)colonizing sway ‘into ever deeper layers of our human bodies, human actions and behaviours’, says Crawford, is employed on all microlevels of extraction, as ‘every single form of biodata, including forensic, biometrics, sociometric and psychometric is right now being captured and logged’ (29:00). Plasticity solidifies into the flexibility of behavioural adaptation.⁹ Hidden behind the user friendliness of a ‘centralized AI infrastructure far from view’ (Crawford and Joler 2018) there are layers of exploitation whose strings of functional interaction can only be pulled by algorithmic performance. Massive real-time calculations fold in new bodies, scales and hierarchies. The sheer scope of economic profit and political gain against collective resolution seems jaw-dropping even for seasoned scholars like Crawford and Joler: ‘The scale of this system is almost beyond human imagining. How can we begin to see it, to grasp its immensity and complexity as a connected form?’ Their conclusion does not come as a surprise: ‘In an era of extractivism, the real value of that data is controlled and exploited by the very few at the top of the pyramid’ (ibid.). The result ‘is a stark power asymmetry: the employers can look at everything, the low-wage worker cannot opt out’. In the most adverse sense for democratic resolution, ‘the interpretation of images constitutes an exercise of asymmetrical power’ (Crawford and Paglen 2019:27:08). Shortest-term extraction meets long-term ecological, social and economic consequences.

MAKING THE BLACK BOX SPEAK

Crawford and Joler (2018) offer the insight that transparency is not restored by technocratic solution: ‘In many cases, transparency wouldn’t help much – without forms of real choice, and corporate accountability, mere transparency won’t shift the weight of the current power asymmetries.’ What is needed are more radical approaches than mending, ameliorating or improving it (Nestler 2014: 136). This is the motive of the art project *Making the Black Box Speak*, which the author realized with Sylvia

Eckermann and other participants for the art series *The Future of Demonstration*.¹⁰ As in *Instanterernity. Black box body cult*, the body is at the centre of attention, but here the focus is on the evocation of an insurrection that the audience co-performs within an artistic setting that combines performance and speech, physicality of action and common invocations of resistance. As resolution of the black box is barely produced by direct action or critique, the project aims at

forming alliances with those that make the black box speak from inside. Hence, it revolves around the *expert figure of the renegade* – a traitor to her system (such as a whistleblower or dissident) but an educator for the public at large. *Making the Black Box Speak* probes forms of resistance (epistemic, social and affective) and solidarity (how to share risk) that cut through the black box. What is at stake is deeply performative, material and bodied. *Making the Black Box Speak* endeavours how we can apply the rich body of ‘resolution’ to a plasticity that can resolve what has been disrupted and marginalized ... towards the insurrection of renegade activism.¹¹

Making resolution gives access to the plasticity of knowledge through the multiplicity of human and non-human voices. The promise of fairness and accountability is merely a chill pill for those (often unwittingly) affected by claims of global technopower. Even though these claims are contingent, their leverage is too massive to compete with. What needs to be done is radically exceed and reform the frameworks of critique and dissent, which, like transparency, evoke the false belief that we are all on the same plane. Thus, the project conceives resolution as a template to activate ecologies of solidarity. The *renegade*, such as a whistleblower or a hacker with ‘skin in the game’, is an ambivalent figure who turns critique into insurrection. A ‘political actor in a non-political world’ (Alford 2002: 97),¹² she stands her ground by taking extreme risk. Renegade activism is a call to share the risk of insurrection. It acknowledges the importance of renegade acts from within technocapitalist violence that opens inroads for building new compositions and collectives. Thus, the renegade claims performatively what Judith Butler calls ‘the possibility of a speech act as an insurrectionary act’ (1997: 160) (figs 4–6).



INSTEAD OF A CONCLUSION

Undoubtedly, such resistance requires new methodologies and new sets of tools. What is at stake is not only to come up with new cultural and artistic interventions, but the understanding that we again need to learn to *sense anew*, develop new senses, if we want to decipher the performative speech of power. Here is a world of algorithms, AI and machine-learning that generates recalibrated data in micro-time whose 'outputs [are] predominantly unaccountable and ungoverned, while the inputs are enigmatic' (Crawford and Joler 2018). Even though this world is highly abstract, its application is largely affect-driven. Thus, the sensory and sensitive planes of the body, exposed to and partaking in micro-performativity, correspond more intimately and directly than the abstracting mind to the effects of finance and other data-driven performativity. New performative relations between art, finance and data can contribute to a radical 'arbitrage' that redistributes what today is the privilege of a tiny elite: the abundant wealth of the derivative condition (Nestler *et al.* 2018). Certainly, such projects are contingent claims, too; but they break dance away from the illusiveness of the promise and swing out from the *complicity* of critique. Instead of resorting to the passive overload of the *mindful* spectator, let sensate bodies learn to perform common agency by radically speculating in presence against the asymmetric machinations of the technocapitalist spectacle and its asymmetric apparatus of resolution. Crisis is not new; we have been living and working through it for a long time. Aren't we ready now?

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