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ART, MARKETS, AND FINANCE

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Critique, Speculation, and Infrastructural Projections: An Introduction

This chapter offers a critical overview of the approaches that inform theorizations and practical applications of art's relationship to finance. Rather than offering a comprehensive survey of artists engaged with finance, the text distills methodological lenses through a selection of relevant practices. Thus, it charts a landscape of methodologies that have been developed within the art field and at its interfaces with other fields, analyzing their contributions and limitations. The analysis limits itself historically to the post-World War II era, focusing on the institution of contemporary art and the global financial order, both of which may be said to represent the hegemonic forms of art and finance today. As such, contemporary art is approached as a unified paradigm for art production and dissemination at global scale mediated by a set of shared discursive, institutional, and economic practices (Velthuis & Baia Curioni, 2015: 1–2). As a genre of art, contemporary art emerges from the legacy of the conceptual turn of the 1960s (Osborne, 2013), while the practice of Marcel Duchamp from 1913 onwards when he created his first readymades is seen as a key historical precursor, if not straight out template, for both the logic and operational sensibility of contemporary art (de Duve, 2012, who dubs Duchamp “the witty financier who holds the secret of artistic exchange value”; Roberts, 2007). Meanwhile, the global consolidation of contemporary art's socio-institutional complex is typically associated with the post-1989 period (Augita et al., 2009; Osborne, 2013).

The sphere of modern finance follows a comparable historical periodization, emerging as a self-standing branch of the economic discipline and an independent sector of national and international economies in the aftermath of World War II. Through such institutions as the IMF and the World Bank, finance attained greater

international reach in the 1970s. The collapse of the Bretton Woods agreement and the rise of derivative markets consolidated the financial sphere as the central system of governance within a globalized world in the 1990s.

The five key lenses through which the relationship between art and finance has been perceived are art theory, critical artistic practice, art institutional practice, sociological analysis, and a financial business perspective. The first part of the chapter focuses on the emergence and consolidation of the critical art paradigm as the dominant framework for understanding art's approach to finance in the sphere of contemporary art, outlining its historical emergence, philosophical commitments, and *de facto* constraints. It will be concluded that in the light of present-day dynamics within the spheres of art and finance, the critical art paradigm is not only highly constrained epistemologically but may in fact contribute to the perpetuation of the very conditions that it critiques. The second part of the chapter focuses on methodologies that take on a more post-disciplinary (Nestler, 2017) approach and strives to recode the relationship between critical understanding and the capacity to operationalize and influence. To this extent, the section explores historical practices such as those related to digital art, and emerging performative methodologies that cut across multiple fields and aim to produce infrastructurally significant feedback through their actions. Rather than departing from the premise that art and finance exist in two separate realms, the selected approaches harness the cross-cutting dynamics of our techno-financial societies, strategically identifying ways in which these dynamics may be manipulated and redeployed. While these exploratory approaches and hacks most often function as temporary systemic interjections, they nonetheless open up a realm of alternative epistemological and strategic possibilities for art as an expression of techno-financial ordering.

The evolutionary trajectories of contemporary art and finance, and the impact that their formative dynamics have had on theorizing their relationship, are of key importance in understanding the established approaches to art and finance today. Scholarly (primarily, sociological) identification of financialization arose in conjunction with discourses on the economic, geopolitical, and socio-cultural effects of globalization (Axford, 1995; Knorr Cetina & Preda, 2004; McNally, 2011; Sassen, 1998), while increasing attention to financialization as a phenomenon in its own right (Krippner, 2005) has been an influential factor in the formation of critical positions on the topic (Berardi, 2012; Lazarato, 2012; Marazzi, 2009). Simultaneously, processes of contemporary art's financialization have led to the formation of specialist art business and finance knowledge, based on financial measures such as indexing and due diligence. Driven primarily by specialized art market actors and analysts (e.g., Mei Moses Art Indices, The European Fine Art Fair (TEFAF) Report), investment funds and larger financial institutions such as UBS and Deloitte, the financial expertise aimed at offering art as an alternative asset class to high-net-worth individuals (HNWIs) has been seized upon by art fairs such as Art Basel. Financialization of contemporary art spurred increasing critical responses from within the art

field (Steyerl, 2017; Toscano & Kinkle, 2015). Both of these tendencies only intensified with the global financial crisis of 2008 as the complexity and power of the financial order became widely felt and at the same time better understood.

Sociological analysis and institutional practice offer a more systematic understanding and pose questions about the relationship between contemporary art and modern finance that neither the business perspective nor the established critical approaches are able to answer (Ivanova, 2016b; Malik & Nestler, 2016; Velthuis, 2007). A central question concerns the structural role of the art market system in the field of contemporary art: the institutional structures of the art fair and the biennial are on the one hand places of “collision” between business and critical approaches, and on the other fertile grounds for symbiosis insofar as critical art endows the market with value (Malik, 2008). While it is often argued that this dynamic attests to the all-encompassing reach of financialization (Martin, 2002), it equally points to the limitations of the critical approach in generating positions vis-à-vis finance that transcend the circular feedback between criticality and financialization as the two only possible ways of conceiving the relationship between art and finance, monopolizing our understanding of the functions that art and finance can have in society. Thus, the larger ambition of this text, outlined in the second part of the chapter, is to start sketching a progressive vision for art and finance that departs from the functions that they perform within today’s dominant systems of governance.

Critical Art Paradigm and Its Discontents

Emergence and Consolidation of the Critical Art Paradigm

The 1950s and 1960s saw a shift in the logic of art history from a focus on chronological cataloguing of historical artists to selective interpretation and engagement with living artists (Meyer, 2013). The terms of analyzing art expanded from strictly formal and historical considerations to the assessment of the artwork’s *critical* dimension, its potentiality for rupturing and displacing convention (Holmes, 2009), particularly in relationship to wider societal conditions. The shedding of disciplinary insularity in the name of greater socio-political awareness—both in theoretical terms and vis-à-vis co-temporary events of political nature—intersected with the intellectual sensibility that cut across academic and activist milieus of the time, articulated through the writings of thinkers that we now associate with the various waves of critical thought in the Euro-American contexts. The newfound critical disposition in art theory and practice can to a certain extent be aligned with the emergence of critical Marxist-inspired methods in approaching the legacy of modernity and its aesthetics and in addressing the contingent social and political structures imposed by industrial capitalism (Adorno & Horkheimer, 1997; Marcuse, 1964). Theorization of socio-political emancipation in terms of material reconstitution of societal conditions was emblematic of the general epistemological reorientation

from art theory and practice as fields that dealt with representation to art theory and practice predicated on a self-reflexive approach to their historical positioning. A second wave of critical theory finds most proximate resonance with the modality of critique that formed the foundations of the critical art paradigm that contemporary art consequently inherited. In other words, while Marxist critical theory coalesces with the birth of art's co-temporary consciousness, it was post-structuralism's break from universalist assumptions and embrace of contextual probing of hegemonic norms in the name of producing antagonistic and difference-based models for social emancipation (Deleuze, 1994; Deleuze & Guattari, 1977, 1987; Derrida, 1978; Mouffe, 1992) that established the directional template for art's critical disposition.

Conceptual art of the post-war period abandoned modernism's formalism in search of different paradigms through which art could relate to reality (Alberro, 2000). For artists such as Adrian Piper, Hans Haacke, Robert Smithson, Vito Acconci, Art & Language, Joseph Kosuth, Mary Kelly, Martha Rosler, Barbara Kruger, Critical Art Ensemble, Marta Minujín, Cildo Meireles, and Bruce Nauman, the artwork became a conceptual prism that allowed a symbolic exploration of racial, gender, sexual, or socio-economic inequality, chiming with wider critical discourses on these subjects (Fanon, 2004; Ives, 2007). While many practices associated with the conceptual turn were invested in bringing out the subjective experience of oppressive structural conditions, others addressed more abstract aspects of the capitalist system and technological change. For example, artists associated with the first wave of institutional critique—most prominently, Haacke—adopted post-structuralism's deconstructive methodology to expose structural pathologies obfuscated in capitalist societies. The use of the artwork as a reference system (Weibel, 2008) composed of signs with the capacity to reveal what are generally obfuscated dovetails with the deconstructionist sensibility and post-structuralism's focus on the political dimension of semantics. The practices of such artists as Haacke, Robert Morris, or Lee Lozano, as well as those associated with institutional critique more generally, may be qualified as early attempts in formulating a methodological approach from within art practice to the relationship between art and finance (even though the latter term was not yet in use at the time). One of the most indicative works in this regard is *Shapolsky et al. Manhattan Real Estate Holdings, a Real Time Social System, as of May 1, 1971*, in which Haacke investigates and maps the connections between illicit real estate practices in New York City, "rogue" landlords and their integration into a large-scale business operation related to figures who sat on the Guggenheim's Board of Trustees.¹ The template, rooted in a conviction that art's critical potential is to be located in its ability to reveal what is obfuscated and signal potentialities would be expanded by the second wave of institutional critique. The latter is marked by the artist's self-inclusion in the artwork's semantic operation—from descriptive analysis of an external reality to an analysis that reflexively encapsulates the position of the describing subject position. Here, the work of

artist Andrea Fraser is often taken to be exemplary. In *Untitled* (2003), Fraser arranged for her gallery Friedrich Petzel to negotiate a deal with a collector that would grant him a sexual encounter in a hotel room with the artist—an encounter that was videotaped, and the video consequently sold in the art market and “thus destined to circulate as a commodity” (in an interview with Praxis, 2004). *Untitled* manifests the central feature of second-wave institutional critique—the artist’s performative self-reflexivity in engaging with the image of capital’s total subsumption. Second-wave institutional critique shadows the critical positions explored by post-Fordist thinkers associated with the Autonomia Operaia movement (Berardi, 2009; Rancière, 2005; Virno & Hardt, 1996). It symbolically enacts art’s compromised critical position when confronted with market forces and dynamics of commodification that make no distinction between material output as critical artwork in its object form and the immaterial labor that goes into producing and circulating critical discourse. Although not all critical artworks engaged with the latter subject matter fall under the rubric of institutional critique (as not all necessarily reflect on the complicity of art institutions and actors within those dynamics), the paradigm of revelation and critical reflexivity function as hegemonic tropes in the approaches taken by critical art practices to phenomena that connect art and finance since the 1960s.²

In “On Art Activism” (2014), Boris Groys argues that in contrast to “aestheticization” as a design strategy, which affirms, improves, and normalizes the neoliberal promise of human capital and value by way of usefulness and attraction, and in which the market serves as cure against alienated and alienating work, “artistic aestheticization means the defunctionalization of [a] tool, the violent annulment of its practical applicability and efficiency,” which in his view serves as a foundation for a revolutionary project. The museum, in which “the aestheticized material corpse functions as a testimony to the impossibility of resurrection,” is the central node for a transformation in which contemporary art “aestheticizes the present by turning it into the dead past.” In contrast, by expanding on the undercurrents of financialization that reshape the museum, Brian Holmes (2006: 414) concludes that the museum (as well as the university) are “normalizing devices” that “frame art practice and lend it both meaning and value.” The museum as an integrated infrastructure of financialization awakens the “dead” to a new, derivative form of life and monetary appreciation. The open question—and one might think here of Tino Sehgal’s performative contracts that allow buying, selling, and repeating “situations” or the debate ensuing Marina Abramovic’s work for a gala at the Museum of Contemporary Art in Los Angeles³—is whether contemporary art with its criticality protocol can act against financialization and wealth concentration (by defunctionalizing the total aestheticization of capital and its finance-based appreciation regime), or, whether it is prone to render its total subsumption to derivative capitalism as the symbolic-representational image of finance power, which speaks and acts performatively (Nestler et al., 2018: 136).

Critical Art Paradigm's Two Models

Given that, within the critical post-Marxist tradition, finance has been generally treated as a subset of the capitalist order, the construction of strong anti-capitalist languages through the critical art practice paradigm has been central in informing theoretical and artistic approaches to finance more specifically. In tracing the historical emergence of artworks that deal with particular aspects of finance rather than with capitalist dynamics more generally, it is worth pointing out that the critique has tended to focus on finance's abstracting qualities (Lütticken, 2012) and the detrimental effects of the societal fetishization of money as the basic unit of exchange, the powers of which strive to extend into every domain of life (Diederichsen, 2008). Within this overarching agenda, there are two distinct methodological templates that, in many ways, mimic the distinction between first- and second-wave institutional critique as described above. The first follows the detached critical observer model, while the second presents a reflexive engagement with one's own position as part of the critical operation of the artwork.

The critical observer model is historically evidenced in such works as Kruger's *Untitled. Money Can Buy You Love* (1985), and more recently *Untitled (Money Money Money)* (2011). Other recent examples are Beate Geissler and Oliver Senn's *Volatility Smile* (2011), Melanie Gilligan's *Crisis in the Credit System* (2008), and Christian Jankowski's *Kunstmarkt TV* (2008). SuttonBeresCuller's *Distribution of Wealth* (2009)—“a stack of one-hundred \$1 bills, sliced vertically into segments that correspond to the percentage of the work's sale price taken by the gallery, the dealer, and the artists themselves” (Haiven, 2015: 47)—is exemplary of the tongue-in-cheek aestheticization that often characterizes artworks within this rubric. Here the focus tends to be on the artwork as a representational and often investigative device that strives to communicate the experiential and affective dimensions of commodification and alienation.

Meanwhile, the performative reflexivity model is evident in works as early as Marcel Duchamp's *Tzanck Check* (1919), where the Dada-associated artist paid his dentist for services with a hand-drawn check, the value of which was correlated to the check as an artwork—and thus constitutes a speculation by the artist that the collector “instinctively recognized the speculative potential of the deal” (De Duve, 2012: 73)—rather than as the redeemable and fungible financial quantity specified on the fake bank note. The performative model became more pervasive with the normalization of post-formalist and post-medium specific art in the 1960s and 1970s—for example, Cildo Meireles's *Insertions into Ideological Circuits: Cédula Project* (1970), where the Brazilian artist added messages on banknotes, after which he would put them back into circulation. In a similar vein, in 1984, J.S.G. Bogg started making payments with hand-drawn one-sided dollar notes, later offering collectors receipts for sale that allowed them to trace the original notes. Other examples include Lise Autogena and Joshua Portway's *Black Shoals Stock Market Planetarium* (2001) and

Michael Goldberg's *Catching a Falling Knife* (2002); more recently, Axel Stockburger's *Quantitative Easing (for the street)* (2014), which randomly distributes Euro-coins publicly, as well as Sarah Meyohas's *BitchCoin* (2015-), in which the artist issued a digital currency backed by her photography at a fixed exchange rate of 1 BitchCoin to 25 square inches of photographic print, or Wong Kit Yi's *North Pole Futures* (2015) where patrons could buy future commissions, which the artist would create during her three-week trip to the North Pole with the money for the works used to fund her "residency."

The performative model coincides with an artistic strategy that the founder of the art journal *Texte zur Kunst*, Isabelle Graw (2009: 188), has termed "market reflexivity." Graw identifies artistic practices, from the modernist Gustav Courbet to Marcel Duchamp, Yves Klein, Robert Rauschenberg, Andy Warhol, Andrea Fraser, and Merlin Carpenter, which "[take] market activity as [their] material at the same time as opposing it." According to Graw (2009: 191), market reflexivity is the privileged form of artistic engagement within a financialized society—a position that not only allows critical art to accept its inclusion in the dynamics of capitalization and private wealth creation but also salvages Adorno and Horkheimer's dialectical vision for an art under capitalism, whereby "abandonment of an idealistic belief system does not mean that market and aesthetic autonomy are identical." Graw (2009: 191, 193) states that "rather than cancelling each other out, [the market's and art's] opposition is in fact the precondition of their constituting a unity." Graw's endorsement of market reflexive critical practices as a method that allows the critical paradigm to have its cake and eat it, too, stands in sharp contrast to her disapproval of artistic practices that in her judgment fall on the more affirmative side of market dynamics in their reflexive gestures. The paradigmatic examples within this category are Jeff Koons and Damien Hirst—artists whose practice came to the fore in the 1980s, a decade marked by significant expansion and commercialization of the art market toward embodying global finance (Horowitz, 2011; Malik & Phillips, 2012).

By demarcating a boundary between market-reflexive and market-affirmative practices, Graw reinforces the ideological assumption ingrained within the critical art paradigm from the 1960s onwards that the value of art's epistemological and political contribution in capitalist societies lies precisely in its ability to generate critique that, in turn, generates *oppositional* discursive and intellectual positions *about* certain phenomena. Although the "postmodern turn" of the 1980s (Jameson, 1991) with its ironic celebration of glossy commercialization is often seen as a qualitative departure from the more intellectually earnest, directly critical and market-shy practices of the previous decade, it should not be treated as a steadfast rupture. As has been mentioned, artists "interpellated" market forces worldwide as early as Dada in the 1910s and 1920s, followed by those who emerged from conceptual circles of the 1950s and 1960s. According to Graw's approach, such works present an element of subversion and/or transgression that operates qualitatively differently to the strategies of blasé

self-commodification and branding that are associated with names like Koons and Hirst in the 1980s and 1990s (Thompson, 2008).

However, instead of pitting the seemingly more nuanced and critical approaches of the earlier era—strategies that Graw (2009) categorizes as “market reflexive”—against those of the 1980s and 1990s—which capitalize on and mimic market dynamics in a much more direct way—we propose that these differences are not just innate to specific artistic dispositions but are telling of, coalesce with, and are impacted by wider shifts in the organization of national markets and the global economy that have arrived with policies of privatization, liberalization, and deregulation in the 1980s and 1990s. To this extent, the dualism of Graw’s approach is problematic as it can only be sustained by an artificial boundary of ethical judgment, while underplaying the significance of wider infrastructural realities, against which such judgment must be calibrated. In other words, Warhol’s factory is as much a child of the dawn of New York’s financial hegemony where transition from industry-based to service-based economy was still in the process of being crystallized, as Koons’s factory is a child of the 1980s when financial market innovations, deregulation (or, more appropriately, self-regulation), and control over cheap labor markets via any means possible, global trade, and aggressive merchandizing became the hallmarks of America’s economic domination.

Equally, it was on the back of US-led global expansion under the banner of liberalism (politically, economically, and culturally) that the contemporary art paradigm nurtured by the critical fervor of the 1960s and 1970s attained a globally oriented and interconnected socio-institutional complex for the first time, which was further expanded and consolidated in the first decade of the twenty-first century. Thus, while the 1980s bore new artistic approaches to capitalist dynamics, the larger economic and geo-political conditions streamlined and directed the field infrastructurally. Although the 1980s and 1990s “art world” did for a while provide a stage for more spectacular art objects (Horowitz, 2011; Stallabrass, 2004), the structural significance of contemporary art’s globalization lay in the proliferation of art fairs, biennials, and institutional spaces that lifted the critical art paradigm from a niche and localized phenomenon born out of post-World War II urban cosmopolitan centers across the world to the globally distributed hegemonic norm of artistic and theoretical disposition that represents contemporary art (Velthuis & Baia Curioni, 2015). Contemporary art attained a gatekeeping position via collecting for the inclusion into the global elite.⁴

The expansion of credit, leverage, income inequality, and capital accumulation in favor of a “transnational capitalist class” (Sklair, 2001), in combination with the fundamental turn in the online sector and the long tail economics of the Internet, brought about a sea change in economics from scarcity to abundance—for those who can profit from it. This condition is not jeopardized by boom-and-bust cycles, as the latter are rather a token of the shift and can thus present themselves as equally exploitable. While contemporary art remains

bound to a logic of scarcity in the form of the rare commodity or event, it also caters to the notion of abundance, not in spite of but due to its criticality which constitutes art's inherent surplus value and therefore its unique feature for its incorporation as an asset class. Contemporary artists aim to produce artworks that stand out in similar ways as black swans, or, in financial terms, out-of-the-money options, which while still within the reach of probabilistic assessment (they do not exit the space of contemporary art) produce "fat tails," i.e., previously improbable horizons. Harvesting a slightly deferred perspective for looking back at the history of art (to paraphrase Walter Benjamin⁵), rather than opening toward new beginnings, they expand the possible *states* of a future-at-present that can be *backprojected*, i.e., priced. Even though a comparison of the two artists is hard to imagine, Fraser's *Untitled* is as much paradigmatic for this as is Koons's commercial porn *Balloon Venus*, a Dom Perignon Limited Edition bottle (both 2003).

This means that there is an under-acknowledged significance of institutional valorization and circulation enacted through the symbiotic relationship between systemic implications of financialization, infrastructural expansion of contemporary art, and the critical art paradigm. The integration of the market reflexive model into the institutional mainstream of contemporary art, reaffirmed by such valorizing publications as *October* and *Texte zur Kunst*, does not so much supplant the "dealer-critic model" (White & White, 1965) that functioned as the cornerstone of modern art's institutionalization in the late nineteenth century, but engendered a turn in the relationship between criticism and art practice, which through institutional circulation became the new ground zero for legitimizing templates of art's approach to societal systems and dynamics. In fact, the two models continue to exist side by side within a single ecology, although it would be more accurate to describe the older one as the "dealer-curator model." Artist such as Koons and Hirst, by advancing their institutional and market status, glaringly rely on the latter, which challenges the underlying politics of the critical art paradigm by pointing to their structural enmeshment. What becomes evident is that the relationship between the economic and the ethico-political value regimes in contemporary art is mediated via the infrastructural backbone of contemporary art, which, on the one hand, purports the value of their separation—or at least a claim to strive for their separation (as per Graw)—and, on the other hand, deploys art's claim to autonomy as a value-creating mechanism—culturally, socially, politically, and economically. Thus, the *de facto* integration of the value regimes and simultaneous claims to the need for their separation reflects a deeper structural imprint of the contemporary art field, namely the stark dissonance between the infrastructural realities inside the field (i.e., the reality of its operations and the nurturing effect of the market) and the discursive positions that are promoted at the field's "front-end"—whether in the form of mission statements, wall texts in galleries, artistic positions displayed in exhibition spaces, or contemporary art's various discursive fora (Ivanova, 2014). While the fact that significant actors within the

socio-institutional complex of art (such as museums and critical publications) play an important role in the financial valuation of artworks by market actors is not new and may be traced as far back as the Renaissance (De Marchi & Van Miegrot, 2006; Parks, 2005; Velthuis & Coslor, 2012), what is novel is the particular way in which the dynamics of marketization and financialization in the globalizing art market post-1960s coalesce with the global trends of market liberalization and financialization (Malik, 2007; Stallabrass, 2004).

Contemporary Art as an Expression of the Global Financial Order

In this sense, the global push for “free trade” and “free art” (Stallabrass, 2004) has not been antithetical to one another, even if so much of “free art” openly critiques the forces of globalization and financialization. Rather, the two coalesce at the level of their overarching operative dynamics—expansion of institutional network with a global reach (via the creation of internationally interconnected institutional and market representatives, and collectors), institutional privatization in parts of the world where spaces for art were previously publicly funded, and the predominance of the “born private” model in countries where the sphere of contemporary art is just being developed or gentrified by a wealthy elite.⁶ These dynamics resonate with the policies of privatization and deregulation, particularly in jurisdictions that came to depend on loans secured via the World Bank, International Monetary Fund, and European Bank for Reconstruction and Development, or directly from developed states, and the formation and consolidation of a mobile global elite. Indeed, cultural globalization in the form of contemporary art and economic globalization has not just been comparative at the level of their models but interlinked at the level of capital, such as the exorbitant amounts of liquidity held in private hands as a result of control over newly deregulated trade of natural resources, and the financial investment into the contemporary art scene through some of these funds (Velthuis, 2007).

Since the 1980s, art objects have not only been increasingly commodified as luxury goods and marketed to old and new financial elites worldwide, but increasingly financialized as an asset class. The emergence of art market reports such as TEFAF in 2000, Deloitte’s Art & Finance annual report in 2011, and the Art Basel Market Report in partnership with UBS and cultural economist Claire McAndrew in 2017, as well as specialized services that lend against contemporary art either as a branch of existing art market activities (e.g., Sotheby’s), as part of packaged financial services (e.g., Deutsche Bank), or as a boutique service (e.g., Athena Art Finance), is indicative of this shift in the supply chain toward a wealthy elite of art dealer-buyers and producers, contractors, and sub-contractors (artists). Exploration of contemporary art’s potential as an asset class had been stalled by lack of transparency at the level of price-setting and transactions (i.e., there are no explicit industry standards for setting prices for artworks, while primary market transactions are “over-the-counter” (OTC)—not

publicly disclosed), protective business climate that had to keep up an impression that access cannot be granted to those who are simply interested in the financial value of an artwork, and relatively small sums involved in comparison to conventional securities.

The contemporary art market's resistance at the top end to following the steep downward market curve in the face of the 2008 financial crisis once again drew attention to contemporary art not only as a luxury commodity but also as an asset class with a low beta-coefficient, and hence a potentially useful tool for portfolio diversification. Consequently, the wealth management wings of global banks and financial institutions as well as their newly sprung boutique counterparts reinvested in their efforts of breaking contemporary art's barriers to financialization by pairing with such infrastructural actors as Art Basel (in the case of UBS) or by investigating the potential of data technology in making market transactions and prices traceable for investors (Deloitte, 2016), or trading and fractionalizing artworks through blockchain-based art fund and auction platforms (University of Oxford and The Alan Turing Institute, 2018). Thus, the approach of the financial sector—or equally, entities that structure themselves in line with the financial and fin-tech sector's operative dynamics (e.g., Athena Art Finance or Maecenas)—has been to bring the top market segment of contemporary art into its (digitized) operational scope (Arora & Vermeylen, 2013).

This trend also reveals a shadier dimension of contemporary art's financial credibility, namely its ability to lock in liquidity and to transport it across national borders without having to incur taxation that would be applied to capital transfer. Freeports such as Geneva Freeport, Luxembourg Freeport, and Le Freeport Singapore play a central role in this scheme (Ditzig et al., 2016). The internal dynamics of contemporary art's ecology have been conducive to this trend insofar as the last decade has seen the erosion of non-market based funding structures for the arts as well as the thinning out of smaller and mid-sized galleries and collectors that were typically associated with supporting local artists as well as younger practitioners whose position has not yet been affirmed by the market, and those artists whose future value trend was equally uncertain. The corporatization and monopolization of the global contemporary art market through a consolidation of a top segment of globally distributed galleries and collectors, and a global network of freeports as traffic hubs, signal that it has been in the process of restructuring with the top end segment pivoting toward the financial sector.

However, it would not be entirely accurate to isolate the “blue chip” segment of contemporary art from its more high-risk segments. For one, all segments of the market are unregulated and rely heavily on various forms of private interests and assets (a term that replaced “wealth” as it implies future profit) while circulation across the socio-institutional complex of contemporary art acts as a key parameter for financial and cultural valuation. Thus, the observation made in regard to the collision between the critical paradigm of art and its financialization at the outset of this section may be reframed as a general

condition of the contemporary art sphere in terms of the relationship between the operational dynamics of its infrastructures and the operational norms of its epistemological positions. While the latter have the capacity to self-reflexively encapsulate and at times even mediate their subsumption within the financial conditions that they critique, they are incapable of transcending these conditions, both operationally and epistemologically. One might even take that argument further insofar as critique has become a vital component of the continual adaptation and reconfiguration that nurtures value creation within the current financial regime, from the macro level to the different tiers of the micro zone, in which all data and metadata become the “critical apparatus” scrutinized for even the most miniscule profit opportunity.

Implications of a Systemic Approach

One approach that has attempted to rationalize the dynamic between the critical art paradigm and the reality of institutional functioning in contemporary art stems from the sphere of sociology. Pierre Bourdieu’s analysis (1993, 1996, 2010) of the cultural sphere as a socio-institutional ecology where taste and value are defined in the struggle between its actors over symbolic capital that can, in turn, be translated into cultural and financial capital, leads to the conclusion that the epistemological potential of art is highly dependent on the possibilities offered by art’s infrastructural conditions. To this extent, the work of Boltanski and Chiapello (2007), although not speaking on the matter directly, sheds further light on the compatibility of critical approaches to finance emerging from within art theory and practice with a financialized system of governance that prices all forms of value creation and privatizes its profits. The generation of critical discourse performs the liberal-capitalist definition of individual freedom, which, through institutional valorization and dearth of non-market-based options for material security, produces value for the overall ecology of the contemporary art sphere. The latter is, in turn, harnessed by a select number of participants. By the same token, the market institutional ecology is driven by the desire of actors to become part of the select circle, reinforcing an endemic culture of information asymmetry. Olav Velthuis’s (2007) sociological analysis of the art market exposes market opacity as a mechanism for maintaining artificial scarcity and a highly coded power structure, which not only sets up barriers to entry but protects the critical correlation between symbolic value and financial value.

The sociological macro vision of the contemporary art field renders critical positions on finance emerging from within that field to be highly constrained by the conditions of their production, dissemination, and valuation. Whereas critical positions on finance within the paradigm described in this section often offer intellectually sound and aesthetically persuasive insights on finance, what is repressed infrastructurally is the possibility for art to relate *differently* to finance than within the established critical paradigm and its dependence on

capital. In other words, there is an urgency for a shift to a new paradigm that builds on a concept and a contextualization of the nonlinearity, entanglement, and multiplicity of processes, to which we return below, for art to seek different modes of understanding and operationalizing its own financialized condition, and to harness new ways of acting as an interface with other processes. To this extent, the short-circuiting that is produced by the current closed loop of critical approaches to finance and contemporary art's financialized predicament is very much set on the self-perpetuation of its own condition, which, on the one hand, becomes further consolidated through ecological institutionalization, and, on the other hand, either absorbs or suppresses emerging/marginal tendencies.

In the meantime, technological transformations are continuing to reshape geopolitics and governance (Bratton, 2016). For these shifts, the technological "nature" of the financial sphere—an increasingly automated and algorithmic global platform—is the governing "kernel" that recalibrates volatility (i.e., the short-term risks that are either perceived as threats or opportunities) in a competitive environment in micro-time. In a world in which "states" (from corporate bodies to national states to social statuses, individual identities and probabilistic states of the world) are turning from at least theoretically autonomous devices within specific systems of relations into speculative ventures exposed to contingency, the ability to dynamically hedge exposure any time, externalize losses in no time, and leverage one's bets at high factor becomes the unifying—if not universal—methodology of governance in managing claims repetitively against one another.

Such "derivative condition" (Nestler, 2017) applies to market participants in general today, and as such also to the contemporary art market. Whether the condition is eschewed through critical distance of opposition or affirmed, in the sense that Catherine Malabou (2018) references Deleuze's differential repetition, decides how these shifts are confronted: "instead of thinking of repetition as the return of the same—that 'most abysmal thought' [i.e., critical position]—[one] learns to affirm what is repeated, thus transforming repetition itself." Since the stakes and the potentials are technopolitical,⁷ they concern not only the ambition to surpass critique but also intelligent appropriation against increasingly performative technologies and media of power. We will below resort to artistic examples that take this approach, often deriving from a tradition that deviates from contemporary art.

Another major limitation of the critical paradigm lies in its inability to offer alternative approaches to art as a financial asset such as the ones that are currently advocated for by the financial realm and the top end segment of contemporary art. Here the shortcoming is the inability or unwillingness to recognize that art's financialization could take different routes and promote different sets of interests to the ones that are advocated for by wealth managers. This would mean looking at art's financialization as a testing ground for finance that is not driven by the neoliberal agenda, or, alternatively, as a platform for harnessing

aesthetic, cultural, and social potentials from an activism that engages with finance and other black boxes from within.⁸ And as the late sociologist, activist, and dancer Randy Martin (2015: 105) argued—against the misconception that neoliberalism simply means defunding the state in favor of privatization—“public and private are always constituted through a kind of interdependence, and the challenge is to understand what creates their mutual imbrications and differentiation, a problem to which the derivative logic provides some keys.”

The historical overview of the critical art paradigm demonstrates that contemporary art is a historically and geopolitically specific formation—in its institutional, infrastructural, and ideological scopes. By contrasting critical aspiration with the field’s infrastructural and institutional realities, we showed that this oppositional expectation cannot epistemologically or operationally transcend the parameters of the *status quo*. The artists João Enxuto and Erica Love argue that “while technology is intensifying the soft power of speculation, reputation, and the hype of networks, recent changes in technical infrastructure have done very little to shake the narrowly-defined and limited objectives of contemporary art” (2016: 173).⁹ Contemporary art is therefore not verbatim for art of our time, but an ideological and institutional construct. As such, the term “contemporary art” relates to today’s hegemonic order of art, intimately bound up with the hegemonic form of global finance. In order for art to advance in its ability to offer political and epistemological contributions to societal issues after financialization, it is necessary to break free from the position that contemporary art is the only possible paradigm within which such positions can be produced (Malik, 2013). In the case of critique grounded in another relationship than that of opposition, we will revisit certain art formations of the last three decades that germinated alternative approaches to finance, while developing new infrastructural parameters and protocols for art in its relationship to other spheres, which reconfigure the issues of autonomy and value within heterogenic and shifting postdisciplinary settings that can not only cope with but add to the complexity of the current condition.

Toward Speculative Horizons and Systemic Visions

Art in Search of Non-Art Repercussions

While the critical art paradigm and financialization are interlocked via the organizing logics of the contemporary art field, another direction was pursued within the same period by artists whose choice of tools and techniques was only marginally appreciated in the contemporary art world. New media, digital, electronic, and net art are terms for practices that evolved in the 1980s and 1990s following the initiation of the field in the late 1950s. Partly applied research and partly wild experimentation with new media and technologies, these approaches often radically interrogated the conditions of art and social reproduction. Highly politicized by a critical stance toward media and ICT, digital

art not only attacked the new economy's sell out of the social potential of new information technologies but was also highly skeptical of how the art world operates. Instead of inscribing itself into the gallery and museum system—which in most cases was and is too inert and unskilled to deal with these new tools and concepts—digital art often either dismissed the art world or used it as an “attention tool” for wider aesthetic, activist, and political aims (Nestler, 2007).

In 1996, the media art theoretician Lev Manovich diagnosed that “the convergence between the contemporary art world and the computer art world [...] will NOT happen,” jokingly differentiating between them as “Duchamp-land” and “Turing-land.” Aware of the appropriation of Turing-land aesthetics by Duchamp-land art, he nevertheless recognizes “what we should not expect from Turing-land is art which will be accepted in Duchamp-land [since] Duchamp-land wants art, not research into new aesthetic possibilities of new media” (Manovich, 1996). One example of an artistic practice that complicates this verdict can be found in the work of Thomas Feuerstein whose artistic career began with media and net art in the early 1990s and whose work ranges across all aspects of the infosphere—or, as Tiziana Terranova conceptualized it, the “informational milieu” (2004: 8)—with a focus on rendering complex themes and issues. His collaborative project *Hausmusik. Network Installation for Real Data* (1993) is an early example of art addressing finance directly. *Hausmusik* used real-time stock market data provided by Reuters which was transformed to control a piano and a violin. Referring to the world as oikos, music was not produced by musicians but “by a collective of global consumers.” Although in macro sense, “conceptual narration”—Feuerstein’s method in which “confabulations [operate] like a mycellic network rather than causally and dually”¹⁰—may be categorized as representational and symbolic, it taps into the actual dynamics of algorithmic and biotechnological processes in order to expose their generative potential. In a similar vein, Sylvia Eckermann et al.’s *The Trend Is Your Friend!* (2009) constructs an automated and at the same time immersive market environment that mediates through moving image and sound the double auction market model. Viewers that enter the installation can affirm, negate, or amplify particular market dynamics that they are confronting by shifting their gaze as well as by voice. Here the artwork functions as a simulation that translates complex conditions that structure markets and trading dynamics into a participatory aesthetic experience. Raising the question of individual agency in complex and interrelated systems, the market as an abstraction attains an inherently social and affective character, of which it is generally deprived by both neoclassical economic theory (LiPuma, 2016) and standard contemporary art critique.

Before concepts like “post-media,”¹¹ and more recently “post-internet,” liquidated into the contemporary art field’s valuation regime (Connor, 2013) “by embracing the fluidity of the art object as it circulates, like a currency, through networks and markets alike” (Lotti, 2018: 98), digital art and its hacks constituted less of a genre of art but an attempt to re-invent both the art system and art

practice for the twenty-first century and its technological edge. The explorative spirit behind these projects often exceeded the critical stance of contemporary art by its implicit desire to offer practical answers, however preliminary and contingent, to the question: “what is to be done?” Initially, much of digital art relied on its own institutional setting that it had been developing since the late 1970s, and which often depended on public funding. Its infrastructural backbone included festivals, conferences, zines, blogs, archives, and non-profit media art institutions and organizations. Especially in the 1990s and 2000s—i.e., at a time of economic and public funding crisis and subsequent renaissance of the commercial gallery system—there used to be little confluence between the worlds of contemporary art and digital art, except in countries where new media and new media art were adopted more quickly and widely as part of the global innovation paradigm in the development of capitalist markets and infrastructures.

Digital art practitioners were often less avid in defining themselves as artists in the usual connotation of the term, as this was seen as adhering to a reactionary interpretation of individuality instead of developing inclusive and common practices. Rather, many artists were affiliated with coding culture and digital counterculture. The field was and continues to be more engaged in open source than in “free art”; it is less invested in “breaking conventions” while remaining “snug in the market’s lap” (Stallabrass, 2004) and instead focused on (artistic) forms of disruption, digital actionism, or hacker activism targeted at government agencies and policies, corporations, market structures, and Internet technologies, among others. Mainly emerging from Gen X, net artists constituted the first Internet generation but were still brought up in the “analogue” world. Hence, artists like Heath Bunting, Etoy, ®™mark or The Yes Men made use of art institutions as physical distribution spaces for the specific agenda or desire underlying their often highly political or anarchic work. The impact of a project could be extended and leveraged in the slipstream of art, yet the ultimate aim would be to produce an impact on the very forces that one was interrogating. Working with and through the volatilities in-between real life and cyberspace, artistic freedom and marketing strategies, open source and piracy,¹² research and playing it by ear, brought about new artistic and collaborative risk-tactics that countered capitalist claims with their own claims as to what the future should look like (mainly based on ideas and platforms of the commons). This involved methodologies that furthered a speculative attitude in order to performatively navigate the legal, economic, and other repercussions that these forms of intervention met as well as an anarcho-tactical disposition to obtain enough clout to perform within a rather capricious attention economy.

Such artistic methodologies are certainly performatively reflexive, however, rather than aiming to perform an oppositional stance to a certain state of affairs and to find discursive resonance in the sphere of contemporary art, a net art approach looks to elicit feedback within the targeted state of affairs through intervention. An earlier example in this vein is *Nike Ground* (2003) by Eva and

Franco Mattes (0100101110101101.ORG) in collaboration with Public Netbase/t0 in Vienna. The intervention consisted of a massive Nike-swoosh made of “special steel covered with a revolutionary red resin made from recycled sneaker soles,” a high-tech container as info box, a fake website, and an advertisement campaign based on the line “Karlsplatz, one of Vienna’s main squares, is soon to be renamed Nikeplatz.” *Nike Ground* mobilized massive reactions from the public and city officials. Nike corporation filed legal action “against the breach of copyright” but the Viennese Commercial Court “rejected Nike’s plea for a provisional injunction on formal grounds”¹³ and Nike decided to withdraw due to local and international criticism of being a spoilsport. (Corporations learnt their lesson quickly and integrated identity hacking into their marketing portfolios.)

This approach could be described as a form of affirmation-resistance by means of tactical media¹⁴ escalation and identity hacking. Instead of reiterating older forms of critique, such projects—often collaboratively realized—appropriate the tools and language of power toward their breaking point, for example, by forging narratives between fact and fiction performatively and “recalibrating” the volatile course of events in real time. Another similar intervention is UBERMORGEN’s *Voteauction.com* (initially conceived by James Baumgartner), which was initiated for the 2000 presidential election in the United States (Bush vs Gore) and offered an infrastructure to sell and buy votes via auction. With the subtitle “Bringing Democracy and Capitalism Closer Together,” the project took a step from critique as performative representation toward a performative action based on the affirmation of a diverse set of conditions: financial capitalism as a global order; information technologies and media as the structure and networks of this order, also as regards politics; the admission that art was not a field beyond these confines or otherwise standing out from the more mundane forms of systemic violence. Other examples of hacking the financial and corporate system, in which UBERMORGEN collaborated with the artist Paolo Cirio and the editor and artist Alessandro Ludivico, are *Amazon Noir: The Big Book Crime* (2006) and *GWEI: Google Will Eat Itself* (2005). Addressing the issue of proprietary copyright protection, the media art performance *Amazon Noir* hacked Amazon’s “Search Inside” service and freely distributed digital volumes of books: “The conceptual artwork integrated the criminalization of piracy with free circulation and access to knowledge, hence addressing copyright and fair use laws within the disrupted digital economy and information monopolies” (*Amazon Noir*, 2006).

While both the hacks of *Voteauction.com* and *Amazon Noir* resulted in spectacular media coverage (and in the latter case, Amazon’s denial of the hack and of their vulnerability), lawsuits, and repercussions for the artists not unlike those experienced by whistleblowers,¹⁵ *GWEI* shows more “stealth” characteristics with its conceptual elaboration of the parasite moving below the radar of law infringement in respect to brand, copyright, patent, etc.:

We generate money by serving Google text advertisements on a network of hidden Websites. With this money we automatically buy Google shares.

We buy Google via their own advertisement! Google eats itself—but in the end “we” own it! By establishing this autocannibalistic model we deconstruct the new global advertisement mechanisms by rendering them into a surreal click-based economic model. (GWEI, 2005)

Even though the project parasitically exploits Google’s money-generating algorithm through an act of infrastructural deconstruction (and here differing from semantic deconstruction of post-conceptual art), it does so in a subtle and positively inconsequential way, as it would take “202,345.117 Years until GWEI would fully own Google.” The number reminds us that Google the data “para-site” exploits each and every click to a degree beyond imagination without any redistribution effort except to owners and shareholders, a fact that almost ridicules the debates about tax evasion and creative accounting. At the same time, it hints at a fact already mentioned by Karl Marx in *Capital I*, but neatly blanketed by neoliberals: that unchecked capitalism leads to monopoly centralization. Here, artistic over-affirmation not only appropriates the models of mass media advertising, information technology, metadata, and financial capitalism in an entertaining and timely fashion (and uses the art market to sell all sorts of paraphernalia following from it); as early as 2005 and at a time when Google was deemed digital savior rather than the data demon, it brought home the “totalitarian power untouched” that the global data conglomerates of platform capitalism maintain today (GWEI, 2005). GWEI also demonstrates that while art may actively intervene into wider infrastructures, the project-based logics limits its potential for scalability. In this sense, art is still conceptualized and actualized as a syncopated interjection.

Nevertheless, what many of these and other works have in common is an explorative and constructive engagement with the powers, terms, and conditions that shape the world today. They are also characterized by “a new level of awareness with regard to the extent to which market dynamics bleed into the fabrics of the art milieu” (Lotti, 2018: 89). And in contrast to the critical position in contemporary art, they signal an invigorated speculative inclination and a strategic orientation pivoted beyond art world validation, even if the latter is used as one of the avenues via which wider impact—and some income—is achieved.

Affirmation in the Name of Speculative Exploration

Before speculative realism was inaugurated in philosophy (at a conference at Goldsmiths, University of London, April 27, 2007), artists had already developed practices that incorporate technology, theoretical exploration, postdisciplinary research, and activist affiliation, and have since been engaged in acute experiments with speculative hacks, direct interventions, forensic investigations, or precedent setting experiments.¹⁶ This speculative thrust delineates a positive or enduring attitude vis-à-vis the neoliberal conception of creativity

that not only privileges the objective to own and monopolize ideas, practices, and processes, but also seizes the notion of speculation as an intrinsically financial one. It recaptures speculation from the hegemonic “rationality” of economics and finance, which not only constrain speculative thought with its preference for quantitative analysis (which applies more to economics, as in finance speculation often runs wild by necessity) but also ethically and regarding its qualitative potentials (for a discussion of speculation, see also Konings’s chapter in this *Handbook*). For a rather long time, speculation was yielded to capitalist ventures, leading to violent endeavors that are considered ethically unsound from a post-Marxist position but advocated by liberals, neoliberals, and libertarians alike who are partisan as to its foundational ethics of Western civilization. The distinguishing trait of these artistic works and practices is that they do not fall into the trap of this dichotomy. They speculate on speculation by using the technologies, materials, methodologies and narratives of—in our case—financial capitalism to confront the latter’s “amoral” ambiguities—to quote the financial expert and whistleblower Haim Bodek (Nestler, 2012–15/2014–15: 39:30 min.)—and to explore avenues that contribute to reorienting the financial sphere. Such approaches activate art and post-disciplinary research toward envisioning and together crafting *other* narratives and imaginaries in favor of, for instance, “undercommon” (Harney & Moten, 2013) and common aims (Roio, 2018)—instead of simply rejecting finance as the epitome of capitalism and black box sovereignty. And instead of advocating “an insurrection of slowness, withdrawal, and exhaustion” like the theorist and activist Franco “Bifo” Berardi (2012: 68), it engages with forms of insurrection that attempt to recode access, flows, and protocols of finance (as well as other techno-prognostic operations). An example for a practice that makes use of the symbolic power of art and at the same time exceeds syncopated interjection is Paolo Cirio’s *Loophole for All* (2013). Cirio hacked the company register of the Cayman Islands, promoting “the sale of real identities of anonymous Cayman companies at low cost to democratize the privileges of offshore businesses” (*Loophole for All*, 2013). The artistic intervention not only opened offshore schemes to “ordinary people to avoid taxation the same way as these companies do” (*Loophole for All*, 2013), but also cunningly exploited the asset of anonymity against those hiding behind it.

However, work initially delivered from such artistic research is frequently spiraled into contemporary art and its marketization, via critical reflexivity of opposition but in a derivative mode, once again seemingly fulfilling Manovich’s paradigmatic divide between Duchamp-land and Turing-land. But what if this conceptual rift obscures rather than illuminates the post-media condition? What if another distinction, this time a philosophical one, would better describe the *tense relaxation* between art that tries to cut its way toward new aesthetics, materials, and distributions and art that the market can (and wants to) make use of? A distinction, in which the market trope is turned from “aestheticized” alienation to an engagement with its social and technological

complexity, its processes, protocols, and criteria? We are thinking here of the proposition put forward by Steven Shaviro (2012: ix, xii) in his text *Without Criteria*: that we should not follow Heidegger's insistence on being, which he summarizes in the question "Why is there something, rather than nothing," but rather ask with Whitehead "how is it that there is always something new?" Shaviro argues that in contrast to Heidegger, Whitehead engages with the present and its challenges by appreciating repetition, recycling, and recalibration as possibilities for novelty. If thought is to become more Whiteheadian, we must turn away from the obsessive insistence on oppositional critique because our senses are telling us that "the world is *already* otherwise" (Shaviro, 2012: xii), which implies an opening toward "speculation, fabulation and invention" and thus toward nonlinearity, entanglement, and multiplicity as regards contingent becomings. Here lies a confluence between art and finance—at least when we give finance the credit of potentially exceeding the realms of capitalism and neoclassical economics and art the credit of exceeding symbolic enactment of opposition to a state of affairs that is by default already past.

The proposition to distinguish between a *Heidegger-time* and a *Whitehead-time*—in which temporality is not an instant of measurement but constructed in intensive experience—is also one that offers propositions, rather than judgments; metastable rather than stable states; potentiality rather than (absolute) truth, and in which relations—that seem derivative and therefore secondary, if not fictive—"are every bit as real as 'things' [...] because they are themselves 'experienced relations'" (Shaviro, 2012: 40–41). These formulations, implying nonlinearity, nonequilibrium, and contingency, neither sound alien to the post-media condition nor to the philosophy of finance, as exemplified by Elie Ayache (2010, 2015; Nestler, 2012) and Jon Roffe (2015). They reverberate in studies of the sociology of finance, most prominently in Knorr Cetina (2003) and Knorr Cetina and Preda (2007), and would probably be shared by many traders and quants who know the "uneconomic" *visceral feel* of being in the market all too well.

Even though Turing-land has been infiltrating Duchamp-land—such as in the eminent work of artists like Simon Denny and collectives like DIS—there is a lingering security-sensitive spirit, an asset allocative grasp in these works that signals an entrepreneurial animal spirit, as identified by Matteo Pasquinelli (2008).¹⁷ It retro-exploits rather than forward-celebrates new media art, culture, and the commons—a concept that claims (rather than promises) acting "in solidarity of one world" (Shaviro, 2012, 108). In the specific instance of our concern here, this amounts to entanglements that reassemble revolutionary ethos, which got dispersed in the network assemblages of social media, within derivative practices that engender new optionalities also in the field of finance—an arguably utopian premise, but one deeply ingrained in the processual spirit of our time, grounded in wild bricolages and assemblages; (bio)materialities and codes; and the affective potentials of (bio)technopolitical hacking and (crypto) automation.

One example of these artistic approaches is *Terra0* by Paul Seidler, Paul Kolling, and Max Hampshire. The project uses a decentralized autonomous organization (DAO) on the Ethereum Blockchain to explore—by way of automated sustainable and resilient forestry—how a smart contract can sustain itself. A self-owned forest creates capital in which humans are not involved by selling licenses for the logging of its trees through automated processes, smart contracts, and blockchain technology.¹⁸ The authors state that the art project “gives [them] the proper space for the speculative aspect [...] to set up a prototype of a self-utilizing piece of land” (“Introduction”, n.d.) and examine a scenario whereby objects and natural systems appropriate and apply utilization mechanisms to themselves. Referencing this project among others, Laura Lotti (2018: 96) argues that the speculative consequences of peer-to-peer automated technologies are potentially far-reaching, as they expose “the multidimensionality of property rights as legal, economic, and social operators of subjectivation and power relations” and thus produce a hardcoded revolutionary ethos “in the very definition of agency and autonomy—in both artistic and economic terms [that challenges] received notions of ownership, personhood and autonomy in a post-blockchain near future.” Thus, they illustrate the potentials of tokenization beyond the self-management of capital, “ultimately collapsing the boundaries between art, ecology, economy, and politics.”

Here, the token can be described as a new vehicle for autonomy that (experimentally) outsources trust to automated processes but for the advantage of collectivizing and decentralizing systems in favor of stakeholders (also nonhuman ones). Such research orientation toward platforms may in fact point to an infrastructurally underexplored potential of art that exceeds the possibilities of individual artworks. There is a host of blockchain- and cryptocurrency-related endeavors that are either co-developed by artists, in a close exchange with artists, or engaged between art and their fields of research. One example is ECSA (economic space agency), an offspring of Robin Hood Cooperative (or Robin Hood Asset Management), who self-describe as “a group of radical economists, finance theorists, software architects, game designers, artists, lawyers, peer production experts, and decentralized application engineers—exactly what is needed to reimagine what economy can be.”¹⁹ Another approach is taken by Denis “Jaromil” Roio who has been engaged in free software coding, hacker activism, and net art for over two decades. In 2002, he founded Dyne.org, a working platform of programmers, artists, and activists, which defines itself as a “non-profit free software foundry with more than 15 years of expertise in developing tools and narratives for community empowerment” and whose practice ranges from GNU/Linux-based operating systems (like Devuan) to privacy-aware tools and applications for complementary currency governance systems and direct democracy and economic empowerment (D-CENT), a social digital currency (Freecoin), an artistic research project “to contrast abstract value creation with new paradigms in distributed energy usage and value re-cycling” (*Entropical*) and a blockchain ecosystem for electronic cash and

smart contracts based on energy-efficient Proof-of-Trust consensus algorithm (YETTA).

Quite recently, artistic-scientific research at the intersections of biology and technology has begun interrogating the consequences as well as potentials of finance as regards living organisms and biotechnology. An example for an art project experimenting with algorithmic engineering is *ADM XI* (2017) by the artist group RYBN.org. The platform hosts a collection of competing “heretic, irrational and experimental” trading algorithms which are not “driven by price [...] but by living organisms such as soil, plants, and bacteria” (“About ADM XI”, n.d.). The project exploits “artist[s]’ legendary vision and know-how, to create innovative and counter-intuitive strategies of investment and speculation.” RYBN.org claims that “the uncanny strategies challenge the neo-classical economics dogma” by following:

their own non-mercantile and obsessive logic: some attempt to produce a total and irreversible chaos, while others try to influence the market price to make it look like a given geometrical shape, while others try to saturate the market with non-human affects. (“About ADM XI”, n.d.)

Another approach is taken by projects that engage with the *biosphere* by experimenting with biological structures and narrative streams. “Aliveness” is decoded along non-proprietary lines, challenging schemes indicated by terms like “Big Bio” and “Big Pharma.” In *Metabolic Currencies* (2017), Lucie Strecker, Klaus Spiess, and collaborators from art and science explore whether experimental financial frameworks and currency systems can “negotiate value through their liveness when mediated by interfaces with consumers and their affective resources.” This hybrid performance speculates on “how the invariances, the un-encodable and invaluable in biology and art could challenge economics’ preference for perfect information acquisition and efficiency for prediction, to escape the capitalization of categorized life.”

Within the notion of Whitehead-time, artistic experiments and realizations involved in the crypto- or biospheres not only pursue the explorative zeal of artistic research but also work toward a technology-inclusive affective orientation. As such, they at least circumscribe potential perspectives for contributing to a financial ecology after postcapitalism. There is an immanent necessity of work grounded in the potentiality of “decision”—a term with consequences in Whitehead’s philosophy—from which all subsequent recalibrations are derivative of. These practices thus transform the affirmation of the derivative into new practices of being embodied (and not only incorporated)—which includes self-owned automation—in a way that reverberates in what Catherine Malabou (2018) conceptualizes as “plasticity”²⁰—“the capacity to concurrently receive and bestow form.” However, we are only half way into Whitehead-time because what is often missing in the speculative art forms—and not only there—is a positive conceptualization of novelty, contingency, volatility, and leverage;

and within a wider but crucial perspective, the protocols and platforms which performatively define, process and “switch” (Ayache, 2010) regimes of evaluation and decision-making.

Developing New Organizational Protocols

Financialization makes evident the pivotal role played by organizational protocols that structure the streamlining of value creation and distribution. As has already been identified, contemporary art’s infrastructural functioning is largely downplayed in the assessment of art’s epistemological and political potential. While this may be convenient for maintaining the status quo, the suppression of infrastructural realities and endeavors that seek to populate the field of art with new institutional models and missions is a major stumbling block for creating new art ecosystems that are capable of progressive operation in a technopolitical age. Thus, in many ways, the larger project of amplifying and scaling up the approaches to finance that are emphasized in this part of the chapter is tied in with a project that seeks to reform various organizational parameters shaping the institutional complex(es) of art. For example, currently, there are scarcely any institutional pathways available for institutional dissemination and the capacity to utilize knowledge generated through speculative artistic practices outside the exhibition/publication format. In many ways, the prototypical contemporary art institution still remains bound by a high modernist/late nineteenth-century conception of the museum (Bennett, 1995) as first and foremost an “interface” with “the public.” To this extent, development of new organizational protocols that can reposition the art institution’s existing capabilities to offer new interfaces with non-traditional stakeholders and partners still remains an open and much needed project. Development of such interfaces is in part dependent on a cultural shift from equating the field of art exclusively with art objects, events, and individual (i.e., fragmented) artistic expressions to understanding art from a systemic perspective.

As early as 1968, Jack Burnham’s systems manifesto advocated for artistic approaches that shift from object-based to systems-based logics given that in technologically driven (and we may add, financialized) societies, “priorities revolve] around the problem of organization.” Although Burnham has been largely taken up by the art field through artists who represent or fashion systems via their object-based works (Ivanova, 2017), there is another lineage of approaches that straddle art with the question of organization at a systemic scale. For example, Artist Placement Group—a UK-based collective that started operating in the 1970s—organized placements for artists in an attempt to develop new ways for art to interact with key industries. The model has been taken up by the world of tech start-ups where artists are frequently engaged as consultants (Salter, 2013) and even Google has launched a Cultural Institute—an art-driven R&D lab. What these developments indicate is that the ever open and synthesizing potential of art is a resource to be mined beyond the asset potential

of contemporary art objects in a financialized economy. New organizational forms will yield novel articulations for the deployment of that resource with a potential to set systemic precedents, and there is thus an urgency to rethink the leverage that art institutions and actors within the art world already hold in pivoting toward modulated organizational formations.²¹

Another key access point for reforming the infrastructural constellation of the art field is its economic dimension. The advent of the online economy and availability of new tools such as blockchain has reawakened Seth Siegelaub and lawyer, Robert Projansky's *Artist's Reserved Rights Transfer and Sale Agreement* (1971) designed to provide artists agency over circulation of their work in a market economy.²² Working Artists and Greater Economy (W.A.G.E.) is a New York-based lobbying agency and a self-appointed certification platform for institutions that agree to respect the agency's wage criteria in their work with artists. One of its new projects is a blockchain version of the Siegelaub contract, which will be integrated into an administrative platform that will allow wagens (artists) to manage their relationships with institutions and market actors. It utilizes the possibilities of digital platforms to coalesce administrative functionality with coalition building. While shortcomings may be identified in relation to projects such as W.A.G.E. and Artist Placement Group (APG)-inspired ventures, the main point here is that institutional reform cannot be overlooked in addressing the potential of art in "transforming repetition," especially in contrast to the often-exploitative subcontractor condition of the artist in the contemporary art supply chain.

Bestowing New Forms

While in the last decade, many more projects than can be mentioned took to accessing finance as a field of artistic research and infrastructural reform, the three strains that are emphasized here are artistic projects that take inroads into finance by entering into affiliations with financial experts to carve out new readings, narratives, and agencies; artistic interventions that hijack financial/capitalist operations and structures, and larger endeavors that develop new organizational forms and those that apply the blockchain technology as a way of reforming the infrastructural protocols of the art field. What is taken advantage of in all of these examples by way of acknowledgment is the fact that—as the editors of the special issue on art and finance in *Finance and Society*, Suhail Malik and Gerald Nestler (2014: 94–95), state—"by now, the interests of the art market [and we may add, by way of financialization] permeate all the way through the art system." This has profound repercussions for how actors—individual agents and organizations—conceive of their systemic function.

In the derivative paradigm and its operative market logic, world-producing and transgressive art of the past is conserved as pure financial wealth by deflating its former radical political clout in the purified citations offered by contemporary art, in which a political-emancipatory stance is prerequisite as a branding

mechanism. This shift can be traced back to as early as 1984—to the height of financial deregulation policies—when Brian Wallis (1984: xii) observed that “[n]ow, not only is the avant-garde no longer radical, though its forms continue to be produced and simulated for an overextended art market, but in a final irony, modernism has become the official culture, the aesthetic haven of neo-conservatives.” Modernist avant-garde has come to constitute “fundamental value” not in the sense of a politics of change, of radicality or of alterity, but as the underlying asset of a derivative speculation on future value transacted and recalibrated in the response chain with contemporary work (by way of dynamic hedging, to use a financial term). In contrast to the romantic notion of artistic value, art is either made productive (renders price) by entering circulation or it is nonproductive and as such externalized from the dynamic recalibration of pricing—it might hold value but in the most marginal and *unproductive* sense offered by the neoliberal ideology. Exposed to market forces, originality, transgression, and resistance—marks of quality of the liberal (modernist) conception of art—succumb to a relational “post-asset” and must not be “overemphasized” in the neoliberal “unleashing” of creativity. In this perspective, the derivative logics of new labels such as post-internet or street art (a derivative of the politically controversial graffiti) and their artists’ brands are akin to order types that allow the performative insertion of new speculative and shortcutting operations into the market for entering, exiting, or leveraging positions, not unlike those in high-frequency trading (on high-frequency trading, see also the chapter by Lange in this *Handbook*).²³ The derivative condition (Nestler, 2017) in which artists find themselves today is a highly volatile world (not only works but entire careers are market-performance related). Noise more often than not obscures information “productively” in order to leverage risk options. Here, the worlds of data, finance, and art coalesce: noise is the master of information (on noise, see the chapter by Preda in this *Handbook*).

Those art projects that tackle the black box constitution of informational and financial technocapitalism—and what Alberto G. Ramos (1981: 81) already in the early 1980s defined as the “deceitful cognitive politics [...] peculiar to market centered societies”—are, as we have shown, aware of this incorporation. Moreover, they exceed the trope of market reflexivity as an anchor of critical art practice and do not stop at revealing the obfuscated nature of power dynamics under capitalism.²⁴ However, they are, not surprisingly, mostly at the margins of, or survive completely outside, the global art industry and its market-styled art assets, or they take activist positions that materialize at a variety of sites including the paradigmatic “white cube” and its asset-producing capital. In this case, however, their main source of funding and income is the increasingly neoliberal “device” of the university, rather than the museum (Holmes, 2006), and thus—except in extant pockets of Western European welfare states—another highly financialized institution with a brutal debt/leverage ratio that signifies the crisis of the neoliberal regime based on probabilistic hypothesis in the face of contingency.

The derivative logics of the “art-finance complex” not only attempt to normalize art by financializing what it can capitalize on, it also externalizes resistant art practices it cannot co-opt easily, thus deflating art’s emancipatory potentials. In the globalized art world, *differentiation* serves the flexible tastes of savvy collectors rather than the plasticity of art’s “contestation” with reality. Historically, though, art has always reinvented itself with new questions, approaches, formats, and practices, thus averting attempts to homogenize the “culture of art,” a fact that implies enormous losses on value investment, or, to the contrary, huge gains in profit and esteem for those few of the “leisure class” (Veblen, 1899) who took the risk to buy or finance art outside accepted categories of taste and esteem. And while new art has often been captured by the market after some time, it has also proven the “floating crap game” of the art “market” (Baumol, 1986) wrong many times by aiming at the *priceless truth value* (to adapt Hénaff, 2010) at the core of the condition of its time, its challenges, and bonds.

An approach that repoliticizes activist and artistic practices along the lines that can be described as aesthetics in the field of consequences and which aims at enhancing resolution not for artistic means, but as an evidence-generating agency²⁵ is Forensic Architecture (FA), a London-based research collective that brings together architectural, artistic, and media research in order to “reverse the direction of the forensic gaze and to turn it back on those very state agencies—the police, military, or secret services—that otherwise use forensics (surveillance, tracking, and pattern analysis) to govern or control populations” (“Ground Truth”, 2017). From an art theoretical perspective, this reversal constitutes a radical reformulation of new media art for the twenty-first century. The very antithesis to *l’art pour l’art*, FA’s practice is situated in a realm of post-disciplinary research, which is operationalized within a number of contexts such as laws of court, NGO campaigns, and negotiations with governments, not to mention the extensive coverage received by mainstream media. In the light of Malabou’s (2018) theorization of plasticity via repetition (and in contrast to ever “flexible” finance) what characterizes FA’s radical counter-investigations is their deliberate intention—their agency—to “receive form” by way of acts of violence and “bestow form” by way of the event of forensic *reperformance* of these very acts. This *revolutionary* association of technology, theory, and research toward emancipatory, entangled, and encouraging agentorial interventions reverberates increasingly in art world corners that are seeking new conceptually, materially, and ethically consequential approaches for moving beyond the critical reflexivity paradigm.²⁶

An aesthetics in the field of consequences engaging with finance directly is “aesthetics of resolution”—a project of one author of the present chapter (Nestler, 2014, 2015).²⁷ With transparency under extreme pressure as the paradigmatic model for governing sociality,²⁸ Nestler conceives the term resolution as a toolbox whose semantic field (spanning from perception to knowledge production to decision-making) offers an inroad for hacking²⁹ black box information and

access asymmetry, and thus for *other* (political) sensibilities and relations. One of the artistic research outcomes was that despite of an existing array of (forensic) investigations, we are confronted with a secretive regime that only submits “substandard resolution, a ghost of an image”—to take Christiane Paul’s observation (2015: 1–2) outside the art field. Hence, only someone from within the black box is essentially capable of making the black box speak. Nestler refers to this expert witness as the “figure of the renegade.” Identified and denounced by the system as *traitor*, she—a whistleblower, hacker with “skin in the game” or “those with two names” (Brekke and Vickers, 2019: 63)—turns public *educator* (often in alliance with other experts). By producing knowledge against the proprietary logic of capitalism and the asymmetries manufactured by corporate or state actors,³⁰ she enhances resolution across all levels of the term. *Instanternity* is Nestler’s collaborative effort with the high-frequency trader and whistleblower Haim Bodek and the artist Sylvia Eckermann to map automated finance not only techno-aesthetically but also legally, infrastructurally, and ethnographically. In experimental settings they refer the volatility and contingency of financial performance directly to the audience by constructing a space in which participation turns into a physical and affective disordering of concentration in order to create an awareness with which we can learn to *read* the performative speech of power (not unlike cultures deciphered representative power between physical experience and the abstractions of the mind). The artistic hypothesis is that we need to leverage the body’s sensory and intuitive intelligence in its interaction with other *bodies* to build a new body politic on a common ecology. Projects like *Instanternity* and *Making the Black Box Speak* (2018),³¹ which Nestler realized with Eckermann and other collaborators, engage with a conception of technology, agency, and solidarity in which the depth of resolution does not collapse into asymmetric leverage for the few. *Renegade agency* is affirmative in the sense that it enters into alliances with those who take the risk of confronting the system, and its non-transparency, from the inside. Rather than reiterating or recalibrating established frameworks of critique and transparency, resolution takes resistance to the level of insurrection.

Technocapitalist biopolitics rest on a volatile cohesion in which the promise of welfare for all is replaced by the automated exploitation of individualized affects. But *making sense* of the artistic, cultural, and financial potentials of the derivative, and volatility and leverage as constitutive forces, revalorizes the extensive capacities and temporalities to perceive and reorient deep (infra) structural changes—i.e., governmental in the Foucauldian sense—against behavioral and social normalization. New performative conceptions of the relations between art, data, and finance can contribute to a radical “arbitrage” that redistributes what today is the privilege of a tiny elite: the abundant wealth of the derivative condition. The notion of plasticity may serve as a lead as to how deep *re-form* (“receiving” and “bestowing form”) can transform not only the mind but all bodies with dignity. Plasticity as a volatility practice is a (*self-*) *empirical* process in which bodies and minds perceive, shape, and leverage, each

other—Whiteheadian aesthetics—but where confluences of bodies (human and nonhuman) take “random lead.”

Notes

- 1 The Guggenheim canceled Haacke’s solo exhibition, on the ground that the museum’s policies “exclude active engagement toward social and political ends,” and dismissed the curator, Edward Fry. See *New York Times*, April 7, 1971, online: <https://www.nytimes.com/1971/04/07/archives/the-guggenheim-cancels-haackes-show.html> (last accessed March 8, 2019).
- 2 This was not confined to the Western world, as instanced by *New Tendencies*, a movement initiated in non-aligned Yugoslavia in the early 1960s that spread across the Cold War divide (Medosch, 2016).
- 3 See: <http://theperformanceclub.org/2011/11/yvonne-rainer-douglas-crimp-and-taisha-paggett-blast-marina-abramovic-and-moca-la/>.
- 4 A central figure of art world dynamics is the collector (see, e.g., *Collecting Contemporary Art*, 2008). On the one hand, art-loving philanthropist and, on the other, savvy investor, he or she speculates on, hedges, and arbitrages aesthetic information and affective surplus, thus quantifying value into price.
- 5 Benjamin (1969), from *Theses on the Philosophy of History*, first published in English by Hannah Arendt.
- 6 In China, contemporary art museums are often part of real estate projects—the owner of K11 Art Malls, Adrian Cheng, explains that “[t]he point is to build a seamless ecosystem between art and retail” (Fan, 2017). Russia has seen strong international investments by the oligarch class. Latin America and the Caribbean region “boast” collector-institutions and Africa has seen its first art financialization controversy around the opening of the Zeitz Museum of Contemporary Art Africa in Cape Town.
- 7 The financial expert and philosopher Elie Ayache, for instance, defines derivative markets as “technology of the future” (2006).
- 8 Emily Rosamond (2016) points to the financialization of socially engaged art, which usually stands in opposition to the art market. With Michel Feher she argues (2016: 124):

what is needed most from socially engaged art practices is that they experiment with their status as investees. This might involve not so much a futile attempt to shelter one’s project from the logics of social investment, so much as embracing the double bottom line as an operational logic.
- 9 Examples sparking debates on automated art, human versus AI creativity, and fintech art market disruptions are Christie’s \$432,000 auction sale of a portrait generated by a “generative adversarial net” (GAN) algorithm and the Codex blockchain art auction at the Ethereal Summit 2018.
- 10 See http://www.myzel.net/Narration/vorwort_en.html.
- 11 The term was introduced in 1985 by Felix Guattari to designate mass media and was applied to aesthetics and art by theorists like Peter Weibel, Lev Manovich, Christiane Paul, or Matthew Fuller, and criticized by Rosalind Krauss. For a brief overview of the discussion, see: <https://monoskop.org/Postmedia> (last accessed March 8, 2019).
- 12 For example, *Kingdom of Piracy*, curated by Shu Lea Cheang, Armin Medosch, Yukiko Shikata as “an online, open workspace to explore the free sharing of digital content—often condemned as piracy—as the Net’s ultimate art form.” See, for example, <http://www.medienkunstnetz.de/works/kingdom-of-piracy/>.

- 13 See: <http://www.t0.or.at/nikeground/pressreleases/en/003>.
- 14 Tactical media (Garcia & Lovink, 1996) denotes radical activist/artistic interventions in the media sphere—the actual environment of such art practices, in contrast to the art world.
- 15 Apart from legal and political issues “[b]etrayal, blasphemy and pessimism finally split the gang of bad guys. The good guys (Amazon.com) won the showdown and drove off into the blistering sun with the beautiful femme fatale, the seductive and erotic massmedia” (GWEI, 2005).
- 16 This line of artistic experiments differs from the appropriation of speculative realism and object-oriented-ontology in the contemporary art sphere. For a critical interrogation of the latter, see *Speculative Aesthetics* (2014).
- 17 For an analysis in this vein, see also Zhang (2018).
- 18 See <http://networkcultures.org/moneylab/2016/09/29/terra0-the-self-owning-augmented-forest/>.
- 19 See: <https://economicspace.agency/team>.
- 20 Malabou argues against flexibility, which “only designates the capacity to be moulded or bent in all directions without resistance”—a similar assessment as Holmes’ (2001) diagnosis of the “flexible personality” in neoliberal globalization.
- 21 Examples of artistic practices include Jubilee, which “functions as a cooperative structure that optimises the output of its members through joining efforts and equally distributing its collective assets and resources (economic, artistic and social),” and Primer, “a platform for artistic and organisational development” located in the headquarters of the biotech company Aquaporin.
- 22 For an updated version of the contract aimed at circulation of digital artworks, see Rafael Rozendaal’s Art Website Sales Contract. In a similar vein, artists Jonas Lund and Harm van den Dorpel are using tokenization to control the financialization of their own practices. See <https://jlt.ltd>, and <https://tokens.harmvandendorpel.com>.
- 23 One ambiguous figure in this acceleration of leveraging speculative gains and arbitrage opportunities is the “art flipper” who produces market volatility (especially on social media platforms) to gain and exploit competitive advantage over established art market players. On this controversy, see, for example, Lotti (2016: 99), or, <https://www.artsy.net/article/artsy-editorial-flippers-art-dealers>.
- 24 Recent preeminent examples are The Sackler family and Whitney Biennial controversies.
- 25 In contrast to the “substandard resolution” of the “poor image” (Steyerl, 2009), which Paul (2015) views as an unsatisfactory but necessary mediation to “capture a certain condition of cultural and artistic practice in the early 21st century.” On the poor image and the artwork as derivative, see Wark (2016).
- 26 A result of such art world demand is FA’s shortlisting for the Turner Prize 2018, which highlights the ambivalence between politically and artistically relevant activist work and its contingent absorption into contemporary art. Eyal Weizman, director of FA, argues “we should rather insist, as counterintuitive as it may seem, on the evidentiary dimension of art and its truth value.” Online: <https://frieze.com/article/id-rather-lose-prizes-and-win-cases-interview-eyal-weizman-turner-prize-nominated-forensic>.
- 27 Initially an artistic investigation of high-frequency trading and the Flash Crash 2010 in the context of the exhibition *Forensis* at the Haus der Kulturen der Welt in Berlin, 2014 (Forensic Architecture, 2015).
- 28 Transparency is commonly conceived as a prerequisite for resolution but under black box conditions this relation is ruptured, or, in fact “colonized by the logic of secrecy” (Pasquale, 2015: 2).

- 29 To quote the finance activist and anthropologist Brett Scott (2015, original emphasis), hacking “involves *queering*, deviating from established paths and making fluid the boundaries that are otherwise viewed as concrete and static.”
- 30 Not confined to finance, this constitutes the social anesthetic of black box society (Pasquale, 2015).
- 31 See <http://thefutureofdemonstration.net/passion/e03/index.html>.

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