



The Case for Reduction, ed. by Christoph F. E. Holzhey and Jakob Schillinger, *Cultural Inquiry*, 25 (Berlin: ICI Berlin Press, 2022), pp. 91–115

ÖZGÜN EYLÜL İŞÇEN

Black Box Allegories of Gulf Futurism

The Irreducible Other of Computational Capital

CITE AS:

Özgün Eylül İşçen, 'Black Box Allegories of Gulf Futurism: The Irreducible Other of Computational Capital', in *The Case for Reduction*, ed. by Christoph F. E. Holzhey and Jakob Schillinger, *Cultural Inquiry*, 25 (Berlin: ICI Berlin Press, 2022), pp. 91–115 <https://doi.org/10.37050/ci-25_05>

RIGHTS STATEMENT:

© by the author(s)

Except for images or otherwise noted, this publication is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

ABSTRACT: Given the prospect of post-oil futures, this chapter historically situates contemporary Gulf Futurism within cybernetic and logistical aspirations underlying the current global trend of the smartness mandate. Working through the complex visuality that the cybernetic black box animates, the chapter revisits Fredric Jameson's cognitive mapping as an allegorical model for the inherent frictions of computational capital. To this end, it discusses Kuwaiti artist Monira Al Qadiri's artistic practice that reclaims a right to speculate while condensing material reality and imaginative threads, thereby going beyond a mere gesture of unveiling or mapping.

KEYWORDS: Gulf Futurism; Smartness Mandate; Ubiquitous computing; Post-oil Futures; Black box; Cybernetics; Logistics; Cognitive Mapping

Black Box Allegories of Gulf Futurism

The Irreducible Other of Computational Capital

ÖZGÜN EYLÜL İŞCEN

INTRODUCTION

On the first day of October 2021, Expo 2020 Dubai, delayed by one year due to the COVID-19 pandemic, opened its doors. Until its closing at the end of March 2022, it hosted more than twenty-four million people, boosting the country's economy and tourism while fulfilling its goal of becoming a global hub for emerging technologies.¹ Constructed around the themes of opportunity, mobility, and sustainability, the one hundred ninety-two countries participating in the Expo showcased their competing futuristic narratives and innovations. In this respect, the Expo took place in the background of the shifting centres of global accumulation and the UAE's efforts to expand its regional footprint within this fast-changing international order.

Integrated with the Expo site was a permanent public art exhibition, curated by Tarek Abou El Fetouh, where Kuwaiti, Berlin-based artist Monira Al Qadiri attended with *Chimera* (2021) — a gigantic

1 Neil Halligan, 'Expo 2020 Dubai Records More than 24 Million Visits after Late Surge', *The National*, 2 April 2022 <<https://www.thenationalnews.com/uae/expo-2020/2022/04/02/expo-2020-dubai-records-more-than-24-million-visits-after-late-surge-in-numbers/>> [accessed 17 May 2022].



Figure 1. Monira Al Qadiri, *Chimera*, 2021, permanent aluminium sculpture with iridescent automotive paint, 450 × 470 × 490 cm, Expo 2020 Dubai. Courtesy of the artist. Photo credit: Roman Mensing in cooperation with Thorsten Arendt.

iridescent coloured sculpture based on the shape of an oil drill head (see Figure 1).² With its size and colour, the artist intended to produce a presence of a futuristic creature from outer space, mesmerizing and unsettling the viewers at once. The Greek mythology-inspired title of the work, *Chimera*, brings forth a figure of a mythical creature composed of incongruous parts gathered from multiple animals. In the artist's iteration, the pre-oil times and post-oil futures merge within the body of the sculpture. The iridescent quality of its surface hints at the visual complexity of both oil and pearl, thereby recalling the centuries-old pearl industry, which was replaced by the oil industry that has been on the rise since the 1930s.

2 'Expo 2020 Dubai unveils first permanent public artwork by Kuwaiti creative', *Arab News*, 4 July 2021 <<https://www.arabnews.com/node/1888116/lifestyle>> [accessed 17 May 2022]. The work was commissioned by Expo 2020 Dubai and is part of its collection. See also the artist's website <<https://www.moniraalqadiri.com/chimera/>> [accessed 30 May 2022].

Chimera makes multi-layered connections between pearl and oil, spanning from physical and symbolic qualities to thick layers of history and ecology (for example, oil as a geological phenomenon). In this respect, the shape of the oil drill head brings to the surface the materiality of extraction alongside the spectacles led by oil wealth. Its iridescent surface mirrors back the surrounding site full of those spectacles constituting Gulf Futurism, condensed within the glamorous, high-tech architecture of the Expo site.

Indeed, the Expo site demonstrates how contemporary Gulf Futurism builds upon profit-driven, technocratic premises, which adopt the prevailing neoliberal ethos of turning crises into opportunities. In opposition, the artists Sophia Al-Maria and Fatima Al Qadiri coined the term ‘Gulf Futurism’ in the early 2010s to attend to the socio-cultural contradictions inherent in the accelerated urban and technological development in the Arabian Gulf, especially since the 1970s oil boom. These contradictions often derive from the contrast between those high-tech architectural spectacles and what lies behind them, ranging from the destruction of desert ecosystems and Bedouin lifestyles to the segregation of socio-economic groups through extreme wealth disparities and securitized everyday life in the city.³

Nonetheless, the ongoing urban struggles and artistic practices in the larger Middle East and North Africa region enact what Jussi Parikka calls counterfuturisms to contest the material implications of Gulf Futurism in the present and imagine alternatives to the risks and hopes that it preemptively imposes in the region and beyond.⁴ In resonance with futurisms that embrace a critical and emancipatory agenda, such as Afrofuturism, artists like Monira Al Qadiri intervene in the hegemonic uses and imaginaries of a given technology.⁵ In this

3 ‘Al Qadiri and Al-Maria on Gulf Futurism’, *Dazed Digital*, 14 November 2012, <<https://www.dazeddigital.com/music/article/15037/1/alqadiri-al-maria-on-gulf-futurism>> [accessed 15 October 2020].

4 Jussi Parikka, ‘Middle East and Other Futurisms: Imaginary Temporalities in Contemporary Art and Visual Culture’, *Culture, Theory and Critique*, 59.1 (2018), pp. 40–58. See also: Jussi Parikka, ‘Counter-Futuring’, *Counter-N*, ed. by Özgün Eylül İşçen and Shintaro Miyazaki, 12 April 2022 <<https://doi.org/10.18452/24451>>.

5 It is beyond the scope of this paper to sketch out these different futurisms with conflicting tendencies, which requires a further historical context. See: *Ethnofuturismen*, ed. by Armen Avanesian and Mahan Moalemi (Berlin: Merve Verlag, 2018); Bahar Noorizadeh, ‘Weird-Futuring’, *Counter-N*, ed. by Özgün Eylül İşçen and Shintaro Miyazaki,

regard, her work offers not merely a critique of Gulf Futurism but also a reflection on its material history with the aim of opening up a path for reimagining post-oil futures otherwise.

Al Qadiri's critical intervention should be understood against the background of the global trend of the smartness mandate.⁶ Given the economic instability that followed the 2008–09 global financial crisis and the prospect of post-oil futures on the side, Gulf Futurism has taken the shape of the smartness mandate. This mandate aims at finding market-led and technology-enabled solutions to ever-growing economic and ecological crises that have a planetary scale. According to Orit Halpern, Robert Mitchell, and Bernard Dionysius Geoghegan, the growth of smart technology, characterized by datafication, optimization, and sustainability, has motivated a new model of managing and governing cities and the global supply chain. Yet, most of these technocratic premises address the recurring crises of capitalist modernity by investing in 'smarter' infrastructures to absorb them rather than by introducing structural changes.⁷

Indeed, these spectacles have material implications, such as how the city of Dubai has grown as a logistical hub via state-owned conglomerates (e.g., Dubai World) operating worldwide. These architectural spectacles exemplify what Kelly Easterling calls 'extrastatecraft', which she defines as a set of zones, devices, and narratives materializing an infrastructural space.⁸ Accordingly, I argue that contemporary Gulf Futurism expresses the aesthetic regime of Dubai as a logistical city, which builds upon — while obscuring — the pairing of smart technology with a racialized labour regime via the Kafala (sponsorship) system.⁹

12 April 2022 <<https://doi.org/10.18452/24452>>. See also: Kodwo Eshun, 'Further Considerations of Afrofuturism', *CR: The New Centennial Review*, 3.2 (Summer 2003), pp. 287–302 <<https://doi.org/10.1353/ncr.2003.0021>>.

6 Orit Halpern, Robert Mitchell, and Bernard Dionysius Geoghegan, 'The Smartness Mandate: Notes Toward a Critique', *Grey Room*, 68 (2017), pp. 106–29 <https://doi.org/10.1162/GREY_a_00221>. Please note that here and in the remaining chapter 'Al Qadiri' is used to refer to Monira.

7 *Ibid.*, p. 121. See also: Gökçe Günel, *Spaceship in the Desert: Energy, Climate Change, and Urban Design in Abu Dhabi* (Durham, NC: Duke University Press, 2019).

8 Kelly Easterling, *Extrastatecraft: The Power of Infrastructure Space* (London: Verso, 2014).

9 I elaborate on this point regarding the racial politics of smart urbanism within the context of contemporary Gulf Futurism, developing a transnational perspective span-

Situated within the realm of logistical worlding, the high-tech spectacles of sustainable futures constitute a larger space where the abstract logics of capital and data clash with the material and social conditions that animate them. In this regard, Al Qadiri's sculptural works, inspired by the industrial oil drill heads, link the extraction of geological layers (oil) to its impacts on the material and symbolic culture through aesthetic forms based on plastic (made up of fossil fuel) and 3D technology.¹⁰ Thus, Al Qadiri situates their presence and medium within the geopolitical context of contemporary Gulf Futurism.

Al Qadiri's work thereby enacts a cognitive mapping that connects the convoluted geographies and systems ranging from the technological to the aesthetic. For Fredric Jameson, who coined the term, 'cognitive mapping' refers to an ongoing aesthetic inquiry, if not a struggle with political implications, that renders one's situatedness within the global networks of capitalism tangible.¹¹ Yet, cognitive mapping often designates an allegorical form since it mainly addresses the dialectical nature of mediation between different scales, such as the local and the global, or realms, such as the economic and the cultural. The inexhaustible gap integral to its process keeps the mediation operating through frictions. In other words, the allegorical model of cognitive mapping reconfigures it as a practice both material and speculative.

To develop these ideas further, I expand upon Al Qadiri's sculpture series to demonstrate how the figure of a black box constitutes an allegory of computational capital, of which Dubai's smartness mandate is a spectacular manifestation.¹² Here, I will underline the cybernetic

ning from Dubai to Beirut, in: Özgün Eylül İşcen, 'The Racial Politics of Smartness Urbanism: Dubai and Beirut as Two Sides of the Same Coin', *Ethnic and Racial Studies*, 44.12 (2021), pp. 2282–2303 <<https://doi.org/10.1080/01419870.2021.1921233>>.

- 10 This chapter focuses on Al Qadiri's series of works aligned together since the mid-2010s. These works, made up of different sizes, materials, and mechanisms, often engage with 3D technology in some capacity, whether design or printing, with oil drill heads as a figural inspiration and the iridescent tone connecting the physical qualities of oil and pearl. Given their larger sizes, *Chimera*, made of aluminum, and *Alien Technology*, made of fiberglass, are not 3D-printed.
- 11 Fredric Jameson, 'Cognitive Mapping', in *Marxism and the Interpretation of Culture*, ed. by Cary Nelson and Lawrence Grossberg (Champaign: University of Illinois Press, 1988), pp. 347–60.
- 12 I borrow the term computational capital from Jonathan Beller since it highlights the historical entanglements between computational and capitalist rationality, especially their rootedness in colonial history and imperial logic. In this sense, the term also

genealogy of the black box, often blamed for its exclusive, reductive modelling of the world with the aim of prediction and control, as in the case of the logistical worlding that underlies smart urbanism. Yet, the composite surface colours and shapes of Al Qadiri's sculptures manifest the complexity of a cybernetic black box, which makes them irreducible to a specific object. They condense both material history and imagination, thereby expressing the very limits of imperial aspirations, whether cybernetic or logistical, for total control and visibility. Ultimately, the historical trajectories of the black box and oil intermingle within Dubai's smartness mandate. This intermingling demonstrates how computational capital operates through 'frictions', in Anna Tsing's terms, where the possibilities of contestation and transformation arise.¹³

THE BLACK BOX AS AN AESTHETIC PHENOMENON

Since originating in the 1940s as part of military research (to which I will come back soon), the black box has gained multiple connotations, which require us to understand it as something more nuanced than a mere technical object. In this chapter, I briefly overview its cybernetic conception, focusing on its aesthetic regime due to the relevance of this regime to today's smartness mandate and to computational capital in general. The figure of the black box often designates a matter of opacity by implying the presence of structures and operations that constitute the realm of visibility while staying hidden. In other words, it refers to a system that one can know only through its inputs and outputs without accessing its internal functioning. Various purpose-oriented, system-like entities can fit this description, such as a computer, an institution, or the human mind.

marks the historical period of post-World War II, since when capitalist operations have increasingly relied on computational systems as a totalizing system, such as platform capitalism. See: Jonathan Beller, *The Message is Murder: Substrates of Computational Capital* (London: Pluto Press, 2018) <<https://doi.org/10.2307/j.ctt1x07z9t>>.

13 With her emphasis on frictions, Tsing connects the supposedly frictionless 'just-in-time' supply chains to the differential material conditions and social relations that animate them. I will come back to this idea later in the chapter. Anna Tsing, 'Supply Chains and the Human Condition', *Rethinking Marxism*, 21.2 (2009), pp. 148–76. See also: Anna Tsing, *Friction: An Ethnography of Global Connection* (Princeton, NJ: Princeton University Press, 2004).

For example, the black box speaks to the current condition in which humans use social media platforms while unaware of the algorithmic processes underlying the interfaces they interact through. In this sense, the software acts like ideology, constituting the fabric of social life yet operating beneath.¹⁴ Therefore, the black box holds an interesting position regarding the mediation between invisible structures and the realm of the visible and often provokes an aesthetic gesture that renders those hidden structures tangible.

Nonetheless, this gesture of unveiling is much more complicated than it first appears. Continuing with the example of software: until it breaks down, or the hardware does, the user won't necessarily realize what lies behind their screen, spanning from the material infrastructure to the human labour that maintains the media. As Bruno Latour famously puts it, 'scientific and technical work is made invisible by its own success.'¹⁵ In other words, when a machine runs efficiently, one can skip the internal complexity while focusing on its inputs and outputs. In turn, 'paradoxically, the more science and technology succeed, the more opaque and obscure they become.'¹⁶ Computational systems absorb this pattern within their architectures and thus render it even harder to open the box. With today's machine learning systems and ubiquitous computing, the operating system lies beyond the perceptual threshold and direct control of the user and even the coder.

In this sense, I broaden Latour's idea of 'black-boxing', obscuring while functioning, to address abstractions through which computational capital works. Indeed, computational systems expand extractive operations of global capital by turning social behaviour (e.g., interacting with friends, playing games) into monetizable labour. Due to the shifting patterns of capitalist accumulation via computational media, it is complicated to unpack the 'rational kernel' and 'mystical shell' of the commodity, to use Marx's terms, to reveal the totality (history, rationality) enclosed within; one cannot merely 'descend into the hid-

14 Wendy H. K. Chun, *Programmed Visions: Software and Memory* (Cambridge, MA: MIT Press, 2011).

15 Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge, MA: Harvard University Press, 1999), p. 304.

16 Ibid.

den abode of production'.¹⁷ The point here is that capitalist extraction has expanded its usual sites and mechanisms by varying scale and granularity (e.g., data mining) while intensifying the reproduction of social hierarchies predicated on race, gender, and geopolitics. Those abstractions occur within machines, via statistical models, databases, etc., under the guise of value-neutrality, i.e., in black boxes that obscure their own functioning and historicity.

To delve into that history, I will situate the cybernetic model of the black box, which shapes the dominant conception of computational systems today, within the cybernetic and logistical implications of the smartness mandate. According to Tung-Hui Hu, the figure of the black box demonstrates how infrastructure is foremost a speculative medium, more than it is a technical one, translating future capacity into the present while promoting fantasies of sustainability: 'Infrastructure requires not just maintenance, but also an imagination of its collapse so as to pre-empt and avoid that collapse; indeed, infrastructure is a way of designing the everyday to bear the load of emergency.'¹⁸

In this respect, today's rhetorics of crisis and sustainability intermingle within the smartness mandate, thereby highlighting its embeddedness within the development of a cybernetic and logistical model of the world in the aftermath of World War II. As this historical period and the context of the Arabian Gulf demonstrate, these coalescent developments constituted the rise of US imperialism and its dominance within the oil-centred economy, the military and financial sectors, as well as the global supply chain.

As mentioned above, the black box came into being during World War II alongside the development of radio, radar, and electronic navigational systems in British and Allied military research. Those measures later on motivated epistemological presuppositions, which marked the cybernetic turn in the 1940s.¹⁹ As Peter Galison has

17 Alexander R. Galloway, "Black Box, Black Bloc": A Lecture Given at the New School in New York City on April 12, 2010', p. 3 <http://cultureandcommunication.org/galloway/pdf/Galloway_Black_Box_Black_Bloc.pdf> [accessed 13 March 2022]. Galloway here cites: Karl Marx, *Capital: A Critique of Political Economy*, trans. by Ben Fowkes, 3 vols (London: Penguin, 1976), 1, pp. 103 and 279.

18 Tung-Hui Hu, 'Black Boxes and Green Lights: Media, Infrastructure, and the Future At Any Cost', *English Language Notes*, 55.1-2 (Spring/Fall 2017), pp. 81-88 (p. 83).

19 Philipp von Hilgers, 'The History of the Black Box: The Clash of a Thing and Its Concept', *Cultural Politics*, 7.1 (2011), pp. 41-58.

shown, cybernetics evolved as a war science since it came out of military research on anti-aircraft defence systems, which aimed to track and predict the flight patterns of enemy pilots based on mechanisms of information feedback.²⁰ For Galison, in other words, cybernetic thought rose upon the premise of the opacity of the Other.

For example, the efforts of founding cybernetician Norbert Wiener and his compatriots to predict the future moves of enemy airplanes became an aspiration to compute human action and, ultimately, an aspiration to develop communication between a range of entities — humans, animals, and machines. Cybernetics fundamentally reconfigured the world as a series of interconnected systems or ‘black boxes’ — devices into which inputs (messages, information) feed and from which outputs proceed in coordination with the regulated behaviour of the given system towards a desired goal.²¹

Indeed, early cybernetics after World War II sought to create order out of chaos by utilizing communication and prediction as in information processing and systems thinking. The Cold War and the accompanying threat of nuclear annihilation situated computers as powerful tools and as metaphors promising ‘total oversight, exacting standards of control, and technical-rational solutions to a myriad of complex problems.’²² Rather than describing the world as it is, the interest of cyberneticians was predicting what it would become and fostering homogeneity instead of difference.²³ According to Orit Hal-

20 Peter Galison, ‘The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision’, *Critical Inquiry*, 21.1 (1994), pp. 228–66 <<https://doi.org/10.1086/448747>>. As Peter Galison details, cybernetics, which has roots in military research, was already shaped around racialized discourses since enemies were not all alike. On one hand, there was the Japanese soldier who was barely human in the eyes of the Allied Forces. On the other hand, there was a more enduring enemy, a ‘cold-blooded and machine-like opponent’ (p. 231) composed of the hybridized German pilot and his aircraft. Galison calls this enemy the ‘cybernetic Other’ (p. 264), arguing that it led the Allied Forces to develop a new science of communication and control in line with the fantasies of omniscience and automation.

21 Megan Archer, ‘Logistics as Rationality: Excavating the Coloniality of Contemporary Logistical Formations’ (Doctoral Dissertation, University of Brighton, 2020) <https://cris.brighton.ac.uk/ws/portalfiles/portal/22372242/Archer_Thesis_2020.pdf> [accessed 16 March 2022].

22 Antoine Bousquet, *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity* (New York: Columbia University Press, 2009), p. 124.

23 Orit Halpern, *Beautiful Data: A History of Vision and Reason since 1945* (Durham, NC: Duke University Press, 2015), p. 46.

pern, early cybernetics, as well as the information theory it inspired, relied on a ‘not-yet-realized aspiration to transform a world of ontology, description, and materiality to one of communication, prediction, and virtuality.’²⁴

Furthermore, Megan Archer situates such cybernetic aspirations for systemic standardization within the rise of logistical capitalism since the 1960s and its imperial order of expansion and control.²⁵ Logistics requiring the detailed organization and implementation of complex operations themselves have become a site of capitalist accumulation. I will highlight three historical trajectories in which these two fields, both rooted in military science, come into close contact.

First, the technical systems led by cybernetic research have transformed the scope and form of logistical operations since the 1960s. On the one hand, the black box obscured the extracting mechanisms involved in logistical operations, such as their reliance on material resources and human labour. On the other hand, there is a hyper-visibility on the side of management/administration that tracks and surveils the work at the site (e.g., port) to decrease friction.²⁶ Thus, the figure of the black box has appeared in the form of shipping containers — uniformly sized boxes — that render logistical reorganization space- and time-efficient.

Second, Archer coins the term ‘logistical rationality’ to underscore that, like cybernetics, logistics aspires to filter out heterogeneity or noise and is rooted in the imperial order following World War II.²⁷ For Katherine Hayles, ‘The power of the black box does not lie in concealing a knowable answer, but rather in its symbolization of the limits of knowledge.’²⁸ Yet, the impossibility of seeing inside the black box did not produce an epistemological limit for early cyberneticians. On the contrary, the cybernetic rhetoric of the time animated an epistemological object based on ‘secured incalculability.’²⁹ As Philipp von

24 Ibid., p. 40.

25 Archer, ‘Logistics as Rationality’, p. 24.

26 Laleh Khalili, *Sinews of War and Trade: Shipping and Capitalism in the Arabian Peninsula* (London: Verso, 2021), p. 176.

27 Archer, ‘Logistics as Rationality’, p. 12.

28 Katherine Hayles, *Unthought: The Power of the Cognitive Non-Conscious* (Chicago: University of Chicago Press, 2017), p. 189.

29 Hilgers, ‘The History of the Black Box’, p. 43.

Hilgers notes, by way of black-boxing it was no longer necessary to know everything about individuals in order to manage and govern them.³⁰ Thus, cybernetic research invested in facilitating and maximizing communication and control between humans, animals, and machine systems, which eventually reduced the human being to a reified model of an interchangeable, information-processing entity.

The third and last trajectory lays out an aesthetic problem that the black box allegory poses: Its opacity cannot be undone merely by a gesture of unveiling. In other words, it is impossible to open the black box in terms of transparency because what lies beneath are the spatial-temporal regimes underlying the global supply chain as well as the colonial histories and social hierarchies they operate through. Hence, these regimes exceed the individual's immediate perception. In other words, the dialectical nature of mediation between different scales and realms comes forth again, which brings us back to Jameson's idea of cognitive mapping.

REVISITING JAMESON'S ALLEGORICAL MODE OF COGNITIVE MAPPING

The increasingly complex and abstract, algorithmically mediated operations of global capital have only deepened their extractive capacity while obscuring their operations, as the black box allegory implies. Given this condition, several scholars argue that the act of cognitive mapping, a term Jameson coined in the late 1980s, is no longer viable. For instance, for Wendy H. K. Chun, cognitive mapping has become an imperialist tool of network science itself, which seeks to link a local experience to global systems by flattening the subject into a functional category.³¹ Noting that '[w]e are now constantly called on to map and to value mapping in order to experience power/agency', she asks: 'to what extent is the desire to map not contrary to capitalism but rather integral to its current form, especially since it is through our mappings that we ourselves are mapped?'³²

30 Ibid.

31 Chun, *Programmed Visions*.

32 Ibid., pp. 74 and 75.

In response to such concerns regarding the relevance of cognitive mapping today, Alexander Galloway reworks Chun's idea of software as ideology, operating beneath the surface but not without frictions, with Jameson's dialectical model of allegory.³³ Galloway argues that software corresponds to an allegory of the social, as it exacerbates or ridicules the tension within itself across the material (hardware) and symbolic (software) layers it operates through. For instance, social relations formerly outside the accumulative regime of capitalism are incorporated into its operation, indicating a process of real subsumption in Marxist terms via computational media, thereby expanding new frontiers of extraction like data mining. Nonetheless, with the term 'intraface', Galloway indicates the implicit presence of an outside — the socio-historical context — within the inside. In other words, the intraface affords a dialectical mapping of the relation between the aesthetic mediation (e.g., a digital image/object) and the larger context in which it has come into being.

In this respect, I still find Jameson's dialectical model of cognitive mapping helpful for attending to the local instantiations of global capital, where capitalism's differential impacts are strongly felt and negotiated. Indeed, Jameson's notion of cognitive mapping refers to a geopolitical aesthetic that enables individuals and collectives to render intelligible their positions in the capitalist world system and its historicity. Jameson closely ties the term to the historical condition of late capitalism,³⁴ 'in which the truth of our social life as a whole — in György Lukács' terms, as a totality — is increasingly irreconcilable with the possibilities of aesthetic expression or articulation available to us.'³⁵ Thus, cognitive mapping refers to the capacity for 'a situational

33 Alexander R. Galloway, *The Interface Effect* (Cambridge: Polity Press, 2012).

34 Cognitive mapping has been a significant part of Jameson's entire critical endeavour since the late 1980s, coupled with his other renowned concepts such as political unconscious, utopia, and geopolitical aesthetic.

35 Fredric Jameson, 'Class and Allegory in Contemporary Mass Culture: Dog Day Afternoon as a Political Film', in Jameson, *Signatures of the Visible* (New York: Routledge, 1992), pp. 35–54 (p. 54). For cognitive mapping, Jameson combines Kevin Lynch's empirical problems of city space with Louis Althusser's Lacanian redefinition of ideology as 'the representation of the subject's Imaginary relationship to his or her Real conditions of existence' (Louis Althusser, 'Ideology and Ideological State Apparatuses', in Althusser, *Lenin and Philosophy*, trans. by Ben Brewster (New York: Monthly Review Press, 1972), pp. 127–86 (p. 162), cited in Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991), p. 51.

representation on the part of the individual subject to that vaster and properly unrepresentable totality which is the ensemble of society's structures as a whole.³⁶

Jameson's emphasis on totality is often criticized for replicating the totalizing, abstracting gaze of imperial visuality. Jameson himself, however, drawing upon Jean-Paul Sartre's concept of totalization (as distinct from totality), repudiates a bird's eye view of the whole. Thus, he affirms a project that 'takes as its premise the impossibility for individual and biological human subjects to conceive of such a position, let alone to adopt or achieve it.'³⁷ For Jameson, the act of cognitive mapping depends on praxis, which is to say, on the individual's active negotiation of (urban) space. Consequently, Jameson frames cognitive mapping as an aesthetic problem — a problem of mediation. Despite Jameson's romanticization of the Third World setting back in the 1980s, on the verge of what would be called the neoliberal turn, there is no privileged method and subject of cognitive mapping.³⁸

Engaging with feminist and queer thought, postcolonial and critical race studies, Sandro Mezzadra and Brett Neilson underscore the possibility of observing systematic qualities across varied operations of capital without necessarily attributing to them a priori coherence. From this perspective, the extractive mechanisms of capitalism are 'tendential' rather than totalizing, constantly producing and reworking the hierarchies predicated on race, gender, sexuality, citizenship, and geopolitics.³⁹ These 'multiple outsides' do not constitute an outside of the capitalist system but refer to resources, natural or human, that capital cannot produce itself but ultimately operates through.⁴⁰

Kevin Lynch's well-known book *The Image of the City* (Cambridge, MA: MIT Press, 1960) came out of his MIT-based research on 'the Perceptual Form of the City', in collaboration with György Kepes, which has become one of the predominant references in the field of cybernetic urbanism.

36 Jameson, *Postmodernism*, p. 51.

37 *Ibid.*, p. 331.

38 Please see Jameson's highly discussed text on third world literature as a national allegory: Fredric Jameson, 'Political: National Allegory', in Jameson, *Allegory and Ideology* (London: Verso, 2019), pp. 159–216. See also: Imre Szeman, 'Who's Afraid of National Allegory? Jameson, Literary Criticism, Globalization', *South Atlantic Quarterly*, 100.3 (2001), pp. 803–27 <<https://doi.org/10.1215/00382876-100-3-803>>.

39 Sandro Mezzadra and Brett Neilson, *The Politics of Operations: Excavating Contemporary Capitalism* (Durham, NC: Duke University Press, 2019), p. 33.

40 *Ibid.*, pp. 4–7.

These multiple outsides are operative but not reducible to the unifying logic of capitalist system. They thrive on economic and political vulnerabilities produced by intersecting histories of colonialism, racism, and patriarchy while they operate through contested human encounters and power relations that not only maintain but also hold the capacity to disrupt the global supply chain.⁴¹ As Charmaine Chua argues, ‘Despite its gargantuan architecture and powerful imperial reach, the world of logistics is constantly undermined by its own contingencies and contradictions: precisely because of its aspirations toward omnipotence, logistics is itself a deeply vulnerable entity, ultimately an “ideology (and fantasy)” of “full visibility as integral flexibility.”’⁴²

Within the scope of this chapter, the figure of the black box as described above indicates the presence of what might be called the Irreducible Other of computational capital. The realm of the Irreducible Other, which computational capital cannot fully assimilate into its logic, designates a site of struggle for demystifying and transforming the social relations of production, which is to say in Marxist terms, social reproduction. Therefore cognitive mapping, which foremost refers to the totality of class relations on a global scale, takes the form of what Nicholas Mirzoeff terms ‘countervisuality’, as it starts by inverting the imperial regime of visibility underlying capitalist operations.⁴³ In other words, countervisuality is never merely about seeing but rather about claiming what Mirzoeff terms ‘the right to look’ and restoring one’s relationship to material reality and history. The opposite of the right to look, in return, is not censorship, but visibility.

As Mirzoeff conceives it, visibility refers to a set of techniques for classifying, segregating, and aestheticizing that are used to represent the world in a way that legitimizes the authority of established power.

41 Tsing, ‘Supply Chains and the Human Condition’, p. 151.

42 Charmaine Chua, ‘Logistics’, in *The Sage Handbook of Marxism*, ed. by Beverley Skeggs, Sara R. Farris, Alberto Toscano, and Svenja Bromberg, 3 vols (Los Angeles: Sage, 2022), III, pp. 1444–62 (p. 1458). Here, Chua cites: Alberto Toscano, ‘Lineaments of the Logistical State’, *Viewpoint Magazine*, 4, 28 September 2014 <<https://viewpointmag.com/2014/09/28/lineaments-of-the-logistical-state/>> [accessed 28 May 2022].

43 Nicholas Mirzoeff, *The Right to Look: A Counterhistory of Visuality* (Durham, NC: Duke University Press, 2011), p. 22.

Indeed, Mirzoeff speaks to the military roots of logistics when he connects the task of visualizing to the rising need of military theorists in the eighteenth century to grasp the increasingly complex and expansive battlefield.⁴⁴ Furthermore, the development of techniques of visuality has been entangled with the modern idea of Man's superiority and has rendered all other categories, such as colonized, invisible:

This ability to assemble a visualization manifests the authority of the visualizer. In turn, the authorizing of authority requires permanent renewal in order to win consent as the 'normal' or every day because it is always already contested. The autonomy claimed by the right to look is thus opposed by the authority of visuality. But the right to look came first, and we should not forget it.⁴⁵

Within the scope of this chapter, I situate the black box as an imperial imaginary as such, which imposes a specific, historically situated regime of aesthetics (as explained in the previous section). Yet, visuality is a site of constant negotiation rather than complete domination. Likewise, my resituating the black box as an allegory of computational capital is a gesture toward demonstrating its dialectical nature and understanding the complex entanglements of life forms, capital, and computation.

Accordingly, cognitive mapping necessarily involves reworking the imperial modes of visuality that are integral to capitalist logic but not reducible to it. Here, I take up Stefano Harney and Fred Moten's reconfiguration of the idea of 'logisticality' against the racial violence and coloniality inherent in logistical capitalism. By inverting the connotations of the term, they enact a social capacity to 'take apart, dismantle, tear down the structure that, right now, limits our ability to find each other, to see beyond it and to access the places we know lie beyond its walls.'⁴⁶ Under the contemporary smartness

44 Nicholas Mirzoeff, 'Visualizing the Anthropocene', *Public Culture*, 26.2 (2014), pp. 213–32 (p. 216) <<https://doi.org/10.1215/08992363-2392039>>.

45 Mirzoeff, *The Right to Look*, p. 2.

46 Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning and Black Study* (New York: Autonomedia, 2013), p. 2. As Harney and Moten highlight, the current scope and form of logistical operations via computational systems are rooted in the 16th century — the beginning of the long-distance imperial trade and the Atlantic Slave Trade.

mandate, countervisuality encompasses more than the visual field and unsettles the spatial and temporal regimes underlying the convergence of extraction, finance, and logistics that takes place via computational systems.

Ultimately, cognitive mapping is a diagnostic practice posing an aesthetic problem — a problem of mediation between separate yet entangled spheres, such as the global and the local, the economic (base) and the cultural (superstructure), or the psychic and the social. There is no one-to-one correspondence between these realms; instead, capital operates through these disjunctions, or what Tsing calls frictions. Therefore, Jamesonian cognitive mapping calls for an allegorical method or style which is more than a mere issue of transparency or a gesture of unveiling and mapping. In Jameson's terms, the allegorical does not resolve but heightens the very existence of these gaps, which characterize the Irreducible Other of (computational) capital.

MONIRA AL QADIRI'S SCULPTURAL SERIES AS BLACK BOX ALLEGORY

Reconfiguring Jameson's cognitive mapping via an allegorical model underscores the processual, constantly self-transforming nature of both capitalism and cultural analysis. As Jameson notes:

the allegorical spirit is profoundly discontinuous, a matter of breaks and heterogeneities, of the multiple polysemia of the dream rather than the homogeneous representation of the symbol. Our traditional conception of allegory — based, for instance, on stereotypes of Bunyan — is that of an elaborate set of figures and personifications to be read against some one-to-one table of equivalences: this is, so to speak, a one-dimensional view of this signifying process, which might only be set in motion and complexified were we willing to entertain the more alarming notion that such equivalences are themselves in constant change and transformation at each perpetual present of the text.⁴⁷

Accordingly, cognitive mapping seeks to evoke connections between seemingly unrelated sites, events, subjects, and narratives that underlie

47 Fredric Jameson, 'Political: National Allegory', p. 170.

capitalist operations, and that are constantly reworking their own conditions — like the colour of the light-reflective surface of Al Qadiri's *Chimera* that changes with the daylight.⁴⁸ As Seb Franklin argues, the expanded capacity of capital for the subsumption of communication and aesthetics via computational media requires an allegorical (rather than objective) representation of a system, for allegory allows the user to grasp the otherwise unimaginable relation between multiple scales, such as local and global.⁴⁹

For instance, *Alien Technology* (2014–19) is a series of large-scale, publicly displayed sculptures made of fiberglass plastic and coated with the iridescent tone of automotive paint. Their iridescent colour resonates with the black gold of both oil and pearl, thereby offering a complex visuality. Indeed, the sculptures speak to the artist's investment in making 'aesthetic connections between pearls and oil, through their colour, materiality, symbolism, ecology and economy, as a way of reimagining the past, present and future of the wider Gulf region.'⁵⁰ For instance, Al Qadiri first displayed the series as a public sculpture in the Shindagha Heritage Village in Dubai alongside the material residues of local maritime history (see Figure 2).⁵¹ That history, spanning centuries, involved trade routes and pearl diving that sustained economic activities in pre-oil times, the times before oil arrived like an alien visitor.

The most apparent connection occurs at the level of the medium itself, as in the case of Galloway's intraface — the material presence of historical context within the medium of the artwork itself. *Chimera* and the series *Alien Technology* have developed alongside Al Qadiri's other projects. These projects, which were exhibited at various venues,

48 Melissa Gronlund, 'What Monira Al Qadiri's Otherworldly Expo 2020 Dubai Sculpture Says about the UAE', *The National*, 4 July 2021 <<https://www.thenationalnews.com/arts-culture/art/2021/07/04/what-monira-al-qadiris-otherworldly-expo-2020-dubai-sculpture-says-about-the-uae/>> [accessed 3 June 2022].

49 Seb Franklin, *Digitality as Cultural Logic* (Cambridge, MA: MIT Press, 2015), p. 96.

50 The quote is taken from the artist statement on her website <<https://www.moniraalqadiri.com/chimera/>> [accessed 16 May 2022].

51 This first iteration of *Alien Technology* was produced in Dubai in 2014 as part of AFAC's public arts program curated by Amanda Abi Khalil. Please see the artist's website: <<https://www.moniraalqadiri.com/alien-technology/>> [accessed 30 May 2022].



Figure 2. Monira Al Qadiri, *Alien Technology*, 2014, public sculpture, fiberglass, automotive paint, 3 × 3 × 3 m, Shindagha Heritage Village, Dubai. Courtesy of the artist.

consist of small-scale, 3D-printed, alien-like sculptural objects made up of plastic with iridescent colour, such as *Spectrum* (2016) and *OR-BIT* (2016–18).⁵² Plastic becomes a narrative tool encompassing a process that runs from the extraction of geological layers of the earth (oil) to the production of a fossil-fuel-based object (plastic), whose shapes derive from industrial oil drill heads. Thus, the iridescent surface of these alien-like figures is key to the temporal depth of the work, which connects the pre-oil and post-oil times, which will arrive when the oil reserves dry up or when oil loses its current value.

Plastic and car paint, which provides the iridescent tone, speak to the fact that oil-centred, imperial, capitalist expansion has shaped the history of the Arabian Gulf and the Middle East since the second half of the twentieth century. Indeed, the so-called logistical revolution

52 While writing this chapter, the most recent iteration of Al Qadiri's series *Orbital* is on display at *The Milk of Dreams*, 59th Venice Art Biennale, 2022. They are 3D-printed plastic sculptures coated with automotive paint and integrated within a rotation machine.

and its regime of visibility in Mirzoeff's sense coincide with the rise of an oil-centred economy that accompanied the dominance of US imperialism in the region. The availability of fossil fuels promoted just-in-time production and container shipping, and the transport of oil triggered the development of maritime logistics in return.⁵³ Indeed, oil's lubricant, sleek appearance provoked sociotechnical imaginaries, such as frictionless flow. Accordingly, the oil trade has created new spaces, structures, and infrastructures that reconfigure the shores of the Arabian peninsula while building upon colonial legacies such as the trade routes and bureaucratic structures of the British Mandate.

Hence, oil (and gas) pipelines do not only have the significant material function of connecting the sites of extraction and consumption. They also have aesthetic and political implications: Pipelines render oil invisible, which is to say, black-boxed, naturalizing its presence in people's lives.⁵⁴ At the same time, they hide the environmental impacts of extraction in a manner similar to how computational media hides their extraction sites, such as the rare earth and other resources used for their production and maintenance. The pipelines also bring about the fragmentation of the labour force because they require workers to be far away from one another rather than in close contact at the extraction site (as with coal mining). This makes it more difficult for workers to socialize and mobilize around collective demands.⁵⁵ In the meantime, oil wealth shapes the democratic politics within and beyond the oil-rich countries by sustaining the local elites and authoritarian regimes at a regional scale while imperial, foreign powers refashion democratic ideals for their own interests, mostly justifying their ongoing violence in the region.⁵⁶

53 Khalili, *Sinews of War and Trade*.

54 Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2013).

55 In another iteration, the artist publicly displayed two rotating sculptures titled *Future Past* at the abandoned Schwarzkaue (black changing room) at the General Blumenthal Coal Mine in Germany. With this work, she intended to highlight the historical resonance between different extractive industries and sites while shifting the registers of envisioning the post-oil future through its pasts. Please see <<https://www.moniraalqadiri.com/future-past/>> [accessed 25 May 2022].

56 Mitchell, *Carbon Democracy*, p. 31.

Indeed, the reserves of oil and gas in the Gulf and the larger Middle East region have been consequential to the rise of the United States as a global power in the post-World War II period. For instance, the establishment of the Gulf Cooperation Council (GCC) in 1981 as a regional bloc of the six oil-rich Arab monarchies — Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE — has been closely entangled with the US's dominant role in the oil-centred economy, the financial and military sectors, and the global supply chain.⁵⁷ Thus, a fuller analysis of the growth of Gulf cities as a logistical space requires attention to their regional dominance, which polarizes wealth accumulation and sharpens social hierarchies in the larger region.

In this respect, Dubai constitutes a fruitful setting to unpack such historically situated mechanisms integral to the current trend of the smartness mandate in the Gulf. Due to its limited oil reserves, Dubai's long-term success has relied on economic diversification, accompanied by various branding strategies. The region formed a strategic node within the wider circulatory networks of British colonialism since the late nineteenth century. Following the founding of the country in 1971, the UAE's logistical space advanced via Dubai's multimodal platforms (ports, airports, free trade zones, and logistics corridors).⁵⁸ Writing about the state-controlled portfolio of diverse corporations referred to as Dubai Inc., Rafeef Ziadah highlights the role of port infrastructures in linking diverse moments that underpin the logistics industry: capital accumulation, state-owned conglomerates promoting the internationalization of capital, and repressive labour regimes.⁵⁹

Adam Hanieh identifies a capitalist class of 'Khaleeji capital', dominated by a few massive conglomerates around a Saudi-Emirati axis, which complicates the rentier state framework. This local capitalist class, promoting capitalist expansion with a public-private hybrid

57 Adam Hanieh, *Money, Markets, and Monarchies: The Gulf Cooperation Council and the Political Economy of the Contemporary Middle East* (Cambridge: Cambridge University Press, 2018), p. 23.

58 Following the withdrawal of the British forces, the United Arab Emirates was founded as a federation on 2 December 1971. It is formed of seven emirates — Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al Quwain, Fujairah, and Ras Al Khaimah.

59 Rafeef Ziadah, 'Transport Infrastructure & Logistics in the Making of Dubai Inc.', *International Journal of Urban and Regional Research*, 42.2 (2018), pp. 182–97 (p. 183) <<https://doi.org/10.1111/1468-2427.12570>>.

model, draws profits from the regional and international export of capital and the deep exploitation of non-citizen labour via the Kafala system.⁶⁰ The Kafala, which is currently active in the GCC countries, Lebanon, and Jordan, stratifies the labour force across class, race, gender, ethnicity, and citizenship.

On the same trajectory, the accelerated urban growth in the Gulf has also led to the destruction of Bedouin/tribal forms of life and desert ecosystems, and to the segregation of socio-economic groups, such as low-class, non-citizen workers. Despite the confined spaces of the Gulf and the deprivation of some basic civil and labour rights, dozens of impactful strikes have swept across Dubai and other UAE cities since the early 2000s. There have been transnational mobilizations for fair labour standards for non-citizen workers, whose ultimate demand is dismantling the Kafala system as an industrial complex.⁶¹ Given the regional dominance of Gulf capital, the Arab uprising of 2011 (and its so-called second waves since 2018) ultimately contested the hierarchies of the regional system by claiming people's right to shape their future paths. These mobilized communities reclaim their right to look and they contest the univocal futuristic projections prescribed by Gulf Futurism, thereby constituting the Irreducible Other of computational capital.⁶²

Given this historical urgency, one of the most striking aspects of Al Qadiri's sculptures as a form of 'intraface' is the *temporal plane* it widens. Al Qadiri's work puts into practice Donna J. Haraway's idea

60 Hanieh, *Money, Markets, and Monarchies*, pp. 23–24. See also: Adam Hanieh, *Capitalism and Class in the Gulf Arab States* (New York: Palgrave MacMillan, 2011).

61 It is more accurate to frame the Kafala as the 'Kafala industrial complex', which involves a set of labour legislation, migration policies, border enforcement, privatization of services, and supremacist entitlement. See: Gemma Justo and Ghiwa Sayegh, 'Whose Home Is It? The Workplace of Migrant Domestic Workers Under Kafala', *Funambulist*, 19 February 2021 <<https://thefunambulist.net/magazine/spaces-of-labor/whose-home-is-it-the-workplace-of-migrant-domestic-workers-under-kafala>> [accessed 1 March 2022].

62 However, the later phase of the uprisings saw a determined effort by Arab ruling elites and foreign imperial powers to fight for regional domination in economic and political terms. Accordingly, the GCC has emerged as one of the main protagonists in suppressing the unrest and extending regional domination. Indeed, the UAE in particular has even become a commercial, military, and humanitarian nexus in the region. See: Rafeef Ziadah, 'Circulating Power: Humanitarian Logistics, Militarism, and the United Arab Emirates', *Antipode*, 51.5 (2019), pp. 1684–1702.

of conjoining imagination with material reality to construct the possibility of historical transformation.⁶³ My framing of cognitive mapping through the Jamesonian dialectical model of allegory acts on a similar plane of aesthetics, marking its utopian quality, characterized by its longing for an alternative:

The Utopian moment is indeed in one sense quite impossible for us to imagine, except as the unimaginable; thus a kind of allegorical structure is built into the very forward movement of the Utopian impulse itself, which always points to something other, which can never reveal itself directly but must always speak in figures, which always calls out structurally for completion and exegesis.⁶⁴

Expanding upon the Greek etymology of allegory, ‘*Allos* (another, different) and *agoreuein* (speaking openly, in the assembly, in the *agora*)’, Alberto Toscano demonstrates how allegory resonates with the idea of utopia where its ultimate iterations range from ‘speaking otherwise in public’ to ‘speaking in public about otherness.’⁶⁵ Thus, the unsettling nature of allegory derives from its pointing out the dialectical nature of totalizing, determining forces such as capital rather than offering any stable meaning or positionality, thereby opening a crack within the present.

Through its presence at the Expo site, Al Qadiri’s alien-like sculpture *Chimera* reflects the context that constitutes it — what lies beneath and beyond the spectacles of Gulf Futurism. Indeed, her connecting of pearl and oil imaginaries also offers a conception of historical continuity that grasps alternative possibilities within the present moment. For instance, through Al Qadiri’s work, one can recall how contemporary urban struggles build upon the long histories of

63 Donna J. Haraway, ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century’, in Haraway, *Simians, Cyborgs and Natures: The Re-Invention of Nature* (New York: Routledge, 1991), pp. 149–83. See also: Morehshin Allahyari and Daniel Rouke, *The 3D Additivist Manifesto*, 2015 <<https://additivism.org/manifesto>> [accessed 24 February 2021].

64 Fredric Jameson, *Marxism and Form: Twentieth-Century Dialectical Theories of Literature* (Princeton, NJ: Princeton University Press, 2017), p. 142.

65 Alberto Toscano, ‘Elsewhere and Otherwise: Introduction to a Symposium on Fredric Jameson’s “Allegory and Ideology”’, *Historical Materialism*, 29.1 (2021), pp. 113–22 (p. 118).

various waves of workers' mobilizations in the Gulf since the 1920s — spanning over time the diverse oil, pearl, and shipping industries — that have protested against racially segregated wage structures and housing.⁶⁶ Consequently, the artist simultaneously maps the black-boxed operations of capital, ranging from the extraction of oil to the fragmentation of the labour force, and generates an alternative narration that renders another collectivity and futurity possible.

CONCLUSION: REDUCTION AS EXPANSION

In my concluding remarks, I will briefly reflect on the idea of reduction as an expansion, which underlies some threads I have developed throughout the chapter. The first thread underscores the utopian potential of the allegorical nature of cognitive mapping. The seemingly reductive operation underlying the gesture of mapping becomes expansive since cognitive mapping expresses the incomplete, processual dynamics of totalizing systems, which is to say, of mediation itself. In this sense, a totalizing system such as capitalism never constitutes a full circle — a total capture. Here, the role of allegory is to demonstrate an inherent contradiction within a symbolic or aesthetic form, which reveals how the underlying structure (e.g., ideology) involves utopian and repressive tendencies at once. The efforts of cognitive mapping can take the shape of different methods and styles since it is as incomplete as the totalizing force that it tackles. In this respect, cognitive mapping becomes a struggle to reclaim the right to look, which simultaneously involves mapping the material reality and engendering a political collectivity that renders an alternative possible.

Cognitive mapping ultimately seeks to construct a global class consciousness that is not pre-given in the present moment. As discussed before, the increasingly complex and abstract, algorithmically mediated operations of global capital have only deepened the gap between the social order and its lived experience. Still, one can reaffirm Jameson's cognitive mapping at the very moment that it seems no

66 Alex Boodrookas and Arang Keshavarzian, 'Giving the Transnational a History: Gulf Cities Across Time and Space', in *The New Arab Urban: Gulf Cities of Wealth, Ambition, and Distress*, ed. by Harvey Molotch and Davide Ponzini (New York: New York University Press, 2019), pp. 35–57.

longer pertinent or viable. For Jameson, it is not despite but *because of their subsumption by the logic of the market* that cultural forms become a frontline of our struggles. They not only contest the extensive structures of capital and power but also express ‘the nature of social life, both as we live it now, and as we feel in our bones it rather ought to be lived.’⁶⁷

This point brings forth the other thread I want to highlight, which speaks to the aesthetic intervention the artist Monira Al Qadiri makes while working with computational media. Alongside a critical perspective on the tokenization of the post-oil futures in the region, she tackles complex historical and symbolic layers that constitute Gulf Futurism within an aesthetic form itself. Thus, she underscores the processual, expansive nature of signification and reclaims the medium of 3D rendering, which is often dominated by profit-driven spectacles of computational capital. Her spatial-temporal intervention claims a space for narrating the past and future of the Gulf that opens up alternative possibilities for post-oil futures in the present.

In this regard, the interpretation of Al Qadiri’s work, such as *Chimera* at the Expo 2020 Dubai site, necessitates a reflection on the dialectical nature of Gulf Futurism and its countervisuality, which can evolve into one of its own spectacles. Yet, as Jameson demonstrates, cultural forms embrace contradictory tendencies, which speak to inherent contradictions of the cultural politics of capitalism itself (discussed above at length). Therefore, the spatial-temporal situatedness of each display transforms the meaning and impact of the countervisual gestures. For instance, the act of recalling the shifting patterns of labour and trade in the Arabian Gulf through Al Qadiri’s *Chimera* cannot be isolated from the ongoing exploitation of the non-citizen workforce who have built spectacles such as the Expo site itself.⁶⁸

Thus, cognitive mapping ultimately deals with reclaiming the right to speculate and imagine otherwise, which is to say, it operates tempor-

67 Fredric Jameson, ‘Reification and Utopia in Mass Culture’, in *Signatures of the Visible*, pp. 9–34 (p. 34).

68 Isabel Debre and Malak Harb, ‘Expo 2020’s Workers Face Hardships despite Dubai’s Promises’, *Associated Press News*, 5 December 2021 <<https://apnews.com/article/coronavirus-pandemic-business-health-middle-east-africa-386c8ee45123e7bea212e14cc106adc2>> [accessed 4 June 2022].

ally as much as spatially. In this respect, as I have shown throughout the chapter, the black box becomes an allegory of computational capital and the Irreducible Other that contests and resists capitalism's extractive mechanisms. The ongoing struggles for enacting alternative futures beyond the reach of what is prescribed by Gulf Futurism always cut across material and imaginative realms — where artistic practice and its public interventions can play a constitutive role.

Özgün Eylül İçsen, 'Black Box Allegories of Gulf Futurism: The Irreducible Other of Computational Capital', in *The Case for Reduction*, ed. by Christoph F. E. Holzhey and Jakob Schillinger, *Cultural Inquiry*, 25 (Berlin: ICI Berlin Press, 2022), pp. 91–115 <https://doi.org/10.37050/ci-25_05>

REFERENCES

- 'Al Qadiri and Al-Maria on Gulf Futurism', *Dazed Digital*, 14 November 2012, <<https://www.dazeddigital.com/music/article/15037/1/alqadiri-al-maria-on-gulf-futurism>> [accessed 15 October 2020]
- Allahyari, Morehshin, and Daniel Rouke, *The 3D Additivist Manifesto*, 2015 <<https://additivism.org/manifesto>> [accessed 24 February 2021]
- Althusser, Louis, 'Ideology and Ideological State Apparatuses', in Althusser, *Lenin and Philosophy*, trans. by Ben Brewster (New York: Monthly Review Press, 1972), pp. 127–86
- Archer, Megan, 'Logistics as Rationality: Excavating the Coloniality of Contemporary Logistical Formations' (Doctoral Dissertation, University of Brighton, 2020) <https://cris.brighton.ac.uk/ws/portalfiles/portal/22372242/Archer_Thesis_2020.pdf> [accessed 16 March 2022]
- Avanessian, Armen, and Mahan Moalemi, eds, *Ethnofuturismen* (Berlin: Merve Verlag, 2018)
- Beller, Jonathan, *The Message is Murder: Substrates of Computational Capital* (London: Pluto Press, 2018) <<https://doi.org/10.2307/j.ctt1x07z9t>>
- Boodrookas, Alex, and Arang Keshavarzian, 'Giving the Transnational a History: Gulf Cities Across Time and Space', in *The New Arab Urban: Gulf Cities of Wealth, Ambition, and Distress*, ed. by Harvey Molotch and Davide Ponzini (New York: New York University Press, 2019), pp. 35–57 <<https://doi.org/10.18574/nyu/9781479880010.003.0002>>
- Bousquet, Antoine, *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity* (New York: Columbia University Press, 2009)
- Chua, Charmaine, 'Logistics', in *The Sage Handbook of Marxism*, ed. by Beverley Skeggs, Sara R. Farris, Alberto Toscano, and Svenja Bromberg, 3 vols (Los Angeles: Sage, 2022), III
- Chun, Wendy H. K., *Programmed Visions: Software and Memory* (Cambridge, MA: MIT Press, 2011) <<https://doi.org/10.7551/mitpress/9780262015424.001.0001>>
- Debre, Isabel, and Malak Harb, 'Expo 2020's Workers Face Hardships despite Dubai's Promises', *Associated Press News*, 5 December 2021 <<https://apnews.com/article/coronavirus-pandemic-business-health-middle-east-africa-386c8ee45123e7bea212e14cc106ad>> [accessed 4 June 2022]
- Easterling, Kelly, *Extrastatecraft: The Power of Infrastructure Space* (London: Verso, 2014)
- Eshun, Kodwo, 'Further Considerations of Afrofuturism', *CR: The New Centennial Review*, 3.2 (Summer 2003), pp. 287–302 <<https://doi.org/10.1353/ncr.2003.0021>>
- 'Expo 2020 Dubai unveils first permanent public artwork by Kuwaiti creative', *Arab News*, 4 July 2021 <<https://www.arabnews.com/node/1888116/lifestyle>> [accessed 17 May 2022]
- Franklin, Seb, *Digitality as Cultural Logic* (Cambridge, MA: MIT Press, 2015)
- Galison, Peter, 'The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision', *Critical Inquiry*, 21.1 (1994), pp. 228–66 <<https://doi.org/10.1086/448747>>

- Galloway, Alexander R., “Black Box, Black Bloc”: A Lecture Given at the New School in New York City on April 12, 2010’ <http://cultureandcommunication.org/galloway/pdf/Galloway_Black_Box_Black_Bloc.pdf> [accessed 13 March 2022]
- *The Interface Effect* (Cambridge: Polity Press, 2012)
- Gronlund, Melissa, ‘What Monira Al Qadiri’s Otherworldly Expo 2020 Dubai Sculpture Says about the UAE’, *The National*, 4 July 2021 <<https://www.thenationalnews.com/arts-culture/art/2021/07/04/what-monira-al-qadiris-otherworldly-expo-2020-dubai-sculpture-says-about-the-uae/>>
- Günel, Gökçe, *Spaceship in the Desert: Energy, Climate Change, and Urban Design in Abu Dhabi* (Durham, NC: Duke University Press, 2019) <<https://doi.org/10.1215/9781478002406>>
- Halligan, Neil, ‘Expo 2020 Dubai Records More than 24 Million Visits after Late Surge’, *The National*, 2 April 2022 <<https://www.thenationalnews.com/uae/expo-2020/2022/04/02/expo-2020-dubai-records-more-than-24-million-visits-after-late-surge-in-numbers/>> [accessed 17 May 2022]
- Halpern, Orit, *Beautiful Data: A History of Vision and Reason since 1945* (Durham, NC: Duke University Press, 2015) <<https://doi.org/10.1215/9780822376323>>
- Halpern, Orit, Robert Mitchell, and Bernard Dionysius Geoghegan, ‘The Smartness Mandate: Notes Toward a Critique’, *Grey Room*, 68 (2017), pp. 106–29 <https://doi.org/10.1162/GREY_a_00221>
- Hanieh, Adam, *Capitalism and Class in the Gulf Arab States* (New York: Palgrave MacMillan, 2011) <<https://doi.org/10.1057/9780230119604>>
- *Money, Markets, and Monarchies: The Gulf Cooperation Council and the Political Economy of the Contemporary Middle East* (Cambridge: Cambridge University Press, 2018) <<https://doi.org/10.1017/9781108614443>>
- Haraway, Donna J., ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century’, in Haraway, *Simians, Cyborgs and Natures: The Re-Invention of Nature* (New York: Routledge, 1991), pp. 149–83
- Harney, Stefano, and Fred Moten, *The Undercommons: Fugitive Planning and Black Study* (New York: Autonomedia, 2013)
- Hayles, Katherine, *Unthought: The Power of the Cognitive Non-Conscious* (Chicago: University of Chicago Press, 2017) <<https://doi.org/10.7208/chicago/9780226447919.001.0001>>
- Hilgers, Philipp von, ‘The History of the Black Box: The Clash of a Thing and Its Concept’, *Cultural Politics*, 7.1 (2011), pp. 41–58 <<https://doi.org/10.2752/175174311X12861940861707>>
- Hu, Tung-Hui, ‘Black Boxes and Green Lights: Media, Infrastructure, and the Future At Any Cost’, *English Language Notes*, 55.1–2 (Spring/Fall 2017), pp. 81–88 <<https://doi.org/10.1215/00138282-55.1-2.81>>
- İşcen, Özgün Eylül, ‘The Racial Politics of Smartness Urbanism: Dubai and Beirut as Two Sides of the Same Coin’, *Ethnic and Racial Studies*, 44.12 (2021), pp. 2282–2303 <<https://doi.org/10.1080/01419870.2021.1921233>>
- Jameson, Fredric, ‘Class and Allegory in Contemporary Mass Culture: Dog Day Afternoon as a Political Film’, in Jameson, *Signatures of the Visible* (New York: Routledge, 1992), pp. 35–54
- ‘Cognitive Mapping’, in *Marxism and the Interpretation of Culture*, ed. by Cary Nelson and Lawrence Grossberg (Champaign: University of Illinois Press, 1988), pp. 347–60
- *Marxism and Form: Twentieth-Century Dialectical Theories of Literature* (Princeton, NJ: Princeton University Press, 2017)
- ‘Political: National Allegory’, in Jameson, *Allegory and Ideology* (London: Verso, 2019), pp. 159–216

- *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991) <<https://doi.org/10.1215/9780822378419>>
- ‘Reification and Utopia in Mass Culture’, in Jameson, *Signatures of the Visible* (New York: Routledge, 1992), pp. 9–34
- Justo, Gemma, and Ghiwa Sayegh, ‘Whose Home Is It? The Workplace of Migrant Domestic Workers Under Kafala’, *Funambulist*, 19 February 2021 <<https://thefunambulist.net/magazine/spaces-of-labor/whose-home-is-it-the-workplace-of-migrant-domestic-workers-under-kafala>> [accessed 1 March 2022]
- Khalili, Laleh, *Sinews of War and Trade: Shipping and Capitalism in the Arabian Peninsula* (London: Verso, 2021)
- Latour, Bruno, *Pandora’s Hope: Essays on the Reality of Science Studies* (Cambridge, MA: Harvard University Press, 1999)
- Lynch, Kevin, *The Image of the City* (Cambridge, MA: MIT Press, 1960)
- Marx, Karl, *Capital: A Critique of Political Economy*, trans. by Ben Fowkes, 3 vols (London: Penguin, 1976), I
- Mezzadra, Sandro, and Brett Neilson, *The Politics of Operations: Excavating Contemporary Capitalism* (Durham, NC: Duke University Press, 2019) <<https://doi.org/10.1215/9781478003267>>
- Mirzoeff, Nicholas, *The Right to Look: A Counterhistory of Visuality* (Durham, NC: Duke University Press, 2011) <<https://doi.org/10.1215/9780822393726>>
- ‘Visualizing the Anthropocene’, *Public Culture*, 26.2 (2014), pp. 213–32 <<https://doi.org/10.1215/08992363-2392039>>
- Mitchell, Timothy, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2013)
- Noorizadeh, Bahar, ‘Weird-Futuring’, *Counter-N*, ed. by Özgün Eylül İçsen and Shintaro Miyazaki, 12 April 2022 <<https://doi.org/10.18452/24452>>
- Parikka, Jussi, ‘Counter-Futuring’, *Counter-N*, ed. by Özgün Eylül İçsen and Shintaro Miyazaki, 12 April 2022 <<https://doi.org/10.18452/24451>>
- ‘Middle East and Other Futurisms: Imaginary Temporalities in Contemporary Art and Visual Culture’, *Culture, Theory and Critique*, 59.1 (2018), pp. 40–58 <<https://doi.org/10.1080/14735784.2017.1410439>>
- Szeman, Imre, ‘Who’s Afraid of National Allegory? Jameson, Literary Criticism, Globalization’, *South Atlantic Quarterly*, 100.3 (2001), pp. 803–27 <<https://doi.org/10.1215/00382876-100-3-803>>
- Toscano, Alberto, ‘Elsewhere and Otherwise: Introduction to a Symposium on Fredric Jameson’s “Allegory and Ideology”’, *Historical Materialism*, 29.1 (2021), pp. 113–22 <<https://doi.org/10.1163/1569206X-29010101>>
- ‘Lineaments of the Logistical State’, *Viewpoint Magazine*, 4, 28 September 2014 <<https://viewpointmag.com/2014/09/28/lineaments-of-the-logistical-state/>> [accessed 28 May 2022]
- Tsing, Anna, *Friction: An Ethnography of Global Connection* (Princeton, NJ: Princeton University Press, 2004) <<https://doi.org/10.1515/9781400830596>>
- ‘Supply Chains and the Human Condition’, *Rethinking Marxism*, 21.2 (2009), pp. 148–76 <<https://doi.org/10.1080/08935690902743088>>
- Ziadah, Rafeef, ‘Circulating Power: Humanitarian Logistics, Militarism, and the United Arab Emirates’, *Antipode*, 51.5 (2019), pp. 1684–1702 <<https://doi.org/10.1111/anti.12547>>
- ‘Transport Infrastructure & Logistics in the Making of Dubai Inc.’, *International Journal of Urban and Regional Research*, 42.2 (2018), pp. 182–97 (p. 183) <<https://doi.org/10.1111/1468-2427.12570>>