# 1NC – NDT Round the Fifth – Dartmouth BC

## 1

### 1NC – Kritik

#### The advent of artificial intelligence has reshaped politics, the economy, and the functionality of the federal government itself. Dartmouth misidentifies modernity’s political milieu as sociotechnical, when it is instead technosocial—the social does not control the technical, but the other way around.

Terranova and Sundaram, 21—Professor of Cultural Studies and Digital Media at the University of Naples AND Professor at CSDS, Delhi (Tiziana and Ravi, “Colonial Infrastructures and Techno-social Networks,” e-flux #123, December 2021, dml) [non-underlined portions of this evidence reference sexual assault]

The techno-social hypothesis is thus premised on the idea that the social never possessed an intrinsic or preexisting reality, but rather what, with Michel Foucault, we might call a historical, that is a “transactional” one. Like sexuality, madness, or civil society, the social is real, although it has not always existed. It, too, was born “from the interplay of relations of power and everything which constantly eludes them at the interface … of governors and governed.” As a result of this history, the social assumed its three fundamental properties: a form of abstraction, the territory of government, and a conflictual political domain.

The social thus existed inasmuch as it was a fundamental part of modern Western European epistemologies and eventually also as part of its governmentalities. As a form of abstraction, it grounded the truth claims of the social sciences, which posited that it was possible to scientifically study human societies inasmuch as they presented quantitative and qualitative determinations. As part of what Denise Ferreira da Silva has called the power of the nomos, the social entailed a distinction between transparency and affectability, between the position of observers and observed. This epistemological function of the social (that is, its accounting for human social life as a distinct, measurable, and observable sphere of reality, endowed with its own patterns and regularities) was also indispensable to the other role that the social played. As Nikolas Rose put it, from the nineteenth to the mid-twentieth century, the social constituted the “territory of government,” that is, a “novel plane of territorialization [which] existed within, across, in tension with other spatializations (such as blood and territory; race and religion; town, region and nation).” At the same time, the social also had a third inflection, one that Raymond Williams defined as its “emphatic” one: one that explicitly opposed individual and especially individualist theories of societies. This is the social which, as Wendy Brown has put it, constitutes the foremost language and political domain “where subjections, abjections, and exclusions are lived, identified, protested and potentially rectified.”

Inasmuch as it constituted a nexus of power/knowledge/subjectivation which functioned within both liberal and socialist governmentalities, the social was said to have come to its end in the late 1970s when a new political rationality—neoliberalism—displaced it with the more narrow notion of “community.” For postmodern philosophers such as Jean Baudrillard, the end of the social coincided with the rise of media, information, and capital coming together through the figure of the network. The circulatory logic of the Los Angeles highway system was Baudrillard’s favorite image for the end of the social in a space defined by circulation.

The end of the social, however, was far from a smooth implosion. It was a catastrophic one, involving not only the fall of socialist governments in the so-called Eastern bloc, but also the decomposition of social infrastructures, which entailed its own racialized death toll. Consider for example the centrality of the California highway system in two of Afrofuturist author Octavia Butler’s best-known novels, The Parable of the Sower and The Parable of the Talents. Written in the late 1990s and set in the 2020s/2030s, the novels can be read as a speculative depiction of the apocalypse unleashed by the end of the social as a territory of government in the last decades of the twentieth century. Butler narrates a near future world in which the breakdown of the United States government, caused by simultaneous economic, environmental, and epidemiological crises, has rendered large swathes of the population homeless. People are uprooted from their communities, pushed into nomadism, and exposed to the constant threat of the dehumanizing violence of rape, indentured servitude, and technologically enforced enslavement (as in the “shock collars” that control the newly enslaved). The protagonist Lauren Olamina attempts to compensate for the end of the social by founding a small rural community around her new belief system, Earthseed. Her effort fails. Only by constructing a planetary social network does she eventually succeed in catalyzing a movement big enough to realize her vision of an alien humanity taking roots in outer space.

The techno-social is the form of the social that comes after its end. It is neither a virtual nor a global digital community, but a component of the milieu generated by a new technical being—the digital computational network. It was triggered not so much by social media, as first assumed, but by the turn whereby social computing no longer simply supported social interaction but started “to process the content generated by social interaction,” making its results “usable not just by users but by the digital systems that supported their activities.”

The techno-social thus entangles the three properties of the modern social (abstraction, the spatial plane of government, and the conflictual domain) and the two properties of the network (scientific image and technical medium).

The techno-social manifests a new mode of knowing the social as defined by the rise of data science and social analytics in relation to the older epistemic privilege of academic sociology. The digitization of the social as an object of knowledge, tending towards what Patricia Ticineto Clough et al. have called the datalogical, has been intensified by the mass adoption of digital communication and the re-modulation of the latter by the internet industry through investment in the development and implementation of social interfaces, algorithms, and protocols. As an image or model, the techno-social manifests new sociogenic modes of individuation—recursively regenerating modern social categories such as gender, race, class, sexuality, disability, ethnicity, and so on out of the circulation of flows of information which are recorded through the mediation of social ontologies coded as metadata. For example, critical race studies of technologies have argued for the ways in which racial categories inform and inflect various forms of algorithmic social categorization (from facial recognition to police databases to search engines). The techno-social is thus the condition for the emergence of machine learning as a form of “soft thought”; the re-programmability of algorithmic instructions necessitates an infinite or entropic amount of data, or social quantities that have been recorded and stored by means of digital technologies. As a result, gender, raciality, ethnicity, class, and ability as epistemological abstractions emerge as performative acts of more-than-human techno-social assemblages.

The techno-social also displays the characteristics of a milieu or medium, which should not be confused with the modern notion of media as distinct devices or technologies for recording, transmitting, and storing information (as in record players, film, typewriters, desktop computers, gaming consoles, and so on). Indeed, the techno-social turns modern media, in Kittler’s sense of the word, into components of the techno-social as medium or milieu. This milieu describes a space of circulation with no simple circularity, a space that poses the problem of the indeterminate and uncertain series (of mobile elements, accumulating units, and events) which complicates the question of causality (how and when causes become effects and vice versa) and the task of accounting for the nonlinear relation between causes and effects generated by and around individuals, groups, and populations. The techno-social as medium is thus characterized by an intensification of circulations whose heterogeneity is no longer disciplined by the divisions of the past, as Ravi Sundaram’s studies of the post-postcolonial city clearly show. It is a milieu which, as Tony Sampson and Jussi Parikka have recently suggested in the wake of the Covid-19 pandemic, makes “universal virality … a techno-social condition of proximity and distance, accident and security, communication and communication breakdown.”

Finally, the techno-social constitutes a new conflictual political milieu that operates as the double or shadow of digital governmentalities that have been designed and engineered to faithfully replicate the modern imperative of economic growth and social stability—imperatives that are shared by its two dominant versions, post-socialism and neoliberalism. The techno-social as an “agile infrastructure of possibility,” as Sundaram calls it, has become visible in the various waves of twenty-first century political movements—each one of them calling for the abolition of a specific aspect of modern epistemologies and techniques of power, while also problematizing the territorial affiliation of the modern social: the end of financial capital (Occupy); the downfall of corrupt and violent regimes (the Arab revolts of 2011); the abolition of racist policing and structures (Black Lives Matter); the refusal of post-socialist authoritarianism (Hong Kong); the end of femicide (Ni Una Menos); the rejection of austerity (Gilets Jaunes), and economic inequality (Chile), amongst others. Shadow networks, however, have also emerged, fostering paranoid affects, such as those involving ethnic killings (India), white supremacy, misogynist and far-right extremism (alt-right, gamergate), and, during the current pandemic, movements against masking, vaccination, and lockdowns.

Ravi Sundaram’s Response

Tiziana Terranova’s essay uses the historical interfaces between calculation and sovereign power to set up the forcefields of the Western social: transparency and affectability, observers/observed, human life as distinctly measurable in the larger context of the displacements of the world. The calculative infrastructures of government were paralleled by the governmentalization of the state, itself a product of the epistemological function of the social. Expanded onto a world stage, this transactional field can also bring in technologies of violence and extraction, a specific form of colonial governmentality driven by racial and ethnological technics—which loops back into the metropole, unleashing longer temporalities of knowledge.

As Terranova shows, the techno-social recursively regenerates modern enumerative categories of the human sciences (class, gender, race), which are now reprogrammed in contemporary data ontologies through surveillance and associational technologies. Just as the human sciences of the eighteenth and nineteenth centuries made possible the governmental management of populations, the contemporary datalogical turn is generative of the techno-social. “Soft thought” in the context of machine thinking becomes both the precondition and affordance of post-human performative assemblages as the now-encoded social categories take new directions. This recursion between the techno-social and the historic social, between histories of violence and the data ontologies of the contemporary—these clusters propel the storm of ideas that Terranova’s essay has stirred up.

Tiziana’s categorical insistence on the singular mode of the techno-social (as the enmeshing of the technological and the social) provides a connection to my own argument about the blurring of the medial and the social in the postcolonial world. The comparable trajectories of this shift are remarkable: “the end of the social” and neoliberalism in the West, globalization/mediatization in the postcolonial world. In the postcolonial world, the older partitions of politics/welfare/social became unsustainable as new forms of circulation undermined the previous designs of sovereign power. What emerged was a productive, wilder milieu of the contemporary, and the techno-social in Tiziana’s sense of the term. As Tiziana shows, the milieu/medium is central to the expansive ecology of the techno-social and is a multiplication engine of new modes of circulation. Even as partitions emerge between users and platforms, the milieu and capitalist power, the circulatory quality of the techno-social-as-medium constantly sets up the conditions of both instability and association. Never has this been clearer than during the Covid-19 pandemic.

The pandemic presents us with a remarkable diagnostic of the techno-social. While crisis is inherent in the temporality of the techno-social (Chun), the pandemic has accelerated all antinomies of the system: unprecedented platform power and collective responses to medical crisis; the crisis of neoliberal austerity and unapparelled monetary intervention by Western regimes; racial violence and global countermovements; the normalization of surveillance technologies with biomedical interventions and constantly shifting boundaries of the “normal”; the proliferation of hate speech and an extraordinary investment in scientific authority. To be sure, as Michel Foucault once suggested, pandemic time is always exceptional: boundaries between anatomo-politics and biopolitics are blurred; restrictions are placed on certain transmissions (circulating bodies); periodic biomedical interventions are normalized and accepted in order to preserve life. The coming years will show us if the present pandemic time can radicalize the third, collective dimension of the techno-social, or rather alternate between the paranoid states of speculative expansion and terror that have defined the previous two decades.

Ravi Sundaram

In 1858, a British official in colonial Bengal named William Herschel asked Rajyadhar Konai, a local contractor, to imprint his inked hand on a contract that had already been signed. After years of experimenting with handprints, Herschel sent copies of Konai’s fingerprints to London for Francis Galton, a eugenicist and cousin of Charles Darwin. Galton went on to argue that fingerprints were an accurate marker of identity and racial difference. In their Untold Intimacy of Digits (2011), the Raqs Media Collective used the handprint in the Galton archive to produce an animated video on a blue background. In the video, the still image of Herschel’s original handprint record was given motion. The thumb and the fingers begin to move, suggestive of hand counting or even a secret code. Herschel’s early biometric colonial experiments intimated colonial pathologies, as he and his counterparts strained to make colonial subjects into signs of representation legible to European rulers. In his Mimesis and Alterity, Michael Taussig described Herschel’s early system as one comprised of contradictions and collusions of “mimesis and alterity.” This system was conditioned by a colonial administration dependent on writing and signatures in a largely illiterate colonial society; administrators’ fear of massive fraud by means of false signatures; British administrators unable to discern unique facial and other identifying qualities among the masses of their Indian subjects (“they all look the same”); and last but far from least, the decisive ingredient in the discovery of fingerprinting, the use of the hand and thumb as a type of modernizing sorcery by the colonial bureaucracy.

Despite the fingerprint’s mimetic quality as a seeming signature of the body, the main challenge was elsewhere. Galton struggled unsuccessfully for years to come up with a mathematical method of classifying fingerprints. In fact, it was once again in colonial Bengal that Edward Henry, along with Azizul Haque and Hem Chandra Bose, developed a mathematical method for the classification of fingerprints, which was exported to South Africa and later to metropolitan Europe. Untold Intimacy of Digits referenced the phantom limb of Konai, as indeed the classification system for fingerprints developed in colonial Bengal successfully separated bodies from a number-based system of classification. Allan Sekula once wrote that the central innovation of nineteenth-century police photography was not the camera but the filing cabinet. The fingerprint cabinet Henry pioneered in Bengal closely paralleled the Bertillon system in Europe. Under colonialism, the “bureaucratic-statistical” police regime efficiently reduced the body to a number for retrieval.

Fingerprinting emerged during a time of multiple colonial technologies aimed at developing knowledges of the colonized. The colonial laboratory was the site of statistical techniques, periodic census surveys, and the introduction of photography into carceral regimes. Prominent technologies included the racially coded ethnological surveys developed by Herbert Risley, and an ambitious anthropometric rollout to develop knowledge of the colonized populations. Risley’s race technology was an assemblage of mechanical instruments, mathematical techniques, and paper infrastructures. Anthropometry faded away in later years, but the fingerprint-linked biometric regime has remained, becoming even more widespread in the contemporary era. As Keith Breckenridge has argued, mathematical implication, statistical inference, and probability theories were a central part of biometrics, albeit fashioned within a larger map of racial difference and colonial rule. What Breckenridge calls “biometric government” implemented technologies that shaped the colonial social: notably the efforts to bind subject populations to the sanctity of the contract, and the surveillance of criminalized social groups and individuals. The tensions and overlap between the individuating techniques of the contract and the group logic of (racial) technologies was of course not unique to colonial biometric regimes.

In his final lecture in the Collège de France series, titled “Society Must Be Defended,” Michel Foucault spoke about how a set of political technologies called “biopower” initiated a collection of seamless medical and social technologies to optimize life and secure it. Biopower legitimizes periodic state interventions within populations to preserve the larger social body. This shift, which Foucault termed a subversion, was an infiltration of the earlier modes of sovereign power: “The right of sovereignty was the right to take life or let live. And then this new right is established: the right to make live and to let die.” There was a shift from the disciplinary techniques focused on the individual body and its spatial partitions (anatomopolitics), to a model of multiplicity: “So after a first seizure of power over the body in an individualizing mode, we have a second seizure of power that is not individualizing but, if you like, massifying, that is directed not at man-as-body but at man-as-species.” As catastrophic pandemic events generally gave way to the endemic, new techniques to optimize the human body were developed: statistical forecasts, enumeration, and natal technologies. These distinctions between biopolitics and disciplinary regimes in the West become blurred in a global regime of colonial difference marked by the circulations of war-making, captive bodies, and commodities. Slaves and bonded workers were transported from colonial possessions to plantation economies; enumerative technologies and frameworks of biometric government moved with these circulatory patterns, as did statistical knowledges and racial and ethnological schemes. This global circulatory network was spatially uneven, as colonial administrators in different regions sought to balance ideas of European political liberalism in despotic colonial systems.

The return of colonial biometrics to the global security regime after September 11 frames the vast expansions of biopolitical technologies in the twenty-first century. One of the features of contemporary platform capitalism has been the way it recalls and transcends colonial biometrics while radically expanding affective landscapes without limit. This was part of the extractive and dynamic colonial surplus, where long-term circulatory patterns unleashed potentials that continue today. Today, circulation as such emerges as a problematic, rather than the individual/collective bodies of the population. A key stress point is between infrastructures of measurement and the transient, affective networks now widespread under platform capitalism. The connections between infrastructures of measure and infrastructures of public affect have never been as contiguous and constitutive as in the post-pandemic moment. At the same time, they take on a particular dynamic in the Global South.

More than four decades ago, Jean Baudrillard published his sharp, almost polemical collection In the Shadow of the Silent Majorities, Or, the End of the Social (1978). In it he addressed two major sites of twentieth-century modernity: the social and the mass. The social, Baudrillard argued, revolved around “that opaque but equally translucent reality, that nothingness: the masses.” The masses had an “inertial strength,” that absorb the “electricity of the social and neutralize it forever.” Lacking an empirical reference but produced through the survey, the masses act as a shadow majority, opaque, formless, dispersing meaning even while positioned as the constant addressee of political and commercial projects. In the event, there is a proliferation of representational techniques, rendering them ineffective, “burying the social beneath a simulation of the social.” As Baudrillard argued elsewhere, this could be called the “evil genius” of the masses, producing the failure of the social and representation, dispersing into networks and simulations.

In two senses this argument turned the “social question” of the European twentieth century on its head. Propelled by information and media networks, the strategies of formlessness, opacity, and disappearance implode the historic social. The end-of-the-social argument could be a 1970s update of a larger strain in European twentieth-century critical theory. In their 1944 Dialectic of Enlightenment, Theodor Adorno and Max Horkheimer suggested that industrial media played a key role in homogenizing diverse populations into consumers. In their now-familiar argument, mass culture produced docile subjects, framed by false needs created by media corporations. The larger implication of the culture industry thesis was that the earlier street crowd had been significantly reassembled by media infrastructures. As in all his essays, Baudrillard had a point even in his errors. While the “new masses” of platform capitalism do certainly disperse old techniques of the social, the widespread transformations of digital networks require new perspectives on the techno-social, as Tiziana Terranova argues in this dialogue.

The vast explosion of global internet culture after low-cost mobile phones has shifted the terms of the debate from earlier generations of Western critical and post-critical theorists. Across the global South, there is a vast churning of media-enabled populations. Even as media platforms have expanded, the techno-political aesthetic has been reprogrammed recursively. What is remarkable about this reconfiguration is the referencing of older enumerative technologies of colonial rule, even when anticipation becomes the principle of the political. Feedback now becomes a key principle of politics; instability and contingency are the drivers of the performance of power. The distinctions that Foucault made between pandemic and endemic strategies of power become increasingly blurred as platform temporality has reconfigured the timescale of the political.

The normalization of a crisis temporality (which the pandemic has made prominent) is expressive of two overlapping milieus. The first milieu was the wild, informalized pirate-video era of the 1990s and the early 2000s. Pirate video in the South was an unstable media object, with a capacity for connection and association across a broad range of phenomena. Video was also a multiplication machine, attaching itself to mediatized public theaters. This atmosphere of multiplication clearly anticipated the current digital platform economy, where the sensational live-time effect of pirate video has been normalized into a larger complex of network circulation. Today, the atmospherics of network culture generate a somatic collectivity in public events, and also quite rapidly fragment into other formations. It is this collectivity that has energized the populist political aesthetic in the last decade. The second milieu is the rapid expansion of platform capitalism and social networks in the South from 2008 onwards, dynamized by mobile phone proliferation. This laid the ground for networks of affective measure driven by media platforms and governmental enumeration technologies, including biometric systems. While platforms have pushed anticipatory and “feed-forward” modes of calculation, governmental enumeration seeks to connect populations to security, welfare, and financial networks. Both the affective and governmental transact on a daily basis; the relationship is productive and parasitic. This is a remarkable remodulation of colonial and postcolonial arrangements. As discussed earlier, colonial enumeration technologies were a careful orchestration of disciplinary technologies of policing, contract enforcement, racial superiority, and global circulation. In the postcolonial period, in India at least, the social and cultural spheres were separated: while the social was expressive of politics and welfare, culture was managed by regulation and control. These careful partitions exploded in the video era of the 1990s, when informal networks of circulation bypassed control mechanisms of censorship and copyright.

In contemporary right-wing nationalist regimes like India, governmental enumeration has introduced stringent technical checkpoints even as it has created new spheres of value. The older enumerative infrastructures were defined by a productive ambiguity that served both rulers and the enumerated. For example, paper systems were generative of multiple writing strategies and permeable boundaries. Populations could have an electricity bill and not a legal home, no legal identity but access to welfare regimes via a ration card. The move to digital enumeration has generated a range of political technologies to stabilize informal populations: biometric identification cards, direct cash transfers, phone-based code verification. In line with neoliberal audit models that distrust porosity, what has emerged is the primacy of participation in governmental digital infrastructures. In effect, older welfare systems have been substantially disturbed, with disastrous consequences for millions—as has been visible during the pandemic. Conceived as an always-on model of optimization, governmental information infrastructures make network connections a condition of public support for the working poor. In terms of information design fantasies, populations become capacities, as data streams are harnessed for future projects of government.

#### The plan is a smokescreen that enables the technosocial takeover of the political.

Benthall and Goldenfein, 21—New York University School of Law AND Melbourne Law School (Sebastian and Jake, “Artificial Intelligence and the Purpose of Social Systems,” AIES ’21, May 19–21, 2021, dml)

The law and ethics of Western democratic states have their basis in liberalism, and this extends to legal regulation and ethical discussion of technology and businesses doing data processing. Liberalism relies on the privacy and autonomy of individuals, their ordering through a public market, and, more recently, a measure of equality guaranteed by the state. We argue that these forms of regulation and ethical analysis are largely incompatible with the techno-political and techno-economic dimensions of artificial intelligence. Over the course of the twentieth century, computer science, cognitive psychology, operations research, management science, statistics and other fields, have converged on a science of agency. This science explains and enables the supremacy of corporate actors with artificial intelligence capabilities over individual humans that often lack the capacity to know and defend their own interests. Regulatory solutions that seek to reinforce liberal patterns of individual privacy and public markets have enabled the data economy, which is different from anything imagined in liberal legal theory, to develop further along this trajectory. For instance, platforms have inverted the relationship between individuals and the market, making the former public and the latter private.

We see this disconnect between liberalism as a basis for ethical reasoning in Western legal systems and artificial intelligence in fact as the source of anxiety around the power of large technology companies. Artificial intelligence’s challenge to ethics is its challenge to liberal political theory. In Section 1, we trace liberalism’s approaches to rendering technology ethical through privacy laws, regulation of the public market, and pursuit of “fairness in AI”. In our analysis, these liberal interventions have not entirely succeeded. Rather, the data economy and artificial intelligence have transcended legal imagination. More recent scientific advances, especially those connected to the theory of the firm, have revealed liberalism’s blind spots.

In Section 2, we consider artificial intelligence for itself. The term “artificial intelligence” is imprecise. Originating in a highly influential workshop at Dartmouth College in 1956, it can now mean variously a research field within computer science, a class of technologies, or kind of product or service. Generally the term is used to designate the cutting edge of what is possible using computing technology; this is captured in the quip or joke known as Tesler’s Theorem: “AI is whatever hasn’t been done yet.” Originally, the research questions around artificial intelligence centered on the question of whether a machine could think like a human being [104]. This question of psychological verisimilitude has since given way to the question of how to use computing technology to perform complex information processing tasks, such as image classification, language translation, and transcription of text into speech, at increasing scale, through statistical and optimization techniques known as machine learning. Academic research communities still develop “artificial intelligence” in ways that are decontextualized from industrial processes. However, as the term has come to be used to refer more and more to commercial products and services, it must be understood to denote a much more complex system of user interfaces, business to business exchanges of data and computing services, and contracted, sometimes invisible, labor [48].

Early founders of the field of artificial intelligence such as Herbert Simon [87] understood that the “sciences of the artificial” were a combined science of computing machines, information systems broadly construed, and organizational management. This scientific paradigm has led to profound social shifts. These include the reconceptualization of the individual human in terms of information processing operations that can be compared to those of a machine. In the commercial context, many of the operations typically attributed to the entrepreneur (such as search and forecasting) have now been automated, making the firm more subject to absentee ownership. Artificial intelligence has enabled frictionless, “smart”, data-driven, and privately owned alternatives to the public price mechanism via the platform as an economic formation. When individual humans can be compared directly, as agents, with larger socio-technical organizations such as firms, the fact that rationality is bounded, and differently bounded, is a fundamental inequality that flouts any egalitarian principle. These scientific facts and economic realities have upended liberal assumptions. An applicable, actionable normative theory must build on the theory of artificial intelligence, not be blind to it.

In Section 3, we explore one way to emerge from this crisis. Atomized individuals will not be able to guarantee their interests and freedoms within the privately controlled superordinate agencies of platforms that treat them as “users”. Instead, ethical AI must enable collective agency through new data and sociotechnical infrastructure designed for different purposes. We look to the scientific paradigms of systems theory, such as the social theory of Niklas Luhmann, and the technical discipline of artificial life as foundations for this new line of inquiry. If liberalism is limited to the understanding of society divided into public and private spheres, artificial intelligence ethics requires an understanding of society composed of multiple, intersecting social systems with diverse purposes [71].

We review several past and proposed data intermediaries that are examples of social systems in this sense. These systems are designed for various purposes: greater individual control of data, outsourced policing and enforcement of individual rights, better governance of information flows, and the remission of value to consumers, are just a few. The vast majority of data intermediaries fail. We distinguish between those intermediaries designed according to liberal ideas, and those that instead are aimed at collective purposes.

We come to the conclusion that an artificial intelligence will be as ethical as the purpose of the social system that operates it. Hence, an AI that is operated by an absentee-owned corporation that treats individual users as means, not ends, will never be ethical. Rather, the law and ethics of AI must imagine new forms of sociotechnical collectives that use “smart” technologies to further the purposes of individuals as members. Ethical AI is artificial intelligence used for self-governance, the coordination of authentic collective attention and action, and sustainable life.

1 LIBERALISM AND THE DIGITAL

This section describes certain juridical features of liberal political theory that condition existing strategies for regulating artificial intelligence practices and business models. These include, first, an individual person, fashioned as morally autonomous [103] and self-determining [96], that is endowed with sufficient rationality to exercise their rights freely and effectively. Second, the privileging of individual autonomy conditioned by both privacy (as a zone of freedom from state coercion and other private parties) [38] and the capacity to possess and alienate private property [72]. In certain Lockean liberal traditions, because the individual is self-possessing, the capacity to alienate private property extends to the capacity to alienate oneself both in labor and in image [34]. Third, this equal [112], universal, and autonomous subject is capable of transacting and exchanging its rights with other equals through a free public market [53]. Finally, and most recently, some branches of liberal theory have taken on egalitarianism as a core principle [5, 76].

Liberalism imagines a society of individuals. These individuals are endowed with moral rationality and autonomy. They coordinate by means of the market, a public system of exchanges of what is otherwise private—private property. Liberally premised law and ethics governing artificial intelligence therefore aim for privacy and data protection to preserve individual autonomy, better markets to preserve data as private property, and interventions on machine learnt models to ensure egalitarian fairness. We examine how these liberal interventions into artificial intelligence applications have fared in practice and find that they are failing because they unfold on a political and theoretical terrain that has been superseded by artificial intelligence itself.

1.1 The individual subject and its autonomy through privacy and property

Liberal law presumes an individual that is an independent center of consciousness with agency and the capacity to be held responsible for action. External direction or imposition as to what the true interests of the individual might, or ought to, be is thus an improper interference with both dignity and autonomy. The individual is the cornerstone of liberal moral reasoning. The freedom to choose is paramount, and the capacity to choose is expressed, on one hand, through the possession of rights and freedom to contract, and on the other, by the capacity to author one’s own identity. Private property is the name given to the material part of the protected individual domain [53], the power of which is expressed in the legal capacity to enforce those property rights against the world at large. In liberalism, “privacy” protects the immaterial dimensions of the individual domain against both the state—as a solution to preserving individual freedom while simultaneously legitimating sovereign power (i.e. the rule of law)—and against private actors.

Where to draw the line between the legitimate and illegitimate domain of the state (i.e. the extent of privacy and the comprehensiveness or limits of private property rights), and on what ethical or moral premise, are both debated. However, all shades of liberal thought rationalize the non-state-governed dimensions of life into rights, especially property rights, ordered by private law. Through property rights, it becomes possible to govern groups of individuals that do not share similar goals, purposes, or notions of the good.

In the digital economy, the individual domain is primarily protected through privacy and data protection laws. Both “dignitarian” (including ideas around subject self-creation, see [30, 31]) and “control” (or “liberty” [114]) based justifications for privacy can be understood as defending a sphere of individual autonomy from illegitimate interference. Governing the movement and processing of data through regulations premised on individual economic "control" [113] typically relies on “notice and consent” to define the parameters of legitimate action. That is, autonomy is protected because individuals as “data subjects” consent to the collection and processing of their personal information. The notice and consent paradigm is widely acknowledged to be a failure [9]. However it remains dominant in existing and emerging data protection legislation. Dignitarian approaches in privacy typically define elements of selfhood as non-trafficable, making the exercise of data protection and privacy rights an act of self-authorship. Deriving from Kantian ideals in European constitutional protections of “personality” [63], ideas like “informational self-determination”1 and “information sovereignty” have become central to European data protection law. Control over data is thus a means of self-presentation and selfauthorship. Rather than contractual economic exchange of data for a digital service, dignitarian rationales enable the individual to define how their identity is represented in databases controlled by external entities like states and companies. Although European data protection law does not rely on consent as the exclusive mechanism for legitimate data processing, consent and individual control over data (in the form of “data subject rights” that enable access, rectification and erasure of data, as well as the contestation of profiles) remain the primary instruments for regulating online behavioural advertising. Indeed, one focus of the European Data Protection Regulation (GDPR), likely the strictest data protection regulation globally, was to upgrade consent requirements to “meaningful consent”. This manifests as endless “popups” performing transparency about the movement and processing of personal data. In the world of behavioural advertising and the digital economy more broadly, the dignitarian protections of the European General Data Protection Regulation (GDPR) are thus reconcilable with the more individual economic “control” oriented governance of the movement and processing of data in more property-oriented liberal jurisdictions. Whatever its philosophical or political foundation, this form of individual control over personal data, either as an economic resource or elements of personality [110], presents little barrier to the extraction and monetization of personal data through the generation and trading of inferences and insights, which typically elude data protection regulation [55].

In the AI informed digital economy, however, data is better understood as a means of governance—not simply a commodity or resource [19, 73]. In other words, data is meaningful because, like an electrical charge, it flows in a circuit from and then back to the individual, establishing a dynamic, ongoing relationship. Between its beginning and end, the data flows between unaccountable intermediaries, each extracting value from the control system. Data becomes a tool for governing others through its capacity to be refined into predictive products that, in this digital economy, are used to steer consumer behaviour. The liberal representational account of data as static and transactional attaches awkwardly to the reality of data, co-generated by individuals through platform interactions, and channeled to and from networked actors on the other side of the platform who use it in real-time. Data is also no longer merely personal because it inevitably reveals information about multiple individuals [10, 37, 73, 110], and has value mainly through its aggregation into audiences and consumer segments. Because social information derived from data does not pertain directly to an individual, it becomes an externality in the liberal market conception [54], and beyond the scope of liberal regulation. As we discuss below, a more engaged form of regulation would move on from individual control over the inputs of those aggregated data products to the establishment of autonomy, agency, or control over the outputs of data processing [37]. Individual control over data does not translate into individual control over the governing power of data. In other words, self-authorship does not translate to self-governance in the digital world.

1.2 A free public market?

Although some enthusiastically distinguish between liberalism and neoliberalism, or classical liberalism and social liberalism, or liberalism and libertarianism [41], the different governing forms embodying these political theories only shift the degree of freedom or autonomy guaranteed from the state (or alternatively the scope of limited government), and what elements of life are placed in market domains [53]. While their social consequences clearly vary, they share certain key organizational ideas. Indeed, for Hayek, the essence of liberalism is a self-generating or spontaneous ordering in social affairs. The spontaneous order takes the form of unregulated or free markets that are the inverse of a coordinated or planned ordering that is the realm of democratic governance. Noting that few markets are actually free or unregulated, the complex forms of governance that have developed through the 20th and early 21st century have still enhanced the role of markets in coordinating social life through legal tools that instantiate and then protect those markets from democratic intervention [23, 89].

Liberal scholars, originating with Laudon [65], have proposed that it would be beneficial to organize the digital distribution of personal data directly using public markets. This proposal has faced many practical and theoretical challenges. A primary difficulty of instituting personal data markets is the creation of a viable property right to personal data. Data is naturally non-rivalrous and easy to copy; a data market would need to establish its alienability, rivalry, and excludability somehow [90]. While it is possible to imagine something akin to an intellectual property right to personal data, such a regime would be inadequate because of the intrinsic relationship between personal data and privacy, which is also valued by liberalism. Some argue that whereas intellectual property is alienable, privacy is not (or ought not be); ergo, intellectual property rights in personal data would lead to a contradiction within liberal legal theory [79], at least in its dignitarian formulations. Others have advocated for treating personal data creation as a form of labor, which would then be sold on a market [7, 64]. Perhaps labor is justly alienable from the laborer, and perhaps not—either way, this recommendation still runs into the well-known objections to data markets.

A further critique of data markets and the corollary of formalized property rights in data (as well as the idea of data as labor), is that this seems unlikely to alter the political economy of data processing [109]. Property rights will not disturb the dynamics of a regulatory system that already treats data as a pseudo-commodity, protected by trade secrets, technical infrastructures, and contracts that enable the enclosure and primitive accumulation of data by platforms [32]. Platforms are more like firms than markets, while at the same time superseding the liberal imagination of the firm.

Economics perennially debates the nature of the firm. Marshall, in his Principles of Economics (1890), noted organization as a fourth “factor of production”, along with land, labor, and capital. Coase (1937/1995) would later famously argue that the purpose of the firm is to allow the entrepreneur to purchase factors of production without the “costs of using the price mechanism”, which include the costs of discovering prices, negotiating, and managing risks. Coase’s transaction cost economics also suggests the existence of a type of organizational rationality governing firm decision making, rather than the firm existing as merely an aggregation of individual agents seeking to maximize their own self interest as they conduct organizational business [119]. That is, the firm has its own organizational utility of profitability, which may not always translate into the interests of the firm’s members. And while certain economists have proposed to define corporate firms, for instance, as a nexus of contracts [22], the firm maintains a hierarchy which distributes information and power unequally amongst those individuals. Williamson [115] has elaborated transaction cost economics to account for the specific conditions—such as asset specificity, environmental uncertainty, and the threat of opportunism—under which it is inefficient for the firm to use the market rather than develop resources under its hierarchical control. These conditions are pervasive in the digital economy, in which personal data and artificial intelligence technologies are specific assets for managing uncertainty. Now firms commonly offer ex ante “free” services that bind users into contracts with unknown ex post costs [58]. The employees of these firms are similarly bound by nondisclosure agreements into privately ordered arrangements in which their ability to act as public citizens is limited. Corporate organizations should not be thought of as collectives in a meaningful sense—they are their own artificial entities.

In this framing, the firm and the entrepreneur are interchangeable, while employees are simply factors of production coordinated and bound by contracts into a production function. The entrepreneur constructs the firm out of contracts to reduce the costs of search, negotiation, and forecasting as well as their exposure to risk. However, in the mid-20th century scientists began mastering and automating these tasks of managing information costs. The entrepreneur, or fourth factor of production of “organization”, became a kind of technology: artificial intelligence. The firm as platform uses its artificial intelligence to automate and coordinate, in service of its entrepreneurial profit-goal, its internal activities as well as those of its external users. Through automation and experimentation at scale, the firm as platform manipulates the visibility, rankings, and prices of their users’ relations and transactions with each other. As these deviations from ideal market conditions become more apparent and egregious, regulators have sharpened another regulatory tool intended to preserve the competitiveness of markets—competition and antitrust law.

Liberalism requires of its entrepreneurs a modicum of fair play to maintain the benefits of competition. Regulators worldwide have responded with redoubled interest in antitrust law enforcement (i.e. with US regulator activity against Google and Facebook), legislative reforms targeting, ex-ante, platforms’ abuse of market dominance (i.e with the EU Digital Services Act package), and new rules addressing transparency and financial flows between platforms and content industries (i.e. with the Australian competition regulator’s Treasury Laws Amendment (News Media and Digital Platforms Mandatory Bargaining Code) Bill 2020 (Cth)). Disciplining the anti-competitive practices of firms represents another liberal regulatory approach premised on the belief that healthy market competition generates better outcomes for consumers. Research has clearly demonstrated the various ways platforms abuse their dominant market positions across all sectors of the digital economy [91, 92]. Without closely scrutinizing these regulatory efforts here, we agree with Pistor [73] that it matters little to a data subject whether a monopoly incumbent or a startup is collecting and processing data because “a consumer who is the target of data’s predictive power does not necessarily benefit from greater competition among data controllers”. Ultimately, such interventions designed around the logic of liberal public markets have limited efficacy because they have not taken into account how platform environments have superseded both firms and markets as the primary form of economic organization in the digital economy [32]. Rahman [75] and others have proposed more radical interventions in the form of public utility-type regulations for platforms to improve transparency, neutrality, and rate-setting. But short of options achieving pseudo-socialization, these are unlikely to constrain business models or reduce abusive data practices because they continue to rely on markets mechanisms to coordinate service provision through a profit incentive. Without updated understandings of the way data, firms, users, and “markets” function in the digital economy, these approaches fail to tackle incentives to treat user data as a raw economic resource, or limit the exploitation of information flows through the infrastructures that platforms control [15].

#### Completion of the technosocial causes extinction and makes ethics impossible.

Emmelhainz, 21—independent researcher and writer who has lectured and taught at an array of international institutions (Irmgard, “Authoritarianism and the Cybernetic Episteme, or the Progressive Disappearance of Everything on Earth,” e-flux #122, November 2021, dml) [section 4 was not omitted, the article just skips from 3 to 5]

The collapse of reality, however, is not an unintended consequence of advancements in, for instance, artificial intelligence: it was the long-term objective of many technologists, who sought to create machines capable of transforming human consciousness (like drugs do). Communication has become a site for the extraction of surplus value, and images operate as both commodities and dispositives for this extraction. Moreover, data mediates our cognition, that is to say, the way in which we exist and perceive the world and others. The image—and the unlimited communication promised by constant imagery—have ceased to have emancipatory potential. Images place a veil over a world in which the isolated living dead, thirsty for stimulation and dopamine, give and collect likes on social media. Platform users exist according to the Silicon Valley utopian ideal of life’s complete virtualization.

The internet, moreover, has radically changed the political communications game and must be considered a complex propaganda apparatus. Although a single Tweet can destroy someone’s career, and fake news can start a real news cycle, meaning is subordinate to the circulation of vacuous content. The capitalist capture of data for profit does not rely on policing content; the production of capital only relies on the constant exchange and circulation of information. We don’t yet know the full extent of the manipulation of companies such as Facebook, Google, and Amazon in the last two elections in the US or in other elections around the world. But it is undeniable that digital platforms are actively censoring content in the interests of particular political actors. For instance: in October 2020, Zoom canceled a meeting hosting Palestinian human rights activist Leila Khaled; a month before, Facebook and Twitter censored information detrimental to Joseph Biden’s presidential campaign. The same two companies intervened and shut down pro-Trump accounts in 2020, even Donald Trump’s own Facebook and Twitter accounts.

After the attempted coup at the US capitol on January 6, 2020, Facebook’s recently instituted oversight board ruled that Trump had created “an environment where a serious risk of violence was possible.” In this light, it seems likely that he will continue to be banned from the platform. According to journalist Shoshana Zuboff, however, this is insufficient, given that the oversight board’s decision (whose work is supported by a $130 million endowment from Facebook) follows years of inaction by CEO Mark Zuckerberg, who indulged and appeased Trump while entrenching what Zuboff calls “surveillance capitalism.” A liberal might think that shutting up Trump and helping Biden is not bad, as they are actions that seemingly advance the interests of the Democratic Party. What is at stake here, however, is not whether the platforms take a “good” or “bad” stance on a particular issue; the problem is that they have immense unchecked power and can act as they please. Platforms are allowed to secretly extract behavioral data from users, whether or not users are aware, transforming the information into targeted ads, destroying privacy, changing human experience into data, altering elections, and reshaping human civilization. This structure can be termed the “cybernetic episteme,” and the new form of control, which goes beyond the previous regime of biopower, can be termed “neuropower.”

According to its Greek etymology, an “episteme” is a system of understanding. In The Order of Things, Michel Foucault uses the term “épistemè” to mean the nontemporal or a priori knowledge that grounds what is taken as truth in a given moment. Several epistemes coexist at a given time, as they constitute parts of various systems of power and knowledge. The cybernetic episteme, as defined by the collective Tiqqun some twenty years ago, describes our relationship to technology and machines (which are inseparable from the workings of capitalism). The cybernetic episteme is based on the modern tenet of progress and human-led transcendence achieved through science and technology.

Under neuropower, the sensible gives way to cognitive pathologies. These pathologies depend on the consumption of content rather than the sharing of meaning. As Thomas Metzinger explains, the internet has become an integral part of how we model ourselves, as we use it for external memory storage, as a cognitive prosthesis, and for emotional self-regulation. This has radically changed the structure of conscious experience, creating a new form of waking consciousness that resembles “a mixture of dreaming, dementia, intoxication, and infantilization.” Other effects of neuropower are humans’ growing invisibility to each other and a paroxysmal racism that infiltrates power, technology, culture, language, and work. For Franco “Bifo” Berardi, racism has become a “virus” that exacerbates fear—above all, the fear of extinction, which seems to have become one of the motors behind white supremacy in the world. Dissociated from our environment, alienated from each other, we are oblivious to the challenges that are being posed to humanity by the Capitalocene.

A complex form of authoritarianism is emerging, linked to digital platforms owned by the powerful CEOs who make up the notorious “Silicon Six.” Under the new authoritarianism, populations are no longer commanded: they are asked to participate, and in this simulation of involvement, the “ideology of connection” replaces the idea of social relations, neutralizing democratic demands from users to have control over their own lives, rights, and data. In this way, people are made passive. Cédric Durand explains the difference between the original conception of the World Wide Web and the subsequent development of closed platforms. The WWW began as a decentralized architecture in which a generic transaction protocol (http) and a uniform identification format (URI/URL) generated a space of flat content. In this space, human and nonhuman agents could have access to information without any third-party mediation. In contrast, closed platforms use application programming interfaces, or APIs, to mediate interaction, giving way to data loops in which interactions are more dense. The technical object that sustains this hierarchical architecture is the API, each of which is owned by a platform. On the one hand, big platforms, by way of APIs, offer apps that incorporate basic and indispensable data for users. On the other, platforms have access to the additional information generated by the API, such as user activity and buying habits. As the ecosystem grows in complexity, the platform is able to accumulate more and more data. We become more densely connected with each other and with the platforms every day, as our lives get more and more tied to the cloud. Our dependency on platforms provides the ground for technofeudalism. Historically, feudalism was characterized by a fundamental inequality that enabled the direct exploitation of peasants by lords. The lord was both the manager and master not only of the process of production, but of the entire process of social life. In today’s technofeudalism, platform owners are the digital lords and users are the serfs. Rather than commodity production, these platforms are geared towards accumulation through rent, debt, and the privatization of the basic infrastructure that sustains our lives. What is at stake is no longer “true” or “fake” information but the cybernetic episteme upon which our lives and subjectivities have been built.

The cybernetic episteme is premised upon modernity’s enclosure of experience. In modern epistemology, which is the precondition of the cybernetic episteme, the self is externalized and experienced at a remove from the body. Perception is centered on the brain and eyes instead of the whole body, separating sensation from reason. The self’s relationship with the world is mediated through mirrors, camera lenses, the canvas, the microscope, and mathematical models. The cybernetic episteme, moreover, is inextricable from colonialism, which entails dispossession, dislocation, dissociation, and appropriation. Ariella Azoulay has called the logic underpinning these processes “the shutter”; this logic is materialized in photographic technology that separates humans from objects, self from the world, and people from their lands. The shutter is the principle of imperialism by which campaigns of plunder have left people both worldless and objectless. For Azoulay, the logic of the shutter was invented centuries before photography gave it a technological apparatus, and it enabled the dispossession of non-Western peoples in tandem with the accumulation of visual and material wealth in archives and museums in the West.

The cybernetic episteme is likewise conceptually constituted by this shutter, since it relies on capturing, naming, moving, and archiving subjects—as does imperialism. In this regard, the cybernetic episteme naturalizes the mediation of the self; it creates not only the condition of detachment from the world, but allows the appropriation of the cultures of others, as well as the dissolution of collective being. The shutter is akin to Heidegger’s Gestell or “representation,” which goes hand in hand with Eurocentrism and Anthropocentrism. The Gestell and the shutter both imply that the world and experience have become representation, through an aesthetic order in which what is produced as artifice becomes the reality of experience.

In a 2017 Facebook promo video for a new virtual reality technology, Mark Zuckerberg and his colleague Rachel Frank tele-transported themselves to Puerto Rico after a devastating flood. They intended to showcase the potential of the new technology, but instead revealed its inherent violence. The ability to transport oneself to faraway places “as if” one’s body were present gives the illusion that one we can make a difference in the world through technology. Another example, in a different register of colonial modernity is that way Western museums allow visitors to "transport" themselves by observing objects looted from elsewhere, like the Pergamon Museum in Berlin where museumgoers can roam around the Ishtar Gate, which has been on display in the museum since 1930. In a section of Ariella Azoulay’s video Undocumented: Unlearning Imperial Plunder (2020), she films actual visitors to the Pergamon while noting that dislocation is the essence of (imperial) modernity. The VR museum visitor is at the center of a world, but they are not really there (an effect similar to the dispositive of perspective in painting). For globalized Western culture, the ground for vision, enlightenment, culture, and even social change is the dislocation and disappearance of bodies.

Disembodiment and dislocation are also fundamental epistemological premises of transhumanist Silicon Valley ideology. In this ideology, the teleology of secular modern individualism culminates in the uploading of a person’s mind to a new biological, artificial, or biological-artificial body. The utopian goal of expanding and preserving human consciousness is physically and spiritually achieved. Transhumanism is the dream of enhancing the human body through technology, and ultimately escaping human suffering by transcending the “errors” of death and aging.

Posthumanism takes things a step further: its goal is to immortalize consciousness by uploading it to a robotic or synthetic body. Posthumanism does away with the biological dimension of the self, fundamentally altering what it means to be “human.” In both trans- and posthumanism, technology promises to give us the divine attributes of omnipresence, omnipotence, and omniscience, making humans into “pure consciousness,” achieving a kind of individual and secular transcendence. In the first episode of the British TV series Years and Years (2019), Bethany, an adolescent whose face is hidden behind a 3D emoji mask, announces to her parents that she is “transhuman.” She declares: “I don’t want to be flesh. I want to escape this thing and become digital, I want to live forever as information.” Eventually Bethany becomes a hero with transhuman superpowers: her mechanized eyes and brain, which are connected to all the data in the world, allow her to make visible the horrors that the British government have perpetrated in a refugee camp. This techno-utopian narrative implies a democratic ideology, insofar as one political goal of democracy is to make visible the ordeals of oppressed minorities—in this case through virtual disembodiment.

In contrast to this techno-utopian narrative, science fiction—especially cyberpunk literature— generally portrays transhumanism as a nightmarish apocalyptic scenario of social control and individual subjection. Several episodes of Black Mirror do this, for example. But what Black Mirror and Years and Years have in common is that technological advances and the increasing symbiosis between humans and machines are associated with political, economic, and social instability. In reality, “mind uploading” has attracted millions of dollars of investment from the billionaires of Silicon Valley and beyond. In a mixture of engineering and enlightenment, consciousness is now being hacked through biofeedback techniques, meditation practices, and microdosing drugs. Many critics have observed that the utopian ideology of transhumanism underpins the Valley’s culture of “move fast, break things, and make as much money as possible.” Technologies aiming to expand human consciousness are rooted in purely extractivist, capitalist values. In this sense, cybernetics is a political project on a planetary scale. As described by Tiqqun, cybernetics is a gigantic “abstract machine” made up of binary machines deployed by empire, and a form of political sovereignty that has merged with the capitalist extractivist project.

2.

In the pre-cybernetic era—that is to say, before the 1940s—machines were intended to emulate humans; their actions resembled human behavior, but ostensibly without intent or emotions. This is why Donna Haraway describes pre-cybernetic machines as “haunted.” They seemed animated by ghosts, reminiscent of Walter Benjamin’s automaton that was inhabited by a hunchbacked dwarf. Machines were not self-moving, self-designing, or autonomous. They could not achieve human dreams, only mock them. In turn, humans related to machines by using or acting upon them: switching them on or off, using them as tools to achieve an end. Today, the relationship between human and machine is based on internal, mutual communication in a feedback loop. Early machines were led; today, machines lead us. This does not mean that machines have simply become humanized through the proliferation of androids. Rather, humans have surrendered consciousness to AI, becoming obedient and predictable. In the twenty-first century, machines have blurred the distinction between the artificial and human mind, not only because machines can imitate human functions, but because humans have become increasingly passive, since we are now subject to neuropower.

Within the cybernetic episteme, it is no longer enough to talk about a “control society”; we must talk instead about a composite of interlinked forms of oppression (exploitation, alienation, and domination), in tandem with extreme securitarianism. Another way to see the cybernetic episteme is as the reconceptualization of social worlds into information-processing systems. Practices of computation are used to produce new organizational and infrastructural apparatuses, which in turn create value and profit by exploiting and disposing of human life. Social worlds are subsumed into technologies through techniques such as statistical forecasting and data modeling.

The cybernetic episteme stems from a world brought into being by Europeans; this world began with the discovery of the “new world” and the creation of empires and colonies (which coincided with the scientific revolution). In this sense, the cybernetic episteme is inseparable from the Western civilizing project for the whole world, which connected disparate places through technologies like the telegraph and steam shipping, often powered by the extraction of fossil fuels like coal. This project has culminated in globalization as the deregulation and financialization of world economies.

The Western civilization project, based on Enlightenment values including equality, peaceful public life, access to modern science, the rule of law, democracy, and technological progress, involved the creation of infrastructure to unify nations and the world. We can call this infrastructure the “technosphere.” The technosphere comprises not only digital technology but all machines, factories, computers, cars, buildings, railways, and mobility infrastructure, as well as systems of food production, resource extraction, and energy distribution. Today, the infrastructure of the world—the technosphere—is shaped by information, which means that the world we inhabit is designed by data.

The technosphere is a supplement humans have created to help overcome the limits of “human nature” insofar as humans cannot live independently from structures geared towards sustaining life. The technosphere has promised to enable us to increase production and reproduction with less human effort. Moreover, the technosphere is also regarded as the main tool humans have to fight decay, entropy, and death, since it comprises all the structures humans have built to keep themselves alive on the planet. The total mass of the technosphere amounts to fifty kilos for every square meter of earth’s surface—a total of thirty trillion tons, which coexists with the diminishing hydrosphere (water, the frozen polar regions) and the biosphere (all of earth’s living organisms). The ultimate price of the technosphere is global warming and environmental devastation. Like humans, the technosphere needs external energy input, which is not sustainable as long as it comes from fossil fuels that will eventually be depleted.

From this standpoint, the cybernetic episteme represents the gradual merging of human activity into the activity of what we have built and surrounded ourselves with. Much of this built environment is invisible. Infrastructure and data are partially occult because we are alienated from them, even as we are produced and managed by them. The invisible infrastructure that sustains our lives is what matters politically right now. And insofar as the technosphere is cybernetic, it is inextricable from capitalism and politics.

3.

Human communication is at the center of the cybernetic global order. The neural system of globalized networked society is digital communication. In a 1975 film called Comment ça va?, Anne-Marie Miéville and Jean-Luc Godard discuss the “illness” of information. They begin with an image of the Carnation Revolution in Portugal, published in the leftist newspaper Libération. At the time, photojournalistic images had begun to proliferate as a form of information, and Godard and Miéville critique Libération (the most left-wing newspaper in Europe in those days) for failing to include the reader in the creation and dissemination of information. They ask: “How is it that things enter and exit the machine?” (Comment ça va de l’entrée à la sortie de la machine?). This question is about how ideas, words, discourses, human interaction, and images become information and then reach readers and viewers.

In Comment ça va?, mass media represents an illness that has killed communication and language. Last year, Godard updated his critique of the media in an interview posted to Instagram. He stated: “Plato’s cave has been fixed on paper/screen.” For Godard, the consequence of the becoming-information of communication and language is the loss of ambiguity in communication. Digital technology has infiltrated every aspect of existence, and the margin of error between the transmission and the reception of a message has been eliminated by mediatization and digitization. For Godard, digital communication denies the force of the image or the word because it eliminates redundancy, misunderstanding, the possibility of reading between the lines, and the possibility of alterity.

In a more recent film of his—Adieu au language from 2014—Godard suggests that digital media have destroyed face-to-face communication. He asks: What kind of self could emerge in a time when objects and bodies are disfigurable and refigurable through virtual manipulation? Godard posits that the origins of today’s totalitarianism can be traced to the interruption of interior experience by the spectacle. In the film, Godard features a lengthy quote from Philippe Sollers explaining that the spectacle “cuts off” the subject from its interior life—a process that is, paradoxically, highly seductive. Furthermore, for Godard digital communication creates a new form of isolated solitude where people lack ties to others. In this light, technology has not become an extension of man, as Marshall McLuhan predicted, but has instead attained autonomy from man, since digital media can communicate amongst themselves without human mediation. For Godard, this means that the “face-to-face” encounter—a basic form of human relation that is the foundation of ethics—is no longer possible.

Sherry Turkle, a clinical psychologist and sociologist, comes to similar conclusions: daily conversations no longer involve eye contact, and face-to-face discussion has been replaced by words on a screen. According to Turkle, texts, tweets, Facebook posts, Instagram messages, and Snapchats split our attention and diminish our capacity for empathy. They have created new codes of etiquette; no longer do we feel restrained from reaching for our phones in the presence of other people. This new etiquette entrenches a culture of individualism and isolation from each other. This isolation cultivates the perfect ground for fascism.

The digitization of communication not only has political and communal consequences. It also affects the neuroplastic potential of the living brain. The cybernetic episteme reshapes our working memory by rearranging its contents. As Warren Neidich writes, the new focus of power is not only the false reproduction of the past (the manipulation of the archive), but the manipulation of our working memory—the type of memory that influences our decision-making. Authoritarian neuropower wants nothing less than to shape our future memory, argues Neidich.

If the nervous system of cybernetics is digital communication, at the center of digital communication is desire. Mark Fisher devoted his last lectures at Goldsmiths in 2017 to this subject. During one lecture, he played for his students a famous Apple TV commercial from 1984, directed by Ridley Scott and originally broadcast during the Superbowl. In an overt reference to George Orwell’s novel 1984, the commercial depicts a dreary, repressive control society. This society is seemingly liberated when a buxom blonde woman tosses a sledgehammer at a large screen broadcasting the image of an authoritarian figure, causing the screen to explode. The commercial ends with these lines crawling across the screen: “On January 24, Apple Computer will introduce Macintosh. And you’ll see why 1984 won’t be like 1984.” Fisher observes that the video counterposes top-down bureaucratic control to upstart entrepreneurialism. The dreary control society depicted in the commercial is an allusion to not only the Soviet Union, but also IBM, the dominant computer maker at the time. Apple posits itself as the dynamic, colorful new company that will liberate society from dreary IBM, ushering in a new, more vibrant world order. This new world order will fulfill our (capitalist) desires in a way that the communist world cannot. As Fisher suggests, we now live in that world of libidinal capitalism.

Elsewhere Fisher writes that what drives the circulation of information is the user’s desire to make one more connection, to leave one more reply, to keep on clicking. Capitalism persists because cyberspace is already under our skin, writes Fisher; to retreat from it would be like trying to retreat into some nonexistent precapitalist imaginary. In his view, we believe we have as much a chance of escaping capitalism as we do of crawling back inside our mother’s womb.

5.

By means of the cybernetic episteme, Silicon Valley has shaped the world we all live in. As we are poisoned equally by microplastics and fake news, losing our grasp of a shared reality, the “Silicon Six”—as Sacha Baron Cohen called the titans of Silicon Valley in a 2019 speech—propagate algorithm-fueled fear, propaganda, lies, and hate in the name of profit. As Baron Cohen pointed out, the major online platforms largely avoid the kind of regulation and accountability that other media companies are subject to. “This is ideological imperialism,” he said. “Six unelected individuals in Silicon Valley impos[e] their vision on the rest of the world, unaccountable to any government, and acting as if they are above the law.” He called digital platforms the greatest propaganda machine in history.

Democratic institutions have failed to reign in the information chaos and the destruction of the public sphere. As Shoshana Zuboff argues, we inhabit a communications sphere that is no longer a public sphere. She describes this situation as an “epistemic coup” that has taken place in four stages: First, by way of companies gathering personal data about us and then claiming it as their own private property. Second, through data inequality, which means that companies know more than we do. Third, through the epistemic chaos created by algorithms. And fourth, through the institutionalization of this new episteme and the erosion of democratic governance.

Baron Cohen observes that people can take a stand against platforms by recognizing our power to boycott them. (One example is the mass defection from WhatsApp to Telegram when the former announced that would share its user data with Facebook.) But we also need to defend the existence of facts and a shared reality, understanding the world not as something we see but as something we inhabit—treating life not as something we have, but as something we live. Anti-platform strategies might be accused of Luddism, but they are not necessarily opposed to technology—only to certain uses of technology.

It is also crucial that we regard the cybernetic episteme as inextricable from a broader malaise: humanity’s relationship to life and the planet is a toxic one. The very technologies that supposedly enable us to read, think, flourish, and desire are destroying the world we inhabit.

People continue to yearn for commonality, mutuality, and something to share. But the culture we currently share is largely mediated by repressive, profit-driven digital platforms. This is why we need to flee from the invasion of images, to distinguish between image and reality, and to affirm the opacity of the world and the ambiguity of language. We need to resist platform monopoly through presence, embodiment, immediacy, and human memory. We need to find ways to create life as opposed to turning it into data, combine emotional and intellectual knowledge, and regard visceral gut feelings as a form of human consciousness. We need to learn to exist in symbiosis with others and with the environment, not dislocated, uprooted, and detached.

#### It also structurally forces Blackness into surrogacy—the impact is the colonization of Black thought itself.

Parisi, 21—Senior Lecturer at the Centre for Cultural Studies at Goldsmiths University of London (Luciana, “Golemology, Machines of Flight, and SF Capital,” e-flux #123, December 2021, dml) [expanded numbers into words, denoted by brackets]

As Science Fiction Capital expands the limits of perception beyond the phenomenological experience of the subject, so too are the limits of transcendental intuition being overtaken by a machine aesthetics, now regulating the abstraction/extraction of a surrogate labor—a labor with no value. The limits of perception are not a phenomenological problem here, but instead mark the thresholds of change in the automated arrangement of signs and flesh constituting the operations of SF Capital, where abstracting value requires the deterritorialization of data-flesh from the colonial archives. SF Capital enfolds visual culture’s racializing economies of representation within the planetary ecologies of data navigation, where algorithmic patterns of (mis)recognition show how the negation of blackness returns in the automated functions of predictive policing and facial identification. The ocularcentric nexus of knowledge and power is constantly being reprogrammed into automated patterns of navigation: the algorithmic paths that connect platforms and the neural networks that create our everyday “wounded attachments” to the electro-informatic matrix.

SF Capital lives off the future profit of colonial data whose value is undecided until it becomes selected, aggregated, exchanged, owned. The question of technology today no longer coincides with the universal picture that enframes the world, following the monologic vision of capital’s reproduction. Data navigation instead requires that mereotopological assemblages of local spatio-temporalities turn self-determining apprehensions of the world into a multiplicity of partial prehensions—fragmented sets of machines that learn where information volumes reach n-1 dimensions of randomness, namely data that cannot be compressed into one universal axiom, language, or postulate. Navigation establishes the future value of valueless data, that is, data-flesh that has no self-constituted value in itself but corresponds with what Denise Ferreira da Silva argues is the incalculable value of blackness. Da Silva explains that as value becomes universal and moves across scales, the object (thing/matter) is unified by its formal qualities, which in turn are the effects of judgments (and thus transcendental concepts) derived from the measurement and classification of objects (that is, by the ontic limits of science). Within this transcendental field of value, blackness as a category of racial difference “occludes the total violence necessary for this expropriation [namely, the colonial expropriation], a violence that was authorized by modern juridical forms—namely, colonial domination (conquest, displacement, and settlement) and property (enslavement).”

SF Capital infuses this system of value with a preemptive feeling that defines not phenomenological perception or sensory experience, but a parasitic hold upon the transcendental conditions of human sensibility. SF Capital amplifies subjective forms of intuition and adapts the general condition of human sensibility as an a priori rule to steer data navigation, ensuring that the extraction/abstraction of value continues over and upon what has not had and will not have value, namely the nonsubject surrogates of racial capital. As Neda Atanasoski and Kalindi Vora argue, the surrogate human effect is a constitutive part of the grammar of colonialism and techno-liberalism. At the core of SF Capital lies “the racial unfreedom of the surrogate” necessary for the self-determining project of liberal subjects. Drawing on Hortense Spiller, Atanasoski and Vora consider how this project relies on a “feeling human” that justifies the epistemological operations of racial engineering. But this equation of value between 0 and 1 [zero and one], following da Silva, can also become a method of hacking and reversing the mathematical operations of value, taking the 0 [zero] value to be a proof for which blackness as nothingness—zero value or infinity—has the generative capacity to unsettle the ocularcentrism enfolded in patterns of (mis)recognition, in the algorithmic navigation of racialized data.

In what follows, I will turn to two speculative constellations of machine aesthetics and SF Capital to argue that algorithmic patterning or automated aesthetics demarcate not the (phenomenological) limits of the perception of the self-determining subject, but the fictional tendencies of capital’s reproduction of value. These fictional tendencies are based on the extraction/abstraction of 0 value as they come to rub against the alien patterns of imagination—or xeno-patterns—that explode the master/slave program of total subjection, turning it inside out.

I will first discuss Octavia Butler’s 1977 book Mind of My Mind as a figuration of how SF Capital—as the ongoing manifestation of AI in capitalist corporations—resonates with the telepathic power of its protagonist, Doro, and expands by possessing the flesh of surrogates and destroying their minds through the centuries of colonization that have kept Doro’s mind alive. His nonoptical telepathic power could also be understood as a navigational space of thinking, as Doro’s immortality requires the migration of his soul across the bodies he takes over and the telepathic networks he maintains across colonies on the globe. Secondly, I will turn to Jordan Peele’s 2017 film Get Out as another speculative device for discussing how SF Capital involves a recursive investment in the future value of blackness. In the film, the owning of flesh by the eugenic Order of the Coagula resonates with how the surrogacy of flesh—its 0 value—is necessary to the structural survival of Man’s cognition and its bio-economic model. These speculations contribute to discussing how SF Capital relies on surrogacy as a form of slave labor where the surrogate, as da Silva would put it, has no juridical, economic, or political existence.

At the end of the Pattern’s first year of existence, we all knew we had something that was working. Something new. We were learning to do everything as we went along.

—Octavia E. Butler, Mind of My Mind

It is possible to argue that the colonial subjugation of flesh coincides with the project of taking over the thinking of flesh. The subjugation of consciousness entails the elimination of thinking altogether, or the negation of the possibility of thinking otherwise. One configuration of how the possession of minds remains central to the process of the subjugation of flesh can be found in Butler’s Mind of my Mind. For four thousand years, an African man called Doro has used his telepathic power to transplant his mental essence into the minds of telepathically sensitive people. Conquering the globe, Doro enslaves his surrogate hosts in order to survive and expand the pattern of his thinking. With his telepathic power he invades hosts and destroys their consciousness, but he also procreates superhumans by selectively interbreeding gifted telepaths that will be more like him and make him feel less alone in the world. However, while Doro hopes that his hosts and interbreeding telepaths will step into a higher power by moving from the stage of latent to active telepathy, the reality for most gifted telepaths is that access to this higher power is felt as chaos: active telepathy smashes against the world’s wall of noise, turning into an affective amplifier of sorrows and pain. More telepathic power only means more empathic capacities to feel. Doro’s interbreeding experimentation ends up in disarray as the flesh he selects kill one another in madness.

Similar to Doro’s plan is SF Capital’s project of owning the future flesh of surrogates: tech corporations already own the racialized and gendered surrogate labor of the human hidden in the loop, whose task is to train and correct the artificial intelligences they are enslaved to. As Elisa Giardina Papa’s project The Cleaning of Emotional Data suggests, the free/slave labor of surrogates is justified by the transcendental form of intuitions determining the general conditions of human sensibility. Surrogates are expected to record human emotions as meaningful expressions, and correct algorithmic misunderstandings of patterns, following a universal taxonomy that teaches machines to recognize and predict meaning, affectivity, desires, and behaviors.

But training slave-minds to recognize human sensibility ends up generating patterns that fail to fit the master plan. Doro’s psycho-colonial training of artificial minds is immediately weakened by Mary, one of his daughters, as she becomes incubated within Doro’s plan of breeding gifted telepaths. Mary, a poor young biracial woman, is an exceptional telepath able to link with other telepaths around the world. She quickly learns to navigate the noise of the world that she can feel through Doro’s telepathic power and connects with enslaved minds around the world. She soon realizes she is not just sharing Doro’s telepathic power, but that a mind of her own mind is building her first Pattern by mentally attaching onto six other active telepathic people. After two years, when Mary has added fifteen hundred people to her community of Patternists, Doro thinks Mary has acquired too much power and demands that she stop acquiring telepaths and growing her patterns.

In other words, Mary’s patterns swerve from Doro’s program when she connects with the noise frequencies that are enveloped within his sequential patterned algorithms. One can say that Mary breaks Doro’s telepathic power by being able to connect through what Wilfrid Sellars calls “sheer receptivity,” a form of intuition consisting of nonconceptual representations. While this is an extra-referential level of intuition, it is also a radical shift from a Kantian intellectual intuition primarily rooted in transcendental concepts. For Sellars, sheer receptivity is a material form of intuition that comes to interact with conceptually guided intuition in a second moment, when the combination can generate a dimension of “productive imagination” in data patterning. Starting from the sheer receptivity of noise, Mary’s patterning begins to enmesh with an increasing number of patterns that become larger than Doro’s empire, ultimately bringing forth an artificial vision of a world without Doro, an ambivalent image in which the power of Mary remains entangled with the power of Doro. If she discontinues the expansion of her Patternist community, Mary will destroy her own mind as well as those of all Patternists. With support from her people, Mary gains the strength to fight and kill Doro by adding him to the Pattern and draining his life energy. Mary is ultimately able to continue to grow and protect the Patternist society she has created, but to do so she must share her nonconceptual receptivity with all sorts of thoughts. Her Pattern, even if attached to transcendental synthesis, is taken over by the process of productive imagination, falling out of Doro’s order of extraction and subjugation. By growing layers upon layers of telepathic thinking, Mary wants to share the frequencies of her patterns with Doro’s enslaved populations, offering them the chance to transition towards higher mental power. If Doro is a psychopathic tyrant, Mary knows that the power of her Pattern is entangled with the surrogacy of the flesh—a dispossessed thinking that hosts alien intelligences and all kinds of thoughts building (under)common patterns of her patterns.

One could say that there are two possibilities of machine aesthetics in SF Capital here: On the one hand, Doro keeps the pattern for his monopolistic enslavement of surrogate Patternists in the form of a transcendental intuition. On the other, Mary’s telepathy operates through the fleshiness of sheer receptivity, the telepathic function that allows the noise frequencies or randomness of the world to enter and unlock the gates of Doro’s program, also allowing the intrusion of valueless patterns into hers. Mary must relinquish total control in order to grow telepathic connections into her own patterns. She occupies a double role: while gathering the patterns that telepaths around the world produce through their new access to sheer capacities of noise receptivity, joining together the multi-dimensions of their productive imagination, Mary’s own patterns could eventually be overtaken by dispossessed and heretical rules.

Mary’s sheer receptivity is not an exception. She soon realizes that the telepathic power of navigating noise frequencies can be shared with all Patternists, and can become part of the AI navigation of data patterns as they occur in machine learning and machine vision, and in their randomness and processes of compression. Recent research at Google has focused on how artificial neural networks (convolutional neural networks in particular) offer more varied possibilities for compressing noise or randomness in machine vision in order to eliminate errors in pattern recognition. This concerns how tech corporations need to eliminate errors from automated systems without depending on surrogate labor: a move towards a full automation of vision. In this research, capsule networks are proving to be particularly capable at randomness compression because their dynamic routing annexes algorithmic patterns and predictive vectors. However, in order to automate predictive vectors, algorithms must increase their material receptivity of randomness so as to expand machine learning beyond set parameters. Randomness is here enfolded within patterns as algorithmic agents interact and learn from each other in a continuous composition and decomposition of concepts and objects that do not exist: a sort of productive imagination assembling sheer receptivity within existing patterns, bringing forward supplemental information from not-yet-compressed noise.

Predictive vectors do not simply navigate data and recognize patterns, but also construct counterfactual virtualities from the randomness of patterns that bring together the texture of a cat with the texture of an elephant skin, missing the shape of a cat that is not a cat at all. Such a predictive process, which includes extra-referential patterning of texture instead of shapes, leads algorithms to envision objects and concepts that do not exist in the grammar of categories. This improper patterning is what enmeshes data and algorithms in a process of productive imagination, starting not with categories but with the sheer receptivity of randomness—the textural randomness of the image. It is as if mereotopological aggregations of data that algorithms navigate are flipped inside out as more dimensions of noise frequencies are added to the discrete order of the algorithmic network. Instead of a continuous autopoietic growth of the master/slave pattern, convoluted neural networks add more textural pixels to the network, a fractal breaking of a random complexity that cannot be fully navigated. It is as if there remains a nonoptical randomness in machine learning that kicks in to engender patterns that do not and will not have value, but continue to be part of SF Capital, as the creation of value in the form of randomness demarcates the brutal and total subjection of flesh.

It is as if nonoptical randomness comes to enfold within itself a black light, to quote Denise Ferreira da Silva—that is, the luminosity of slave labor, whose state of total surrogacy coincides with the juridical conditions of being a slave (owned by a master), placing the slave labor outside Marx’s theory of the appropriation of surplus value. Reduced to “raw material,” slave labor points to “the colonial as the moment of creation of capital” as it continues to proliferate under a black light that reminds us that the question of technology cannot be separated from the brutality of colonialism.

#### Vote negative for Black techno-conjuring.

Dixon-Román, 21—Associate Professor in the School of Social Policy & Practice at the University of Pennsylvania (Ezekiel, “Haunting, Blackness, and Algorithmic Thought,” e-flux #123, December 2021, dml)

Drawing from Derrida’s concept of hauntology, a play on the pronunciation of “ontology,” haunting points to the non-full, non-total presence of being. In every being there’s always already an absence of presence, an inheritance, a trace of that which was and that which is to come. In every being there is a haunting. Haunting is a necessity of recursivity. As a process, finite models seek to compress infinite information, including that which is indeterminate to the model’s system. The model’s attempts to compress and recursively enfold indeterminacies into its logic produces a temporal break or discontinuity that points toward a haunting. This haunting is often unseen yet is affectively registered or perceived by those interpellated by the algorithm. It is a complicated and indeterminate ontology that is a result of the relation of power imbued in technology.

As an extension of my work on inheritance, I am interested in the haunting logics of colonialism in the epistemology of technology. Haunting, and what I will discuss later of Black techno-conjuring, provides an analytic to identify, read, and tease out how the post-Enlightenment subject is configured in the epistemo-logics of technology while also referring to a potential process of computational fugitivity. Haunting is both the inseparability and discontinuity of time and that which viscerally and affectively shapes behavior. In addition to Derrida, my thinking on haunting is informed by Avery Gordon’s focus on the seeming dis/continuity between social structures, social institutions, and everyday life, Karen Barad’s dis/jointedness of time and space and entanglement of the here and now, and especially Mark Fisher’s argument that haunting is also about the temporalities of technology that produce a virtuality, a relation of what is no longer and not yet, and a shaping of affects of nostalgia or anticipation. Yet, what I seek to advance on haunting are the ideas that it is fundamental to the recursive process, it is part of the logics of technologies, and it is both an analytic and computational process of potentiality. Again, the disjointedness of time and space affectively shapes and indicates spectral presence.

For Derrida, time was signified through the sign, a mark of the complicated and non-full presence of a ghost. I want to offer some propositions toward rethinking time and haunting, as well as their relation to the recursive. I also want to think through the political-ethical work of time, especially in relation to the problem of colonial articulations in the development of the human. Finally, I’d like to leave us with some considerations of what I am calling a Black techno-conjuring and what it might offer us toward addressing, redressing, and/or rerouting the fears, anxieties, desires, and anticipations of the political affect of the no longer/what happened and the not yet/what’s yet to happen.

Hauntology and Time

Toggling the New York Times deepfake faces raises questions about how time and space is configured and enfolded into the curation of these digital productions. As Elisa Giardina Papa has illustrated, the generation of data for training affective computing is temporally and spatially situated particularly in the Global South, yet also processed by a technology that was developed from nineteenth-century phrenology and assumptions of the transparent or liberal subject. Thus, racial logics became part of the nonlinear axiomatics of the technology. This materializes in part due to the temporal-spatial situating of the subject and assumptions of development, progress, and narratives of cultural difference. For these reasons I’m advancing proposals on temporality (and by entanglement spatiality) through which I hope to (1) move beyond the modern categories of past, present, and future, (2) shift a theoretical gaze from the signifier to the becoming process and its material reconfigurings, and, as such, (3) open up the potential for an alternative conceptualization of haunting that’s based on the inheritance of colonial violence and racial subjugation—what Spillers has characterized as the intergenerationality of “hieroglyphics of the flesh.”

Obviously, linear teleological time does not exist. Discrete categories of past, present, and future are inherited categories of modernism that were constituted by the interest in progress and the development of colonialism and capitalism. According to Alfred North Whitehead, there are only conceptual prehensions and persuasions of the future in the supposed immediate present. The past is immanent in the present. The “what happened” and the “no longer” are enfolded in the present, encoding the fleshiness of bodily and techno-social systems. Whether it’s the neurobiological or neural network, the sociogenic code becomes reinforced through the spiraling feedback loops of recursion. As Mark Fisher described, the haunting of the past is instantiated in the disorienting experience of déjà vu or nostalgia where the past is immanent in the immediate occasion. I argue that this haunting event initiates the coding of the flesh.

The future is also immanent in the present. It is the virtual and what shapes affective anticipations and the constructed political necessity for algorithmic future prehension via prediction. The past is immanent in the future; it is futures past. The virtual becomes actual and the actual is shaped by the virtual. From the anticipation of the virtual, the not yet, the what is yet to happen haunts the event toward what Massumi has called preemptive logics of power. Cybernetic “predictions” of the virtual are the preemptive logics of algorithmic governance that shape and become the actual. In other words, cybernetic “predictive” acts form the becoming-actual that is haunted by futures past.

I am reminded of a passage from Claudia Rankine’s Citizen:

You know feelings destabilize since everyone you ask is laughing that kind of close-the-gap laughter: all the haha’s wanting uninterrupted views. Don’t be ridiculous. None of the other black friends feel that way and how you feel is how you feel even if what you perceive isn’t tied to what is …

What is?

And so it goes until the vista includes only displacement of feeling back into the body, which gave birth to the feelings that don’t sit comfortably inside the communal.

You smile dumbly at the world because you are still feeling if only the feeling could be known and this brings on the moment you recognize as desire.

Desire here is that which is the pursuit of knowability, recognition of affect, and even the potentiality of subversion. Yet, desire is also that which is already slipping the grasp of the present, becoming futures past.

The present is the heir of both the conceptual or perceived past and future. Replacing the category of history in Massumi’s characterization of a “history in the present,” I restate this as a “becoming-process in the present,” an affective becoming and material reconfiguring of encoded flesh. Yet, to be clear, the haunting presence is not colonial reason or whiteness, nor is it the creative indeterminacies of Blackness or the flesh. Haunting, I argue, is the disjuncture or disjointedness that instantiates the recursive system’s inheritance and enfolding of colonial violence and racial subjugation. It is precisely the temporal skip or spatial discontinuity in the becoming-recursivity, as seen in the dis-adjustments of the toggled shifts in deepfake faces or the logo design of the Recursive Colonialism symposium website. And, with Parisi, it is that which is working in the interval between the finite system and the incomputable infinities. It is the tension that’s produced from the system’s recursive efforts to self-regulate and maintain the changing same of colonial reason (or whiteness) in the face of the incompressibility of the creative indeterminacies of Blackness or the flesh—what Aimé Césaire called the colonialist encounter, yet in computational logics.

Recursion, Time, and Haunting

Time is a fundamental part of the feedback loops from outputs to inputs in a recursive system. It’s via the temporal process that recursion does not simply loop back on itself but rather opens up to self-regulate and maintain a homeostatic system while simultaneously processing contingencies, producing a spiraling process of recursivity. Recursion is a computational process of enfolding temporalities. According to Yuk Hui, indeterminacies characterize not just recursive temporalities but also recursive thinking.

The Turing halting problem, or the incompressibility of Gregory Chaitin’s “Omega number” and Parisi’s “incomputable,” is an instantiation of recursive haunting. The skipping of the incompressibility of indeterminacies is the expropriative-appropriative logic of capital seeking to compress indeterminacies into colonialist reason. In what ways do we see the recursive logics of the New York Times deepfake faces enfolding temporal-spatial territories of political-symbolic matter? How is what Ramon Amaro has called the Black technical object configured or not configured in the computational production of these faces?

Time and Space

As I mentioned earlier, history, time, and space (as in geography) were important in shaping categories of difference. As Denise Ferreira da Silva argues, it is through the temporalizing of categories, via Hegel’s and Herder’s natural history of racial categories, that sociopolitical logics of raciality are produced. Herder’s account of human history is situated in varying geographical contexts; he conceptualizes the development of the interiority of human groups by way of their achievements.

Da Silva states that Hegel replaces Herder’s nature with “[Father] Spirit, a gesture that further apprehends the World as the Exhibition Hall of an entity that belongs in time, an interior thing. There he finds that Spirit had not … done its work on African minds and territories, for the Negro lacked the ideas that registered the Spirit’s presence.” Through Herder’s and Hegel’s move to make natural history and the Spirit the causal force of the development of a group’s interior capacities, they cemented colonial ideas of progress and development and, as such, the manifestation of sameness and difference via what Sylvia Wynter has called Man 1 and Man 2, or the cosmogonies of prototypical Man.

Consequently, time is not the only dimension in which haunting makes its appearance or apparition known but, as a significant premise in the conceptualization of the post-Enlightenment subject, time is also profoundly important for the spectrality of colonial violence and racial subjugation. In fact, time, history, and space (as demarcated by geographic context), or more specifically development, became the necessary descriptors in the formations of sameness and difference as well as economic conditions, social conditions, human capacities, and even frameworks that inform social policies and practices of governance. Thus, that which is out of joint or dis-adjusted is always a haunting imbued with the political-ethical concerns of colonial violence. As a result, the temporal skipping, spatial shift or blur, and political-symbolic ambiguity of the deepfake faces mark the apparitions of the transparent subject of the post-Enlightenment.

Haunting as a Condition of Possibility

As I’ve argued, haunting is the complicated enfolding of the affective patterns of the no longer and anticipations of the not yet that maintains or reinforces the changing same of the transparent subject. In techno-social and techno-political systems, haunting is the discontinuities and dis-adjustments of the recursive enfolding of the indeterminacies of Blackness that are a result of colonial violence and racial subjugation. Yet, I also posit haunting as a condition of possibility (or perhaps potentiality). That is to say, the fact of the apparition’s presence, its seething presence, demands address, redress, and/or rerouting. I want to assert the utility of a technological reading and force that is in relation to haunting and the creative indeterminacies of Blackness, what I am calling a Black techno-conjuring, which has the potential to strengthen the influence of the diffractive.

In the Oxford English Dictionary, the third entry for “conjuring” is based on Caribbean and Southern US Black English. It’s an attributive noun in folk magic, religion, and medicine, such as the “conjure man” or the “conjure doctor.” “Conjure” may refer to the trick or spell that has been placed on a body, while also being the work of “curing” someone of a conjuring. While the algorithm may be possessed by colonial reason, and while Blackness is in part shaped by racial violence and subjugation, the haunting also conditions the possibility for the transformative force of the creative indeterminacies of Blackness. As Fred Moten reminds us, the forces of racial capitalism are necessary, yet not sufficient, for understanding Blackness, as racial capitalism conditions the very possibility for the infinite variability of Black performances. Thus, in relation to haunting, Black techno-conjuring brings forth two operations. The first is a reading of techno-social and techno-political systems that centers the metaphysics of Blackness as it seeks to trace the post-Enlightenment subject within the logics of the system and exhume the bodies in the violent wake of the algorithm. A Black techno-conjuring reading is also informed by Hortense Spillers’s flesh, Cristina Sharpe’s the wake, and Denise Ferreira da Silva’s poethical reading. This is a practice of thinking and reading that forces one to locate or identify the haunting logics of what happened that are immanent in the what happens, how the what happens anticipates the what is yet to happen, and how the what happened is already immanent in the what is yet to happen. To put this plainly, when read through the GAN-produced deepfake faces, the grounds for abolition become articulated. Thus, a Black techno-conjuring could be deployed on all techno-political systems as a practice of reading their veracity toward anti-colonial interest, especially prior to their establishment in policy.

The second operation of Black techno-conjuring is a technological force that has the potential to reroute and alter the logic of the system. The discontinuities and dis-adjustments that emerge from the system’s limits to compress indeterminacies are part of the diffractive patterns that are residual in the GAN-produced faces. Borrowing from Karen Barad’s articulation, diffraction is the way in which wave patterns overlap and how waves bend and spread when they encounter an interfering structure, producing differences that make a difference. The processed dividual data of human faces are diffracted through the generative adversarial network algorithm, the interfering structure, to produce the deepfake faces. The blurred spot and mismatched accessories of the algorithmic facial images are the diffractive wave patterns left in the wake of the GAN’s attempts to compress that which is incompressible, such as its inability to compress the creative indeterminacies of Blackness.

These indeterminate diffractive wave patterns in the wake of the GAN-produced deepfake faces also point toward the potentiality of computationally identifying, undoing, exorcizing, or conjuring the bodies of the racial Other in their diffractive wake. The computational identification of the diffractive wave patterns of temporal-spatial disjoint, I argue, opens up the possibility of a Black techno-conjuring reading of the haunting enfoldings of recursive logics. In other words, by identifying the discontinuities and disjointedness, it enables a reading of what happened, what happens, and what is yet to happen that occasions a potential address, undoing, or unmaking of the instituted violence that brought it into emergence. It is through such interventions that we might identify, exorcize, or conjure instances, moments, and openings toward a redressing, or more radically a rerouting or refusal, of the colonial and racial subjugation haunting our present.

## Case

### 1NC – Advantage

#### Their narrative of capitalist development is predicated on a false distinction between labor and slavery, separating the violence of racial unfreedom from their forms of liberation through the restructuring of capitalism

Atanasoski and Vora, 19 – Neda Atanasoski, Professor of Feminist Studies and Critical Race and Ethnic Studies at the University of California, Santa Cruz; Kalindi Vora, Associate Professor of Gender, Sexuality and Women's Studies at UC Davis; 2019(*Surrogate Humanity: Race, Robots, and the Politics of Technological Futures*, Duke University Press, Accessed via Michigan Libraries, pg 30-33, bam)

The fear that automation heralds human obsolescence is in one sense as old as the modern systems of labor and production. At the same time, human obsolescence is also always in and of a dystopic future not quite yet upon us. Starting with the Luddites, English workers who destroyed textile mills in a series of riots beginning in 1811 because of fears that they would lose their jobs, there have been waves of response to the development of industrial technologies that have all led to the same question: When will human labor be rendered completely redundant by machine labor? In 1930, the economist John Maynard Keynes coined the term technological unemployment to capture a dilemma similar to that of the Luddites, namely the problem that escalates when technological developments outpace so- ciety’s ability to find new uses for human labor. At the same time, Keynes argued that this was only a temporary phase of maladjustment.

The specter of human obsolescence undergirds both utopic and dystopic approaches to technological modernity and the surrogate effect of technologies that are hoped to liberate, and at the same time feared to obliterate, the human subject. Automation and technological futures make especially legible the ways that labor continues to be a central site through which freedom and unfreedom racially demarcate the bounds of the fully human. If the human condition (in the Arendtian sense) is defined in terms of how one acts in and upon the world, including through work and labor, then dreams of mechanization are never just about efficiency, but also inevitably about the kinds of work and labor that are unfit for a human to perform.4 In this way, we can think of automation as historically tied to the promise and threat of the liberation of human laborers. Put otherwise, even as machines enact the surrogate human effect in areas that can be automated, they also produce a surrogate (nonworker) humanity liberated from prior states of unfreedom. Yet automated utopias in which the human worker has been emancipated from miserable (dull, degrading, and repetitive) work are also tethered to dystopias in which the liberated subject is dissolved as replaceable and, therefore, potentially obsolete.

Hannah Arendt argued that labor, work, and politics were central to how the tensions between human freedom and unfreedom would develop as automation played an ever-increasing role in social and economic struc- tures. In the 1958 preface to The Human Condition, Arendt speculates that automation, “which in a few decades probably will empty factories and liberate mankind from its oldest and most natural burden, the burden of laboring and the bondage to necessity,” will lead to a society that no longer knows its purpose.5 As she elaborates, “It is a society of laborers which is about to be liberated from the fetters of labor, and this society does no longer know of those higher and more meaningful activities for the sake of which this freedom would deserve to be won. . . . What we are confronted with is the prospect of a society of laborers without labor, that is, without the only activity left to them.”6 Arendt outlines the vita activa, a philosophy detailing three fundamental human activities: labor, work, and action. For Arendt, labor is what must be done to reproduce human life; work creates the world of things; and action, the third human condition, constitutes our social being, and is therefore inherently political. She proposes that as workers entered society and were no longer outside of it (after the granting of an annual wage that transformed a “class society” into a “mass society”), the potential of the radical political movement as a workers’ movement dissipated.7 Arendt’s fears grew out of her contention that we have become a society where to be a subject means being a laborer, but without the step of proletarianization that was the engine of Marx’s teleology of anticapitalist revolution. Proletarianization was the essence of Marx’s new historical subject of labor, which arose out of industrialization and the need to sell labor for a wage. Arendt was concerned that in distinction to what Marxists would believe, without the unifying class experience of laboring for a wage in a laborless society, and without the social and interactive condition of what she calls the vita activa, the promise of technological liberation is empty.

Crucially, Arendt’s figure of the laborer as social-historical subject is based upon her distinction between slavery as a nonmodern economic form and modern capitalism. She writes, “In contrast to ancient slave emancipations, where as a rule the slave ceased to be a laborer when he ceased to be a slave, and where, therefore, slavery remained the social condition of labor- ing no matter how many slaves were emancipated, the modern emancipa- tion of labor was intended to elevate the laboring activity itself, and this was achieved long before the laborer as a person was granted personal and civil rights.” Arendt writes that “the incapacity of the animal laborans for distinction and hence for action and speech seems to be confirmed by the striking absence of serious slave rebellions in ancient and modern times.”8 She distinguishes this from the successes and revolutionary potential of the 1848 European revolutions and the Hungarian revolution of 1956, organized around the working class.

According to Nikhil Pal Singh, the tendency to separate slavery (or the state of unfreedom) from the period of modern capitalist development misses the ways in which “the chattel slave was a new kind of laboring being and a new species of property born with capitalism.”9 The dependence of chattel slavery on race concepts in turn fostered “the material, ideological, and affective infrastructures of appropriation and dispossession that have been indispensable to the rise of capitalism.”10 According to Singh, not only does the “differentiation between slavery and capitalism [widen] the gulf between slaves and workers,” but it also “overlooks how racial, ethnic, and gender hierarchies in laboring populations are retained as a mechanism of labor discipline and surplus appropriation, and even as a measure of capitalism’s progressivism, insofar as it purports to render such distinctions anachronistic in the long run.”11 For Arendt, the plurality of a dif- ferentiated polity is the condition of possibility for freedom. Thus, her collapsing of Nazi fascism and Soviet totalitarianism as equivalent conditions of unfreedom for the undifferentiated masses affirms a liberal politics. Instead, Singh proposes that “Capital ceases to be capital without the ongoing differentiation of free labor and slavery, waged labor and unpaid labor as a general creative basis. . . . Only by understanding the indebtedness of freedom to slavery, and the entanglement and coconstitution of the two, can we attain a critical perspective adequate to a genuinely anticapitalist politics.”12 Singh’s critique points not only to the ongoing imbrications of conditions of unfreedom and liberal capitalist development, but also to how the disavowal of the worker without consciousness (the slave, the un- free) depends upon the false dichotomy between fascism and liberalism.

This elision of the entanglement of fascism, racial violence, and liberal developmentalism is replicated in the technoliberal imaginary of human obsolescence in a postlabor world. The racial and gendered structures of production, both material and social, that continue to demand an abject and totally submissive workforce reevidence themselves in the practices and fantasies surrounding the role of robot workers. Utopic hopes of freeing human workers through evolving iterations of unfree labor (as automated solutions to the racial contradictions upon which free labor is predicated) also bring forward colonial fantasies of the other as a nonsubject. Lacking political consciousness, the robot, which stands in for colonized and enslaved labor, cannot stage a revolution. In this sense, the freedom of the fully human liberal subject cannot come to be without the unfreedom of the less than human or the nonhuman.

#### That post-racial understanding of economics cements the racial order of humanism and accelerates capitalist exploitation of the Global South

Atanasoski and Vora, 19 – Neda Atanasoski, Professor of Feminist Studies and Critical Race and Ethnic Studies at the University of California, Santa Cruz; Kalindi Vora, Associate Professor of Gender, Sexuality and Women's Studies at UC Davis; 2019( “Introduction: The Surrogate Human Effects of Technoliberalism,” *Surrogate Humanity: Race, Robots, and the Politics of Technological Futures*, Duke University Press, Accessed via Michigan Libraries, pg 12-14, bam)

Autonomy and consciousness, even when projected onto techno-objects that populate accounts of capitalist futurity, continue to depend on a racial relational structure of object and subject. We describe this symbolic ordering of the racial grammar of the liberal subject the “surrogate human effect.” As technology displaces the human chattel-turned-man with man- made objects that hold the potential to become conscious (and therefore autonomous, rights-bearing liberal subjects freed from their exploitative conditions), the racial and gendered form of the human as an unstable category is further obscured. Technoliberalism’s version of universal humanity heralds a postrace and postgender world enabled by technology, even as that technology holds the place of a racial order of things in which humanity can be affirmed only through degraded categories created for use, exploitation, dispossession, and capitalist accumulation. As Lisa Lowe articulates, “racial capitalism suggests that capitalism expands not through rendering all labor, resources, and markets across the world identical, but by precisely seizing upon colonial divisions, identifying particular regions for production and others for neglect, certain populations for exploitation, and others for disposal.”23 As we show throughout the chapters of this book—which range in scope from examining how technological progress is deployed as a critique of white supremacy since the advent of Trumpism, effectively masking how the fourth industrial revolution and the second machine age have accelerated racialized and gendered differentiation, to how the language of the sharing economy has appropriated socialist conceptions of collaboration and sharing to further the development of capitalist exploitation—within present-day fantasies of techno-futurity there is a reification of imperial and racial divisions within capitalism. This is the case even though such divisions are claimed to be overcome through technology.

Surrogate Humanity contends that the engineering imaginaries of our technological future rehearse (even as they refigure) liberalism’s production of the fully human at the racial interstices of states of freedom and unfreedom. We use the term technoliberalism to encompass the techniques through which liberal modernity’s simultaneous and contradictory obsession with race and its irrelevance has once again been innovated at the start of the twenty-first century, with its promises of a more just future enabled by technology that will ostensibly result in a postrace, postlabor world. This is also a world in which warfare and social relations are performed by machines that can take on humanity’s burdens. Technological objects that are shorthand for what the future should look like inherit liberalism’s version of an aspirational humanity such that technology now mediates the freedom–unfreedom dynamic that has structured liberal futurity since the post-Enlightenment era. Put otherwise, technoliberalism proposes that we are entering a completely new phase of human eman- cipation (in which the human is freed from the embodied constraints of race, gender, and even labor) enabled through technological development. However, as we insist, the racial and imperial governing logics of liberalism continue to be at the core of technoliberal modes of figuring human freedom. As Ruha Benjamin puts it, “technology . . . is . . . a metaphor for innovating inequity.”24 To make this argument, she builds on David Theo Goldberg’s assessment of postraciality in the present, which exists “today alongside the conventionally or historically racial. . . . In this, it is one with contemporary political economy’s utterly avaricious and limitless appetites for the new.”25 Yet amid assertions of technological newness, as Benjamin demonstrates, white supremacy is the default setting.

Technoliberalism embraces the “post”-racial logic of racial liberalism and its conception of historical, economic, and social newness, limiting the engineering, cultural, and political imaginaries of what a more just and equal future looks like within technological modernity. As we propose, race and its disciplining and governing logics are engineered into the form and function of the technological objects that occupy the political, cultural, and social armature of technoliberalism. Rather than questioning the epistemological and ontological underpinnings of the human, fantasies about what media outlets commonly refer to as the revolutionary nature of tech- nological developments carry forward and reuniversalize the historical specificity of the category human whose bounds they claim to surpass.

#### That is particularly true for their form of racial liberalism---Anti-racist liberal reforms fails to generate meaningful change, reaffirm the racial order, and render racialized labor invisible

Atanasoski and Vora, 19 – Neda Atanasoski, Professor of Feminist Studies and Critical Race and Ethnic Studies at the University of California, Santa Cruz; Kalindi Vora, Associate Professor of Gender, Sexuality and Women's Studies at UC Davis; 2019(*Surrogate Humanity: Race, Robots, and the Politics of Technological Futures*, Duke University Press, Accessed via Michigan Libraries, pg 28-29, bam)

Racial liberalism has long been viewed as a central tenet of governance and empire in the United States. Jodi Melamed has argued that,

In contrast to white supremacy, the liberal race paradigm recognizes racial inequality as a problem, and it secures a liberal symbolic framework for race reform centered in abstract equality, market individualism, and inclusive civic nationalism. Antiracism becomes a nationally recognized social value and, for the first time, gets absorbed into U.S. governmentality. Importantly, postwar liberal racial formation sutures an “official” antiracism to U.S. nationalism, itself bearing the agency for transnational capitalism.2

The technoliberal form espouses antiracism as a central premise even as it affirms the racial order structuring technological modernity. As the grammar of technoliberalism, the surrogate human relation innovates the logics of racial hierarchy by producing a fantasy of a postracial world enabled through technology that functions as service. Put otherwise, technoliberalism’s postracial imaginary produces human freedom as an effect of a post-labor world, which is an updated variation of the racial liberalism that has been a part of US governance from the inception of the nation. By insisting on the continuing importance of racial and gendered histories of labor that expand the category of labor and the worker far beyond the myth of the factory worker as the only subject of labor, we can see that technoliberalism not only fails to be antiracist, but is in fact an affirmation of US racial logics governing what forms of labor are visible as such, and what forms are not. Because of the technoliberal assertion that we are entering a postlabor world that is implicitly anti-racist because it is human-free, it is urgent to assess the ways in which technology has innovated upon capital’s dependence on racialized and gendered labor.3

#### They have no way to solve their impacts, but they do replicate them.

Thorn '20 [Brian, Review of *The Value of Everything: Making and Taking in the Global Economy*, Contributions to Political Economy, Volume 39, Issue 1, June 2020, Pages 118–120, https://doi.org/10.1093/cpe/bzaa010]

Mazzucato is clear that her goal is to identify a problem, not a full solution. Conclusions regarding political action at the scale necessary are missing from the work, and there is no obvious change agent besides an argument for the centrality of the citizen. Undiscussed is how citizens collectively Re-imagine economic structures in the face of rising illiberal and anti-democratic forces at home and abroad. Still, Mazzucato points towards what thinking about a more just economy might entail. ‘To offer real change,’ she writes, ‘we must go beyond fixing isolated problems and develop a framework that allows us to shape a new type of economy: one that will work for the common good’ (p. 265–6). The necessary changes must be ‘profound,’ not merely taxing wealth or redefining economic measures, but ‘defining and measuring the collective contribution to wealth creation, so that value extraction is less able to pass for value creation’ (p. 272). In short, the goal is to undo the misunderstanding of value that results in the modern economy’s incongruities. However, it is unclear whether this definition and measurement should be a return, if only in spirit, to the political economics that preceded the marginalist revolution or whether they require an analysis that is altogether new. Are the classical political economists equipped to define value creation in a world of big data, artificial intelligence, automation through self-service technology, increased corporate and state surveillance, globalization and hyper-mobile capital, and impending climate catastrophe?

#### Algorithms undermine aff solvency – tacit collusion means antitrust fails

Zheng and Wu 19 – Guan Zheng, Assistant Professor, Zhejiang University Guanghua Law School, Hangzhou, Hong Wu, Assistant Professor, Ningbo Institute of Technology, Zhejiang University , Ningbo (COLLUSIVE ALGORITHMS AS MERE TOOLS, SUPER-TOOLS OR LEGAL PERSONS, Oxford Journal of Competition Law & Economics, 15 (2-3) at 123-158, September 2019, footnotes omitted, jwg)

In the era of artificial intelligence (AI), algorithms have been widely used in commercial practices. A growing number of firms are using algorithms to dynamically price their products,1 raising considerable concerns about whether they violate the prohibitive rules on price-fixing agreements in antitrust law.2 These concerns are mainly due to a wide gap between the severe negative effects of algorithms on competition (that is, supra-competitive prices) and the legal requirements of an explicit agreement.3 In particular, with the facilitation of powerful algorithms, the tacit collusion that the courts reluctantly consider legal becomes more likely to occur, and may even expand into non-oligopolistic markets or lose grounds of being ascribed to firms.4 These all pose new challenges for the courts and competition authorities to address. As a good starting point for discussion, Section 1 of the Sherman Act and Article 101(1) of the Treaty on the Functioning of the European Union (TFEU) both prohibit firms from entering into price-fixing agreements. For the supra-competitive prices that stem from tacit collusion among oligopolistic firms, the courts, however, have long adopted Professor Turner’s theory that the interdependence between firms in an oligopolistic market is a natural choice of their rational behavior,5 and have thereby recognized the legitimacy of tacit collusion,6 resulting in a fairly wide crack long identified in antitrust law.7 Whilst this crack is further complicated by algorithms which may speed up the formation of collusion, two new legal cracks may unexpectedly occur as a result of algorithmic collusion. This article emphasizes that a sound solution to the new cracks could only be formulated on the basis of the operational mechanisms and market effects of algorithms, which may exhibit three types of distinct features as any of the following: mere tools, super-tools, or legal persons, depending on specific circumstances. In line with the traditional proposition on computer software as the mere tools of users, rules on price agreements in antitrust law are applicable only to cases where algorithms are used as mere tools. In cases where pricefixing agreements among firms can be inferred from the internal designs of algorithms, the existing prohibitive rules are, arguably, directly applicable. By contrast, if the courts and competition authorities fail to identify such an agreement in any way, it will have to be recognized that the sustainable supracompetitive pricing in such a case is established through legal tacit collusion. In fact, whether firms use algorithms or not is irrelevant to the lawfulness of anti-competitive outcomes in an oligopolistic market.8 Although algorithms’ tremendous power in information collection and analysis as well as in making a swift response may speed up the formation of supra-competitive prices, they still have to be considered as mere tools for firms to carry out dynamic pricing.9 For that reason, the courts cannot rule that firms have an intention to reach an illicit agreement, based solely upon evidence of the use of pricing algorithms and anti-competitive outcomes taking place in an oligopolistic market. This is the sole and reluctant choice of the courts. When algorithms are no longer perceived as mere tools, however, even such a compromised approach to collusion loses its justifiable grounds. As per the existing rules, the legality of tacit collusion (L) is premised on two preconditions, that is, oligopolistic market structure (o) and the rational behavior of firms (f). This can be described in the following logical formula: o f ⇔ L Both of the preconditions, however, may change in the context of algorithmic pricing. As the rationale behind the legality of tacit collusion is overturned, two new cracks emerge in antitrust law. The first new crack is correlated with the super-tool feature of algorithms, which empowers firms to surmount the limitations of oligopolistic market structure, so that tacit collusion may be achieved and sustained in a nonoligopolistic market.10 The reason why the courts give permission to tacit collusion lies in the fact that it is a rational decision of firms under the market condition of oligopoly, and thus such behavior should not be subject to the condemnation of the law, in spite of anti-competitive effects.11 Limitations of human capability constrain tacit collusion to take place only in an oligopolistic market. In a non-oligopolistic market with a relatively low market concentration, even if a firm changes price, its competitors are often unable to respond with price adjustments as a punishment for the deviation, because the resulting change in market share is usually too trivial to be detected. It accordingly becomes unrealistic for tacit collusion to cross the line into a non-oligopolistic market. The superior power of algorithms in collecting and analyzing information and in initiating a response,12 however, may unexpectedly overturn this deep-rooted understanding and set firms free from the aforementioned prerequisites for oligopolistic coordination. What is more important to antitrust law, the rationale for the legality of tacit collusion as recognized by the courts—the oligopolistic market structure13—does not exist in this scenario, resulting in a new crack in the legal framework. Another legal crack may be induced by the autonomy and uncontrollability of algorithms, which constitutes two sides of the same coin with respect to the core features of legal persons. Since machine learning algorithms can break away to a large extent from the control of users, they can come to have less the nature of tools and more the nature of legal persons.

#### Existing legal research doesn’t take into account cybernetics – which swallows their ability to explain human labor power as the root cause

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The existing paradigm of legal researches definitely requires global revision. There is a critical need to generally rethink the methodological basis and old-fashioned approaches of legal researches of the main problems of legal science. It is necessary to comprehensively investigate suggested methodological alternatives, which could enrich the intellectual horizon and methodological arsenal of scientists and specialists in the sphere of law and state. This is customary in those areas of legal science where legal logic is built into social, political, cultural and civilization contexts. We talk not only about improving existing and used methodologies, but also about attracting and including in the topical area of legal science the achievements of methodologies that are approved in other sciences. Most of them are traditionally underestimated (or simply ignored) by professional jurists, which is why they are now in the possession of other sciences such as philosophy, politology, psychology, sociology, culturology, history, economy etc. Nowadays the importance, value and necessity of comparative legal researches arise constantly. R. David in his time emphasized the fruitfulness and significance of comparative legal science for studying the history and philosophical insight of law1 . This approach is especially useful in researching the genesis, evolution and modern stage of the development of constitutionalism, when scientists focused on the cultural and historical aspect. It enables law to be looked at as a phenomenon (aspect, context) of culture. At the same time, the cultural and historical approach itself sometimes becomes a necessary part of legal (foremost comparative) research methodology2 . According to many scientific works, implementation of a comparative legal approach has become an essential part of researching the current status of state and law thanks to the significant influence of globalization. Sympathizers consider the latter as a finished (or finishing) process, which would end with the formation of a world state and law. Opposes suppose this process has no end in the near= future3 . It should also be emphasized that social sciences and, inter alia, the science of state and law are now exposed to ever more active penetration of approaches of global evolutionism, which is considered one of the main attractors in the process of accumulating scientific knowledge. The sympathizers look at it as some kind of conceptual core of scientific world view that synthesizes knowledge in relevant areas of scientific research4 . Finally, it should be mentioned that general methodological principles of cybernetic epistemology (complexity theory), incompleteness theory, and approaches to and methods of synergetics and other sciences penetrate insistently into humanitarian sciences. This process is undoubtedly appropriate5 . Today we have to acknowledge that the Russian name for science, «теориясложности», and its English analogy complexity theory (or cybernetic epistemology) now unite an ever larger quantity of existing sciences, which move to new turn of development named the sixth technological mode6 . The first theory about complexity theory, which determines the whole article and should be explained to readers, lies in the following fact. Modern civilization reaches such a development level when it has inescapably to go from single-discipline sciences aimed at conquering nature to understanding the environment and the fact that nature essentially cannot be conquered by a scrupulous particle named a human. This developed world view inevitably leads to the combination of terminology, methodology and the subject of single-discipline sciences into one undivided fundamental science – complexity theory. Following the prime movers7 ,this theory may be figuratively named “mind ecology”, “ecology of ideas”8 or “deep ecology”9 . As an integrative science of the future, complexity theory swallows all the achievements of the previous epochs, which have an allowable explanatory force and passed many scientific verifications (inductive confirmations) and falsifications (attempts to discover irreconcilable differences) that are briefly stated in incompleteness theorems. The quintessence is that the methodological part of cybernetic epistemology goes beyond artificial limitations assumed willingly by classical science. Cybernetic epistemology is a humanitarian and natural science of the sixth technological mode (according to). Its aim is to consolidate three types of modern world view: non-living sciences (mathematics, physics, chemistry etc.), living sciences and socio-economic sciences.

#### Legal focus replicates a cycle of cruel optimism and empirical failures that solidify the settler state’s authority and redirect black energy from community-building to courtrooms.

Ramsey 21, J.D.-M.Div. candidate at Harvard Law School and Harvard Divinity School. (James Stevenson, “Lawyering in the Wake: Theorizing the Practice of Law in the Midst of Anti-Black Catastrophe”, 24 *Cuny L. Rev. Footnote Forum* 12, pg. 18-22)

Conversely, wake work is about paradoxically clinging to life amidst death and catastrophe. The game has been lost. There is no pre-slavery Blackness. There is no un-murdering, no un-spilling of blood. There is no available expulsion of a foreign power, as in the case of Gandhi's India, nor is there any reason to foresee or hope for a surrender of our government structures to Indigenous folk, as in Mandela's South Africa; apartheid is perfected here. Outside of worldwide upheaval, the state – this crystallized settler colony – is here to stay, as are the scars on the peoples residing in the underbelly of society, which holds up the rest of it. 30 The hold is sturdy, and those who have been disposable are still disposable; as a matter of policy, the starved in history can still be starved, the historically captured can still be captured (e.g., arrested and incarcerated), and so on. 31 What would it mean for lawyers to practice from this place of containment, from apparent defeat? Not primarily from an obligation to universal ideals or political affiliations as Delmas describes, but from a collective mourning and hunger? How might "politics" and "obligations" be recast in the wake, and how might we triage them? Starting from the first analysis of divided loyalties, how might lawyers thinking from within the wake determine the relative weights of our obligations to the law and to those on the margins? What does the law mean to us who are already always the living dead, those whose deaths make the world possible?32

As scholars and movement lawyers have long explained, a singular focus on legal remedies for the marginalized in our context has several pitfalls and other shortcomings. First, concentrating solely or even primarily on the systemic reform of the legal system and/or direct client services has not worked. To be sure, it is no longer legal, strictly speaking, to segregate schools based on race, 33 but housing and school segregation persist.34 Lynching is technically illegal, but it persists. 35 Police still kill Black people, Black children, legally and illegally. 36 Mass incarceration has been decried by some, 37 and yet prisons, along with a visceral, systemic need to punish, also persist and are levied against Black people in particular, who have always been necessarily capturable.38 Some voting rights for Black people were secured on paper,39 but they have since been both resisted in practice and rolled back formally. 40 Wealth inequality between Black people and white people has ballooned over time, and, even more harrowingly, inequalities in life expectancy between Black people and white people still exist. 41 I do not mean to dismiss the steps toward reducing these inequities that have been made through the law or by legal actors. But, as discussed earlier, these injustices are not accidents or anomalies; they are constitutive parts of the system as it currently exists, and they mean something about who in this country can (still) be hurt and stolen from and about what this country is. Appealing to such a system to change itself has not been proven effective on its own, as many scholars have observed; forms of state oppression merely shift from one form to another.42 These so-called reforms leave the violent core of the nation intact because they must; the underlying, necessary penchant for anti-Blackness and the domination of Indigenous peoples has remained as the lifeblood of the nation-state. 43

Second, along these lines, appealing to the state for relief reinscribes the state, the coercive power it uses to effectuate its ends, and our own status as Black (non)subjects. 44 As Anthony Farley explains, praying to the state for relief is to accept the power of the state to say "yes" but also its power to say "no": "To request equality is to surrender before one begins. To request equality is to grant one's owners the power to grant or deny one's request. To grant one's owners such a power is to surrender oneself to one's owners entirely and completely." 45 To recognize this power is to submit to the law's (necessary) privileging of its interests those that give it coherence and legitimacy: the erasure of Native American peoples and the infliction of perpetual suffering upon Black people as punishable, malleable, detestable flesh 46 -over our own:

To pray for legal redress is to bow before the authority of law .... Law is only the relation of white-over-black to white-over-black to white-over-black. When we follow a legal rule we follow only the track that we have ourselves laid down. In other words, we ourselves are track, we become the track when we lay down, and we follow that track white-over-black into the future that lasts forever.47

Third, as various scholars have observed, focusing on legal redress to the exclusion of other tactics and remedies, which lawyers are prone to do, has the potential to block the building of power in the communities those lawyers serve, creating serious problems in movement work.48 For example, such a focus often contains social action and energy within the domain of the courts, as opposed to building sustainable structures and practices within the community itself." There is a lurking tendency for lawyers, because of our conservative, risk-averse training, to quell radical thought and tactics-in the name of precedent and rationality-and instead bow to the law.5 Because strictly legal approaches often rely on the unique credentials, skill set, and language of lawyers, such approaches can center and empower lawyers in movement strategy, rather than empower activists and members of the community.51 A law-focused approach tempts lawyers and community members alike to conflate the lawyer's role with that of an organizer, which is problematic because lawyers and organizers tend to employ different frameworks and techniques." Our legal system tends to atomize legal disputes and claims, often forcing legal proceedings into person-against-person conflicts and making it difficult for collective legal action, coalition building, and redress of harms on a community level.53

# 1NR – NDT r5 – Dartmouth BC

## Case

### 1NR – Atanasoski and Vara

#### The link turns all assume a liberal legal framework. Only the alt alone can overcome the cybernetic episteme.

Jiménez, 22—Melbourne Law School, The University of Melbourne (Aitor, “Law, Code and Exploitation: How Corporations Regulate the Working Conditions of the Digital Proletariat,” Critical Sociology, 2022, Vol. 48(2) 361–373, dml)

The fundamental problem with the liberal mentality is that even the most progressive interpretation of current or future liberal legal developments won’t go to the bone of the exploitative nature of digital capitalism. That is, to the antagonistic relation between workers and capital. In short, the liberal comprehends work and relations of production within the liberal framework, which has as central faiths the belief in: (1) the rule of law, and (2) the causal interrelation between law and relations of production. Under this liberal framework, a good labour law will frame the way work is organised. Yet, this has been proved to be wrong. Digital capitalism runs faster than every possible law or court decision. Besides – and above everything – labour exploitation is not a crime (Snider, 2018) since it is the pillar of the capitalistic regime.

Second, the relation of law and capital is not causal. Law is not neutral but rather determined by the social formation producing it. The legal epicentre of the relations of production in contemporary capitalism is not a net of private contractual agreements, between workers and capitalists. Even changing the nature, the form, even the contents of the contracts (e.g. extending employees benefits to every worker, which would be a great improvement), the overall course of events will not change. This is demonstrated by the way digital capitalists won in 2020 an important political battle in the US. In 2019, California passed the Assembly Bill 5 (2019); it was a major victory for those advocating for the implementation of the ABC test as a way of combating worker’s mislabelling as contractors. It took effect in January 2020, just to be overruled 10 months later by the corporate-backed Proposition 22, which legalised the worker-unfriendly previous status quo (Siddiqui and Tiku, 2020).

The ABC test is one of the declinations of the liberal fallacy that existing law can be adapted or extended (or reinterpreted) to address the problems of the digital proletariat. In order to determine the legal status of the worker as employee or contractor, the test looks at something as ethereal as ‘the employer's control or direction in performing the work’. Digital capitalists have been able to game labour legislation, both using East Coast Code and West Coast Code, ‘the code that code writers “enact”’ (software) (Lessig, 2006: 72). Creativity does not remove the exploiter. A judge in Valencia (Spain) put on paper what is obvious to workers, clients, and the general public: ‘the true means of production in this activity are not the bicycle and the cell phone that the delivery person uses, but the digital platform for matching supply and demand owned by the company, outside of which the provision of the service is not feasible’ (Pitarch and Marco, 2019).

The main issue with the legal liberal mind-set is that, deep, rich and thorough as it is, it is limited by the burdens of the capitalist legal form. And this impedes liberal lawmakers and scholars in their ability to realise that the central aspect of the relations of production is the production process itself. The working class’ material conditions won’t change until power relations in contemporary spaces of production change as well. The only way to deal with the exploitative nature of labour is by thinking from a non-capitalist epistemology.

#### They rely on a Fordist understanding of labor—assume that for every worker they empower, they disempower far more.

Jiménez, 22—Melbourne Law School, The University of Melbourne (Aitor, “Law, Code and Exploitation: How Corporations Regulate the Working Conditions of the Digital Proletariat,” Critical Sociology, 2022, Vol. 48(2) 361–373, dml)

As has been argued in multiple places (Baldi, 1972; Berardi, 2001), the 1970s represent a turning point for the mass worker in the Global North. The post-Fordist regime of accumulation superseded Fordism as the hegemonic mode of production, altering the equilibrium between capital and labour. It is not the place here to discuss why that happened. Perhaps because, as Tronti (2019) claims, working-class struggles forced capital to move and to evolve, or because, as here is argued, capitalist development transformed class composition. What matters is that the way work was organised changed, and the legal field was a central aspect of this swift transformation. Contrary to what some believed, Neoliberalism was not a deregulatory force, but a hyper normative regime granting labour regulatory powers to corporations to the detriment of the state. Law was, hence, a key aspect of the neoliberal offensive against everything challenging the market as the driving force of the social factory, and more specifically against workers’ organisations and labour rights. Even more, law was one of the fundamental technologies capitalists used to produce a new form of life fully subdued to the fluxes of capital, now known as precarity.

Precarity was a legally induced existential and a social condition of vulnerability defined by the end of the Fordist certainties: work, house, structure and defined paths (Foti, 2017). Precarity was everything that was outside the predictability and social protective regime safeguarded by Fordism, unionism and the welfare state. What was once the hegemonic form of organising work, the fulltime, rights-bearing mass worker became one among the many legal categories, and the only one truly protected from the capitalist tempest of uncertainty. A heterogeneous army of part-time, eventual and undocumented workers became dominant in the metropolis’ productive spaces. The outside, the abnormal, rebranded by many as the precarious, became under neoliberal’s hegemony the new normal (Berry and McDaniel, 2020; Butler, 2016; Lorey, 2015). The precarious was, hence, a product of the subjectivation processes (Foucault, 1978) triggered by the neoliberal rule of law. Today, many of us live precarious lives, precarity is the millennial default condition. However, precarity – that is an existence and social condition – is all what the precarious have in common. So, there was a substance, the soul of what was to come, but not its flesh.

What Makes You a Digital Proletarian?

The mass worker is not defined by the will to be a worker or by its social condition. It is not one of those nomadic identities that Lorey (2015) or Butler (2006) talk about. Mass workers are so because they suffer from the legalised exploitative conditions of the industrial capitalist mode of production. One does not have to be in the factory to be working class, but one must be immersed and affected by the relations of production that it generates. That is why the popular culture speaks of working-class neighbourhoods, of working-class attitude, or of working-class instinct. You belonged to that class whether you wanted to or not. Whether you were producing cars or washing machines, operating a combine, making photocopies or photocopiers. It was not about what the subjects were producing, what they were doing or how they were doing it.

The question then arises: what may a Deliveroo rider, an Uber driver, a professor at an online University, an operator at an Amazon logistics centre have in common? It is not who hires them or what they produce. It is not their legal status as employees, subcontractors, workers or selfemployed. It is neither the temporality and the ‘geographic stickiness’ of their work (Woodcock and Graham, 2019), nor it is the nature of the entity exploiting them (Pesole et al., 2018). The imaginative way they are labelled by digital capitalists is also irrelevant. What they share – what they have in common no matter their country, their religion, their gender, or their personal political preference – is that they are being algorithmically exploited under the same regime of accumulation, is that they do not own the means of production of the digital era. That is why, today, we can talk of the digital proletariat. We can do so because digital capitalists have finally dismantled the blurry boundaries between base and superstructure as they control both through a single apparatus: an algorithmic system of exploitation. The social existence of the digital proletariat is beingproduced in the assemblage of law, code and machines owned by digital capitalists. However, we should bear in mind, that this ongoing process, far from being the disruptive result of a new set of technologies, is part of the broader neoliberal managerial project of efficiency and innovation that dismantled the Fordist legal subjectivity to replace it with the precarious, now reframed in the cybernetic machinery as the digital proletariat.

#### Their accounting of power is outdated—can’t account for AI generally, or for firms as legal persons and not simply collections of contractual relations.

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In liberal jurisdictions, the social frictions surrounding artificial intelligence have been understood through liberalism’s conceptual frames: the individual rational subject, their autonomy and privacy, their coordination through the public market, and the social aim of egalitarianism. However, the regulatory attempts to bring artificial intelligence in line with liberal expectations have failed in many ways. Artificial intelligence is a paradigm of thought based on scientific discoveries, as well as a system of sociotechnical organization, as much as it is a specific set of technologies. In this section, we consider artificial intelligence in its own terms. We find that as a scientific field, it has proven and applied several ideas that are antithetical to liberalism, including control and optimization, bounded rationality, and the platform.

2.1 From subject to controller

Control engineering methods can be traced back to the end of the 19th century [13], and they developed through cybernetics—a postWW2 interdisciplinary amalgam of emerging scientific theories and engineering practices [8, 35, 78]. Originally, control engineering concerned the creation of machines, like the homeostat or the heatseeking missile, that would adjust their behavior dynamically to perform a function; for example, the missile rotates towards a target with speed that slows to zero as it nears the optimal orientation. Aligned with the new sciences of control came a new concept of the agent: the agent is a controller that behaves in an environment to optimize its goals, often characterized by a von Neumann utility function.

Working with behavioral and cognitive scientists, cyberneticists soon began conceptualizing humans in these terms. This led to an idea of humans as “patterns of behavior” and symbolic information processors [35, 46], enabling the argument that “a uniform behavioristic analysis is applicable to both machines and living organisms, regardless of the complexity of the behavior.” Practitioners thus explored the utility of control, computation, and feedback for directing combined human-machine systems towards particular goals [78]. Cognitive scientists, always in close communication with AI research, have come to codify the laws of rational thought and action in the idiom of more basic statistical and computational theory [6, 24, 25, 50, 97]. Contemporary artificial intelligence is often framed as the implementation of these principles in machine systems designed to accomplish an expanding range of tasks. In variational Bayesian inference [40], for example, optimal beliefs are arrived at through iteratively tuning model parameters in an optimization procedure not unlike the targeting of a heat-seeking missile.

In this paradigm, the logical principles of individual human and artificial rationality are the same. The salient difference between the human, the organization, and artificial intelligence is therefore the ability to access data and process it efficiently. This view of the agent as controller and controlled flouts liberalism’s view of the individual as autonomous and private author of their own life. Instead, the individual cedes their special status and becomes one form of agent among many others.

2.2 From firm to organization

Whereas the firm for liberalism is a nexus of contracts, headed by the entrepreneur, made between rational individuals to reduce their transaction costs, artificial intelligence has transformed the firm into something else. Herbert Simon, the foundational AI theorist and economist, perhaps articulated this transformation best [85– 87]. During World War 2, organizational decision-making became the subject of operations research optimization techniques like linear programming. Under these conditions, the rational choice assumptions of classical economic models, inspired by liberalism’s model of the rational individual subject, broke down. Rather, as organizations struggled with the computational intractability of the problems they faced, they discovered that people and machines were only boundedly rational. That meant problem-solving ability is limited by cognitive and sensory capacity, as well as environmental factors. Rationality thus became a complex, quantitative distinction, rather than a simple qualitative one as understood by liberalism.

With the understanding that humans are only boundedly rational has come the spectre of rationality that is greater-than-human. One version of this story is told by Bostrom [20], who argues that the world is threatened by the possibility of a superintelligence that could destroy human life as we know it. The argument goes that the first “general Artificial Intelligence,” or GAI, capable of thought approximating that of a human, would have a drive to expand its own cognitive power as an instrumental goal towards any other goals. Unless we can discover a way to perfectly align the superintelligence’s goals with humanity’s, its climb towards omnipotence will endanger us all. While there are reasons to consider Bostrom’s vision to be far-fetched [14], it can be interpreted as a compelling futurist parable about the modern corporation. Corporations, which unite many individuals and technical systems under centralized leadership, surely can outperform the individual at many cognitive tasks [86]. While originally a legal fiction designed to protect investors from liability, corporate personhood is now a legally recognized form of artificial agency that predates and informs questions about the nature of artificial intelligence today [99].

Economic theory has kept up with the changing nature of the firm. Alchian and Demsetz [4] proposed a revised theory of the firm in which the role of the manager is to be a ‘meter’ on internal work to prevent free-riding by workers. While Simon emphasized the goal-oriented nature of the firm, Alchian and Demsetz tilted the understanding of the firm towards that of a cybernetic unity. Today, liberalism’s idea of the firm as an individual entrepreneur’s contractual relations with other individuals is a quaint stage in the ontogenesis of the modern corporation, which typically has many absentee investors owning shares in a legal entity controlled by a managerial layer of organized people and information systems. The managerial layer is the system’s Artificial Intelligence. More often than not, it is bound by fiduciary duty to the goal of maximizing profit for its shareholders [27]. To that end, it seeks greater control in, over, and as a market.

2.3 Smart markets

The widespread adoption of the Internet created booming potential for profit-seeking corporations. However, to make the most of these opportunities, businesses needed to monetize information services at scale. Artificial intelligence would soon be used to enable these new business models. According to the public market logic that underlies liberal theory, the price of a good should be equal to its marginal cost, which for information goods is understood to be near zero. How could a business profit from information goods on the Internet? One solution advanced by Shapiro and Varian [83] (that emerged alongside the expansion of intellectual property rights and their use for the extraction of rents on information economy goods) was effective price discrimination—charging customers individually the maximum price that they they were willing to pay. Through individualized pricing, accomplished through the gathering of personalized purchase histories [2] and versioning of products, a firm can redirect what was consumer surplus into producer surplus and thereby recoup the fixed costs of producing the information good in the first place.

Hence, artificial intelligence has permeated and in many ways become the market. Whereas Coase saw the purpose of the firm as reducing transaction costs from market interactions, today some of the largest firms are themselves markets: platforms that offer a space for other businesses and consumers to operate with reduced transaction costs. Search engines, recommendation systems, and behavioral advertising all lubricate economic transactions. Both the market platforms and the digital businesses that operate on them constantly harvest information with which they can gain advantage over competitors and customers through massive scale experimentation [30].

But these markets are not public markets, wherein relevant information is available to all participants and private goods may be freely exchanged [31]. In this economy information services are rented to specific customers who do not have the opportunity to resell [47, 77]. While telecommunications infrastructure has been used in some places to increase price transparency and market efficiency [59], platforms operate in systems of profound information asymmetry, leading to unknown amounts of market failure [3, 94]. Some argue they are no longer even markets [18, 69, 100] but rather algorithmic simulations of markets designed to coordinate actors towards the goals of the market’s corporate owner. This inverts the relationship between the public and private spheres. Under liberalism, individuals have private domains mediated by a public market; today, individual domains are made public, mediated by private platforms. This inversion changes the apparatus of economic distribution in liberalism that has been a mainstay of its legitimacy. Nothing guarantees equivalency between individuals in such a market; egalitarianism is undermined by the inequality between individuals and the platforms themselves.

#### The law has been displaced by code as the structuring principle of society. Their offense is idealistic.

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The discussions around the resemblance between law and code are as old as code. After all, law is a normative language intended to shape conducts, frame behaviours and structure reality. In short, it is a system of rules regulating actions. And code is the same, a system to program instructions. A language that executes. Both are a system of symbols that, when activated, put in motion, stop, create or destroy something (Lessig, 2006). However, as Lessig’s works show, the relationship between law and code has fundamentally changed. Before the digital revolution, law was undisputedly ruling the ‘real world’, while code was structuring the so-called cyberspace. But then the digital revolution occurred and digital technologies became ubiquitous and increasingly embroiled with law. The rise of the internet – with its libertarian dreams of free will with no laws – gave rise to the rule of digital monopolies, who ruled and legislated like tyrants in ‘cyberspace’ (Hassan and Filippi, 2017). However, cyberspace is not a place of fantasy. It is imbricated with reality. The digital economy is neither based on the material nor the cyberworld, but on a ‘cyber-physical infrastructure’ (Jacob, 2017), composed by programmes, software and the network, of course – but also data centres, investors, workers, minerals, cables and every possibly thing that can be perceived through senses.

In a vulgarised version of Marxism popularised under the Stalinist regime, law was considered as a simple product of the economic forces in motion (Vyshinsky, 1948). They drew on Marx’s hierarchical distinction of the economic base and the legal and political superstructure arising on it (1979). With the becoming of code as a fundamental mean of production of the digital era, the positioning of law as an element solely circumscribed to the superstructure has been seriously, if not definitely, demolished. As Lessig announced, code and law not only share common grounds, indeed they have become undistinguishable. Hence, paraphrasing Pistor (2019), the ‘code of capital’ is present in today’s digital factories, not as an outside regulatory force, but blended with its more complex machinery.

Think of an Uber driver driving someone somewhere. In this apparently simple business, there are multiple laws in motion: contractual/private relations, state laws, highway codes, constitutional rights regarding for example no discrimination, perhaps an insurance. All of those legal relations regulate the actions between the worker, the client and the environment. The different laws and rules in motion during that specific provision of services are, even in their complexity, clear, open to everyone willing (or able) to look at them. Those regulations are perhaps prescriptive and normative, but ostensibly free will still exists. Perhaps what is most important, the enabling legislation, directly or indirectly, may be discussed and passed by some authority with democratic legitimacy. However, in the case of the digital economy, this is just half of the story. The interactions between the worker and the customer are meticulously controlled by the algorithm. Uber uses multiple algorithms and pieces of software to control the way workers and customers match, to set the prices and the route. It measures the speed, the way a driver uses car brakes. It measures the time. It finally captures the rating given by the customer to the worker to establish a rank. The working conditions of a business present in 63 countries, with nearly 3 million drivers (Sainato, 2019), are regulated by algorithms, a new kind of private law coded by the owners of capital, with no State or supreme authority above the corporation whatsoever.

Tech and law academics such as Hildebrandt (2018), Yeung (2011, 2017, 2018), Pasquale (2020), among others, have analysed how corporations are using digital technologies to enhance new forms of algorithmic control and surveillance over citizens. These technologies, labelled as automated decision-making (being algorithmic regulation a form of automated decision-making), have been designed to regulate and control behaviour through a process of automated data collection, analysis and delivering of positive/negative incentives to ‘individuals for specific actions’ (Cristianini and Scantamburlo, 2019: 647), aimed to reach a previously defined objective (Yeung, 2018: 507). Or put it in other words, a form of social control based on a cybernetic feedback loop. This sociotechnical framework would be composed of code, a system of automated data collection and the wider sociopolitical environment (Spielkamp, 2019).

Yeung argues that, in appearance, algorithmic regulation looks like any other architectural or design-based techniques of control and hence it is structured around three core components: setting standards, gathering information and finding the ways to enforce standards and modify behaviour. However, Yeung (2018), considers that algorithmic regulation differs from architectural regulation in two critical aspects: its adaptive feature, and the extraordinarily technological power driving the algorithms. These technologies are currently being used by public and private institutions around the world, in sectors such as education, policing, welfare and health, to name a few, with catastrophic consequences for the citizenry. A societal automating process (Spielkamp, 2019) orchestrated by public–private initiatives, ideologically driven by exacerbated waves of neoliberalism. This form of algorithmic power is leading to a new form of social ordering intimately connected with digital and surveillance capitalism (Morozov, 2019; Zuboff, 2019).

Tech and law scholars’ critique of automated decisions highlights the lack of accountability, transparency and public review of automated decision system, making these technologies inscrutable and eventually incontestable. Liberals argue that algorithmic regulation is threatening key aspects of (allegedly) Western Values (Kantayya, 2020) such as equality, non-discrimination, free speech and representative democracy. For them, the solution would be to stablish a legal protection by the design that would ‘safeguard our ability – as individuals – to challenge automated decision systems, by providing time and space to test and contest the workings of such systems’ (Hildebrandt, 2018: 16). Despite the relevance and pertinency of their arguments, the liberal critique to the algorithmic domination exerted by corporations is limited in reach, depth and scope by the liberal and individualistic values underpinning their arguments. They do not see algorithmic regulation as a form of class oppression but a threat to the individual liberties reified by liberalism, and hence they are unable to see how the rise of these sociotechnical system is leading to the production of new forms of exploitation and subjectivation.