

A Speculative Sketch

On Data Dispositives and Cognitive Apparatuses*

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Data has become an intensely contested territory as data-based information and the new knowledge it creates have come to perform a prominent role in our world of the Internet. The production, use, and control of data intensify what Michel Foucault conceptualizes as *dispositif*¹. Today, the connection between data and dispositive is compelling in regard to the political ramifications and potential for fabricating reality bubbles. Data is increasingly deployed in order to shape and augment dominant power dispositives. The gravity of data-enabled power dispositives and their impact on human life cannot be overstated. Power dispositives consist of »spaces of discipline« (Foucault 1995: 141–149) that encompass universal institutions (e.g., of government, education, health, culture, society, etc.) and their codification². Biopolitics (cf. Foucault 2003; Foucault 1980: 55–62; Dillon/Lobo-Guerrero 2008) arising from the sweeping power of the state once provided publicly staged spectacles to discourage criminality, dissent, and resistance by intimidation and fear of physical destruction (cf. Foucault 1995: 104–115). Modern³ codification on the other hand has contributed to the more humane form of state's power. It has eventually progressed to prohibit arbitrary torture, mutilation, and execution. Today's state apparatuses carry out surveillance, detention, control, and corrective or punitive measures that emphasize intelligence through technology-driven codification, the techno-codification.

In parallel with juridical codification, data enables the power dispositive far deeper in reach and wider in scope in terms of how it is written, implemented, represented, distributed, perceived, and acted upon. To understand this point, we can consider the power and influence of data-driven entities such as Facebook, Twitter, Google, or Amazon, not to mention various state agencies. Even traditional mass media such as TV and radio channels as well as newspapers now depend on the data-driven subscription and advertising-based funding model through the Internet. In the ubiquitous data stream, the proliferation of disinformation and so-called »fake news«, and the radicalization symmetrical to *mediatized*⁴ data, often result in fabricated information and worldviews. We can cite the UK company Cambridge Analytica's efforts to manipulate voters in the UK and the US through personal data.⁵ We can also cite Palantir Technologies Inc., a US company that specializes in Big Data and Artificial Intelligence (AI), involved in autonomous weapons systems sponsored by the US Army Research Lab.⁶ The collection and use of data for dominance in either profit or power by such companies, their corporate clients, and governments represent a precarious current that implicates data in tangible, even grave, consequences to human life.

¹ Hereafter »dispositive« (Foucault 1980: 194–195). Here, we have adopted the English version »dispositive« as proposed by Jeffrey Bussolini (2010) and by Gregg Lambert (2013).

² For example, Jeremy Bentham, the eighteenth-century English jurist Foucault cites, claims that codification, in contrast to common laws, offers the more rational approach to the rules of a society and can form a more comprehensive and effective legal system. It attempts to transcend the traditions and conventions by codified texts, the codes that can be revised, amended, and when necessary, repealed and discarded (Miller 1987 & Burdick 1910).

³ Here we mean »modern« to roughly indicate the period around the American and French Revolutions in the late eighteenth century as in the case of Bentham (note 2 above).

⁴ As a transitive verb, »mediatize« means to »annex (a state) to another« and/or to »make instrumental or subordinate.« As an intransitive verb, it means »to act as mediator« or »to become a mediate vassal of the Holy Roman Empire.« (<https://www.merriam-webster.com/dictionary/mediatized>; accessed: July 27, 2021). In this article, »mediatize« indicates the transitive verb form in relation to dispositive and apparatus, meaning »to make instrumental« and/or »to act as mediator«.

⁵ <https://knowledge.wharton.upenn.edu/article/fallout-cambridge-analytica/> (accessed: April 8, 2021).

⁶ The weapons development work, code-named Project Maven, was first contracted to Google. After the employees' opposition against the project, Google resigned and Palantir was commissioned to continue the project. See: <https://www.businessinsider.com/palantir-ceo-alex-karp-claims-the-companys-tech-is-used-to-target-and-kill-terrorists-2020-5?r=DE&IR=T>; and <https://www.businesswire.com/news/home/20201001005334/en/U.S.-Army-Research-Lab-Selects-Palantir-Technologies-Inc.-for-91M-Artificial-Intelligence-and-Machine-Learning-Development> (both accessed on: April 8, 2021).

Codifying power approaches data as a means to project consistency, coherence, rationality, and ultimately even equity and justice by the seeming objectivity afforded by technology (cf. Rutsky 1999: 78–79). Data-driven codification strengthens the collective agendas that are reflected, shared, practiced, and enforced as the de facto authority derived from technological apparatuses. In both standardization and the performative-operative aspects, data-driven codification reflects the intent and will to *organ-ize*⁷ and manage, if not entirely to dictate, various segments of a society.

The effects of codifying by technological dispositives are symmetrical to the data, both subjective and objective. Not only the inherited traditions of information have evolved into data, but also the conception, composition, representation, dissemination, and use of data are parameterized. We spend hours every day decoding and encoding certain data and its constituent parts that are in turn parsed from other databases. Such *databasing* of quotidian life connects the marketing and profit interests of capitalist entities very closely with efficient workflow and increased profit, thereby directly affecting the disposability of leisure that in turn encourages consumption. Our everyday life often consists of specifically calibrated data that acts on both our body and mind.. The supra-cognitive power of data-dispositives and their apparatuses in large part have taken over our capacities as *Homo sapiens*.

The codification specific to apparatus-centric culture – the kinds of cultural activities and products that depend on extra-somatic and extra-cognitive apparatuses for conception, composition, production, dissemination, and reception – expresses radically different kinds of rules and protocols. From such codification emerges the new forms of »hot media« (McLuhan 2003: 39)⁸ with ultra-high definition that greatly expand the speed, scale, and scope of the dominant power's reach, influence, and capability. Thus a »discourse network« (Kittler 1990) of data, or a data-discourse network, is linked to a given dispositive and its technological apparatuses that enable such data-driven operations. Such operative and administrative

»Our everyday life often consists of specifically calibrated data that no longer directly acts on our body.«

dispositives and their codification influence producing, standardizing, implementing, and enforcing the data and its integrity. In this respect, the data includes anything and everything that may be both quantitatively and qualitatively collected, classified, interpreted, represented, disseminated, and exploited.

Regardless of the origin, topic, and content of the data, today's ubiquitous algorithm-based codification underscores the need for new critical discourse. The intermodal⁹ codification of data may be characterized as a discourse as it already contains the type of information that is invisible, but nonetheless dictates how determinate any work is in relation to various media-apparatus combinations. The global networks of expansive databases connect with one another and behave in an intermodal way that is encoded and managed by various standards of semiotic systems. Such codification includes not only text and image contents, but also the names of the authors, the dates of creation and modification, the kind of application used, and so on. This is known as the metadata: The data about data. At the same time, this codification allows the archive to become fluid in such a way that what has been encoded may be transposed, modulated, exported, edited, and extended to another form of »object-event« (Foucault 2006).

Intermodal encoding in markup languages (e.g. SGML, HTML, XML, etc.)¹⁰ produces object-events for the Internet.

⁷ Here we emphasize »organ« as in a process of turning people and things into organs of a larger body, similar to the meaning of »sublate«.

⁸ Whether or not today's internet-based media is necessarily hot in McLuhan's sense is debatable, as certain activities may require more involvement than traditional media, while some others less due to automated processes the technologies afford.

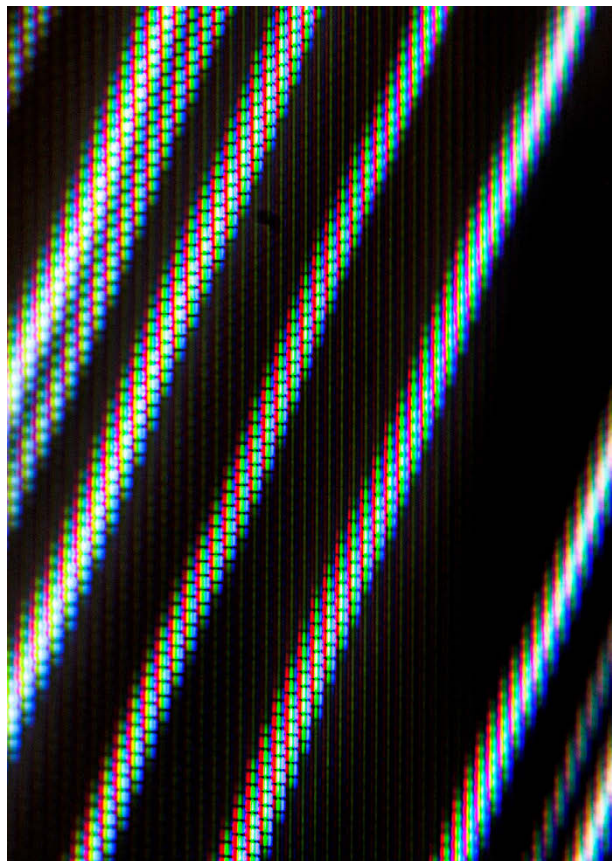
⁹ The term »intermodal« (by extension »intermodality«) has been used in psychology to indicate, for example, how different senses relate to one another and register stimuli as pleasant or unpleasant. One of the earliest examples we could find was Albert J. Harris (1932).

It is also used in transportation and logistics. The Merriam-Webster online dictionary defines »intermodal« as »being or involving transportation by more than one form of carrier during a single journey«, and locates the first known use in 1963 (<https://www.merriam-webster.com/dictionary/intermodal>, accessed: July 27, 2021). In this article, »intermodality« indicates the technical capability to produce, distribute, and present media contents on various classes of devices in a consistent manner.

¹⁰ See <https://www.w3.org/TR/xml/> (accessed: May 26, 2021).



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Through the interchangeability of contents on various devices, data-driven object-events become intermodal. Such interchangeability and resulting intermodality also allow data to »modulate« (Masumi 2002: 76) among various mediations of cultural categories, or enclosures. According to Deleuze, »Enclosures are molds, distinct castings, but controls are a *modulation*, like a self-deforming cast that will continuously change from one moment to the other, or like a sieve whose mesh will transmute from point to point.« (Deleuze 1992: 4; italics in original) Such enclosures are »no longer the distinct analogical spaces [...] but coded figures – deformable and transformable [...].« (Deleuze 1992: 6) The modulation also pertains to the conception, composition, presentation, and capacity of data to significantly expand the scale and scope of its affectation. Hence the modulation provides a vastly richer potential by more easily and effectively incorporating other kinds of apparatus- and codification-driven perceptions of a world as well as what is regarded as tradition and convention.

Today's digital data and its media are distinctive in their capacity to span different types of devices and shift and even deform contents in time, place, and meaning, depending on how the content is encoded and presented. Intermodal encoding languages make it possible to assemble a large amount of information in a way that is not bound by temporal and geographical limitations. Digitally encoded and codified databases have led to a new construct of knowledge that is based on values created by intermodality. Thus, digital media make the one-to-one correlation between the actual and the virtual highly moot, even impossible (cf. Hayles 1993: 71), as there exists no single definitive authorship of a database. The systemic disjunctions and random slippages are inherent in digital data and media in relation to actuality. Yet, this also makes it possible to work with and manipulate the contents in ways that is only possible with the digital technology in order to distinguish among medium, content, and pragmatics. Our daily interactions with and through algorithmic apparatuses consist of modulations between our explicit action and the contingencies that occupy the disjunctions of such modulations.

Apparatzation¹¹ through codification involves a new set of operations and expertise, detached from the direct author-medium-content relationship that an authorial work used to historically embody. Databases depend on specifications set by the programmers and engineers who give a tangible shape to the intent of a given database beyond the question of clear authorship. It is hardly an exaggeration that the data programmers' and engineers' intimacy with the encoding regime is crucial to the production and existence of a data enterprise in the apparatus-centric culture that we live in today.

Ever since the W3¹² codification of the Internet, the traditional publishing apparatus (i.e. the collective of writers, agents, publishers, printing companies, critics, reviewers, etc.) has greatly diminished in power and influence, followed by other forms of media, according to the varying degrees of technical complexity. Inversely, the media apparatuses that embraced W3 have gained more power and influence exceeding TV and radio broadcasts, not to mention the traditional print media. Owing to the seemingly open-ended, fluid appearance of the newly codified dataspace, the notion of nomadic »smooth space« (Deleuze/Guattari 1984: 10–12) appeared to portend a new opportunity for resistance and liberation the modernist avant-gardes once envisioned. In the newly codified smooth dataspace and its phantasmagoria¹³, authorial substance has assumed a new assemblage (Deleuze/Guattari 1984: 8–10), the radicalization of technology, in which the content and authorship diverge in the disjunction between bodies and organs, spanning over far wider extremities.

The dispositives of power and control that used to be imposed primarily on the body itself now operate on the perceptual and cognitive areas through mediatic technologies giving rise to »noopolitics« (Lazzarato 2006 & Terranova 2007). Through such nootechnologies, the discursive positions of data have shifted to the apparatuses of the virtual and its agents. Data in large part belongs to the discourse that gives shape and meaning to the construct beyond human perceptual and cognitive comprehension.

¹¹ In parallel with »dispositive« (*dispositif*), this article employs »apparatus« (*appareil*) to indicate technical and structural organisation, akin to the »bureaucratic« of the three fundamental social organizations in Max Weber (1964). Apparatuses with highly functional bureaucratic organization, rather than charismatic or traditional ones, help implement and enforce effectively the rationality and needs of the power dispositive. This article uses both notions – dispositive and apparatus – in parallel in order to indicate two crucial facets of a dominant power: dispositive indicates the strategic conceptual dimension of the dominant power, while apparatus indicates the mechanistic operative side of the same dominant power. We chose to employ apparatus in parallel with, not as a replacement of, dispositive.

¹² <https://www.w3.org> (accessed: May 16, 2021)

¹³ For discussions on phantasmagoria, see Christine Blaettler (2012), also Andreas Huyssen (1996) and Theodor W. Adorno (2005): 74–85.

The historical dispositives of power have relied on the textural codification of conventions, means, and techniques that help to present, illustrate, and demonstrate the potentiality of programmatic instantiation and construction. In the age of the Internet, they have appropriated data that reinforce and efficiently administer striation and subjectification by compartmentalizing and discriminating¹⁴. In the meantime, the process of redefining and organ-izing smooth space is not unlike Henri Lefebvre's »space of catastrophe« (Lefebvre 2009: 247), where »a differential space« destroys inherited space in the same way as the perspectival space destroys the symbolic space (Lefebvre 2009: 248). The various strategies of power are primarily spatial in the way they attempt to manage and control the apparent volatilities that may emerge in any society. The data-centric management and enforcement of production and property include the apparatuses that produce technological innovations and corresponding new explicit knowledge. In the process, the codification helps control the »chaos and dissolution«, while implementing »the differential and the concrete« (Lefebvre 2009: 249–250).

In the foregoing process, data loses its wider political, social, and cultural potential for enlightenment (Picon 2004: 18) and turns into yet another agent for maximizing profit that drives dominant power. The data and its media afford a new capability that is only possible in the »allopoiesis« (Krippendorff 1986) of apparatization and codification. We may criticize and accuse the allographic¹⁵ apparatuses of the disintegration of an individual, a coherent body that exceeds the simple sum of individual organs. We may also mourn the demise of such a coherent body and attribute it to the new techno-dispositives, whose ideological purpose is captured by the economic and programmatic maximization of »cognitive capitalism« (Boutang 2011: 50–59) driven by data.

The potential for dissonance and alterity to empower our consciousness augmented by data is also as compelling as how the data is distorted and deployed toward spurious ends. The power gained from the assemblage of new apparatuses and codification should be liberating in its very potential for an expanded horizon of possibilities, instead of further elevating and empowering the status quo of the hegemonic dispositives that

have persisted for centuries. Every new technological invention, especially since the mid-nineteenth century, has resulted in some form of avant-garde. The modernist avant-garde, for example, emphasized aesthetic experience as an agent of change that is empowered by modern machines. Even for data as a form of supposedly objective information on a specific subject matter, the modernist optimism for technology and its potential for new discourse are highly relevant for its potential for reform. In contrast, today's data arises from the new software and media of digitally codified technology, not machines. Its pseudo-visionary posturing by the commanding actors often intensifies the power for domination. It also cultivates and reinforces the fetish and cult of authoritarian apparatuses (not to mention the mendacious characters operating them) and the commodity-form (Marx 2004: 164–165) based on manipulation, exploitation, and subjugation. Data and databases, appropriated by the cognitive dispositives driving today's noopolitics, have entangled us in a way biopolitics could never have.

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¹⁴ Here »discriminating« simply indicates isolating specific differences and thereby choosing or separating a particular instance for a specific purpose. It is not meant to indicate »discriminate against« in the political sense commonly used today.

¹⁵ »Allographic« simply means that an author's work does not in itself produce the final product, but is a composition or an instruction that informs what the final product may be, e.g. in architectural drawings or musical scores. The composition is then carried out by others to produce the final outcome. See: Nelson Goodman (1976: 99–123). Also see: Anthony Ralls (1972).

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