

Theorising a Multidimensional Model for Analysing Data Fetishism: Reconciling Marxist and Freudian Approaches to the ‘Split’

Andrea Miconi and Nico Carpentier

1 Introduction¹

In contemporary Western societies, computer-processed/generated large-scale data has achieved an almost sacred position, becoming articulated as an autonomous force that holds the promise of societal advancement. In this essay, we want to deploy the notion of data fetishism to capture and unpack this centralising of computer-processed/generated large-scale data and its societal privileging over knowledge. We will start by drawing on the most classical model in critical sociology – Marx’s idea of exploitation and fetishism – in order to construct a multi-dimensional model that allows for a better understanding of the phenomenon of data fetishism. At the same time, with this article, we want to expand the more traditional approaches of critical sociology, and attempt a cross-fertilisation with another key approach to fetishism – namely Freud’s and Lacan’s theorisations – while being fully aware of the dilemmas related to such an effort (see, for instance, Jameson’s discussion of Psychoanalytic criticism, in Jameson, 1977: 338).

More precisely, this article will start by identifying (and briefly sketching) these two main approaches of the fetishism concept, the material-structural

¹ This chapter results from a long-term theoretical investigation, also carried on in the context of the Horizon Europe project Mapping Media for Future Democracies – MEDEMAP (has received funding from the European Union’s HORIZON research and innovation action under Grant Agreement No 101094984), and European Media Platforms: Assessing Positive and Negative Externalities for European Culture – EUMEMPLAT (has received funding from the European Union’s Horizon 2020 research and innovation program under grant agreement No 101004488). The information, views and opinions in this publication are those of the authors and do not necessarily reflect those of the European Union or of both research projects. Neither the European Union institutions or bodies, nor any person acting on their behalf may be held responsible for the use which may be made of the information contained herein. As is often the case, the authors had the occasion of discussing the topic with a number of colleagues, among which we feel the need to mention the MEDEMAP Principal Investigator, Josef Seethaler, and to thank in particular Inna Lyubareva and Romain Billot.

approach in Marx, and the discourse-subjective approach in Freud. In the next step, we will attempt to reconcile and integrate these two approaches through a number of bridging elements, namely Lacan's (1955–1956) and Žižek's (1989; 1997) mediation between the individual and the societal, and Carpentier's (2017) work on the discursive-material knot. These bridges will allow for the development of a six-dimensional model that captures the specificity of data fetishism in the third and last part of this essay. In our conclusion, we will eventually argue that empirical research is also needed, in order to put this critical framework to the test and to further assess the actual impact of data fetishism on the various social domains and their power configurations.

2 Fetishism in Marx and Freud

Any line of reasoning on the category of fetishism would have to begin with the two founding fathers of the modern humanities.² Its *material* dimension, to start with, has been theorised in Marx's first book of *Capital*, and namely in the section about money and commodity:

A commodity is therefore a mysterious thing, simply because in it the social character of men's labour appears to them as an objective character stamped upon the product of that labour; because the relation of the producers to the sum total of their own labour is presented to them as a social relation, existing not between themselves, but between the products of their labour. [...] There it is a definite social relation between men, that assumes, in their eyes, the fantastic form of a relation between things. [...] This I call the Fetishism which attaches itself to the products of labour, so soon as they are produced as commodities, and which is therefore inseparable from the production of commodities. (Marx, 1867: 47–48)

According to the most canonical critique of political economy, the fetishism inversion is due to the commodity appearing as an autonomous entity and hiding the human work by which it had been produced. For Marx, fetishism comes as a specific feature of the capitalist relations of production, ultimately

² The necessary clarification is that we will not be considering Marx's and Freud's theories *per se* – which would be out of the scope of the essay – while isolating the notion of fetishism as a specific aspect, in order to individuate the roots of its material and discourse dimensions. As a consequence, we will not address the canonical interpretations of those theoretical systems.

based on a *split*: the separation between labour as a human activity and the control of the material means necessary to it, in correspondence with the cyclical advent of so-called primitive accumulation.³

Two generations later, it was Freud who addressed fetishism, but from a clearly different perspective, with fetishism being related to the archetypal prototype of the male genitalia, where it unfolds through the replacement of the sexual organ by a sexualised different part of the body. More precisely, Freud also defines a pathological form of fetishism, as

the situation only becomes pathological when the longing for the fetish passes beyond the point of being merely a necessary condition attached to the sexual object and actually takes the place of the normal aim, and, further, when the fetish becomes detached from a particular individual and becomes the sole sexual object. (Freud, 1905: 33)

Of course, some of the practices that were labelled at that time as 'pathological' are nowadays seen as common, or at the very maximum as non-standard libidinal passions. Freud does individuate a tipping point, separating ordinary forms of fetishism from their critical manifestations. The first forms are based on the replacement of the sexual organ with another part of the other's body, albeit not necessarily articulated with sexual functions – the person's hair or foot, in Freud's preferred examples. Fetishisation only becomes pathological when the focus is placed on the abstract image of the hair or the foot, and that body part then becomes disconnected from the organism it belongs to, and reified as an object of desire *in itself*.

What Freud's interpretation has in common with Marx's, we would argue, is the recognition of the *split* as the igniter of the whole phenomenon. In Freud's case, it is the symbolic extraction of the organ from the body, which then features as the object of desire, displacing desire from the person to the abstract organ; in Marx's case, it is the separation between labour and capital due to the subsumption of people's lifetime, with the enclosures of the agricultural commons, and then with the unprecedented centralisation processes set in motion by the industrial revolution. This communality is a first indication that the divide between the two authors (and traditions) can be transcended,

3 See Marx 1867: 506–509. 'Primitive' is actually an improper translation of the German 'Unsprüngliche Akkumulation', which rather signifies *original* accumulation. Far from being a terminological issue, this is key to a general misunderstanding of the concept, as speaking of 'primitive accumulation' would lead to believe in the myth of a *single* historic fall, while *original* reminds us of a series of *recursive moments*, due to the rise of progressively more advanced exploitation strategies, which is what Marx is actually talking about.

through reflections on the discursive and material entanglement, and on the societal dimension of both approaches.

3 Beyond the Divide

In order to build a multidimensional analytical model that reconciles both approaches, though, it is also necessary to first address the differences between the two theories, at least with respect to two major aspects. If Marx's concept is all about the *material* backbone of the capitalist order, and the power positions hereby derived, Freud is rather referring to the *imaginary* structures of the human world. Secondly, and by definition, while Marx takes into account the *societal* side of the process of modern individuation (Virno, 2002: 74–75), Freud is narrowing down the discursive-ideological to the purely *subjective* dimension of people's inner life.

As to the first point, we can rely on theories of entanglement to move beyond this divide, as they theorise the incessant interactions between the material and the discursive dimensions. For instance, Carpentier's (2017) discursive-material knot approach sees both dimensions as complementary, rather than mutually exclusive levels of the analysis. This approach allows for a rare opportunity for a dialogue between the two fields of post-structuralism and radical materialism, where, so far, bridges have been *built*, but hardly ever *crossed* (Carpentier, 2019: 155–156). In particular, the point we would stress is that the discursive-material knot, with its many assemblages,⁴ affects all levels of human activity, similarly to Foucault's micro-analytics of power (Carpentier, 2017: 4), and therefore also allows us to think about the forms of fetishism as entangled.

Slavoj Žižek adds a relevant nuance to this argument, while stating that the very same juxtaposition between these two ways of theorising fetishism – 'naïve historicist realism' and 'discursive idealism', in his words – *is itself an act of fetishism*, as they both generalise very partial premises:

for historicist realists, discursive idealism fetishised the 'prison-house of language', while for discursivists every notion of pre-discursive reality is to be denounced as a 'fetish'. (Žižek, 1997: 123)

4 For the distinction between the discourse-material *knot* and the discourse-material *assemblage*, respectively bound to the ontological and to the ontic level, see Carpentier 2019: 161–162.

We would argue that any separation between the material and the discursive can hardly explain a process that is precisely based, to large extent, on the interaction between the two poles – so that in this specific perspective materialism and idealism, rather than being opposed, ‘reveal a profound hidden solidarity, a shared conceptual matrix or framework’ (ibidem, 124). As Lacan would put it, ‘what has been rejected from the symbolic reappears in the real’ (Lacan, 1955–1956: 46, italics removed), exactly as the material dimension, in the other way, is imbued with discursive connotations, and any knowledge object is presented in discursive terms: which obviously enough – despite the misinterpretations of post-structuralist claims, and as Laclau and Mouffe wrote – has nothing to do with whether or not that object exists in the physical world (Laclau & Mouffe, 1985: 93).

There is another relevant corollary, in Žižek’s reading, which deals with the potential of fetishism for the unveiling of the great unsaid, or the symbolic order of reality. In this respect, his interpretation goes, Marx and Freud do not simply hint to a ‘regression’ to a pre-existing condition, either in terms of tribalist fetishisation of the commodity, or phantomisation of the sexual organ during the early childhood: rather, they insist on these forms of allegedly pre-modern knowledge being intrinsic to the most advanced stages of evolution as well (1997: 125, note 16).

This brings us to the second element, namely Freud’s individualist interpretation of the split, and his focus on individual psychologies. Žižek’s reading of Freud allows shifting us into societal realms, beyond a mere individualist interpretation of fetishism. These socio-political traces were already present in Freud, for instance, when he wrote that ‘Individual Psychology is at the same time Social Psychology as well’ (Freud, 1921: 1) where ‘all the relations which have hitherto been the chief subject of psychoanalytic research – may claim to be considered as social phenomena [...]’ (Freud, 1921: 2). Lacan pushed this argument further, as Stavrakakis (1999: 3–4) writes: ‘Lacan was aware of a two-way movement between the individual and the social level. As his work evolved and his approach radicalised, he was led to deconstruct the whole essentialist division between the two.’ This becomes apparent in Lacan’s theory of the subject, which is always a split subject,⁵ with an identity constituted through a lack of identity. He allocated vital importance to the symbolic and its structures of meaning to provide the necessary points of identification (where a ‘complete’ identity remains impossible). As Nancy and Lacoue-Labarthe (1992: 30 – emphasis in original) write: ‘there is no subject according to Lacan

5 Lacan thus expands the notion of the split, which Freud only used in articulation with fetishism or psychosis, to become a key defining feature of the subject.

which is not always already a *social* subject, that is, a subject of communication in general [...].'

Arguably, in academic debate, fetishism has become a sort of master signifier in itself, as fetishism comes in different interpretations, albeit all ultimately rooted, more or less explicitly, in the seminal work considered in the previous sections. In Lukács, to start with a venerable example, it is about 'a man's own activity' getting to that stage of 'something objective and independent of him, something that controls him by virtue of an autonomy alien to man' (1922: 84), at the intersection between Marx's idea of fetishism and Weber's reading of *rationalisation* as the foundation of modern society. Honneth, who made substantial use of Lukács' argument, identifies its disruptive power in the separation of a given element from its premises, either in terms of 'misrecognition' of its connection with a whole network of other elements (2008: 19), or its abstraction from the stance of 'empathetic engagement' which would be necessary to its full understanding (*ibidem*, 47–54; 1995: 18). Žižek had already stressed a similar point, when defining fetishism as the process by which a 'network of elements' no longer shows off as pattern of 'relations between' them, while appearing 'as an immediate property of one of the elements, [...] outside its relations with other' entities (1989: 191). From an anthropological perspective, Graeber proposed a synthesis by defining fetishism as the process by which some objects 'seem to take on human qualities which are, ultimately, really derived from the actors themselves' (2005: 425). The concept of fetishism has thus evolved from a very basic form – the substitutions of a subject with an object, or the zero-degree of fetishism (Žižek, 1997: 151) – towards more advanced configurations, which encompass the inversion between the general and the particular, the replacement of the relevant with the secondary, or that of the original with the derivative (Laclau, 2006: 649–650).

4 Six Shades of Data Fetishism

One of the areas where the (expanded) notion of fetishism can be deployed is the analysis of the role of data in contemporary society.⁶ We can materially observe the major impact of platformisation processes, resulting in the 'render[ing] into data' of 'many aspects of the world that have never been

6 Here, we also need to clarify that the fetishisation process – from its very nature, and as seen in respect to Marx's and Freud's original concepts – is not specific to the data discourse and certainly takes place in other environments and cultural domains of our society. The objective of this article is to reflect on the specificity of *data* fetishism, in consideration of the importance that the data discourse has obtained during the last twenty years.

quantified before' (Van Dijck, Poell, de Waal, 2018: 33).⁷ Simultaneously, data are, in contemporary narratives, supposed to impact and reshape *all* of society's domains, which is where, arguably, data fetishism becomes a relevant concept. Given the (claimed) omnipresence of data, a broad definition of data, as the quantification of a part of social reality, also becomes a necessity in order to allow us to individuate and then deconstruct the hegemonic position that the data discourse has taken on during the first decades of the 21st century.

Arguably, the concept of data fetishism still aptly fits these contemporary debates, with their focus on the data as the final output of the value chain – and sometimes emblematically presented as 'raw material' (i.e., Srnicek, 2017: 28; Couldry & Mejias, 2019: 5; Zuboff, 2019: 65) – with no attention placed on the various stages of its generation, extraction, aggregation, and storage. The argument we make is that the current juxtaposition between data and society, on which the whole paradigm of AI, automated data and synthetic data is premised, is exactly reproducing a similar moment of *split*. The consequences of this fetishisation have a relevant impact, as they encompass the most disparate levels.

One example of this kind of approach is Thomas, Nafus and Sherman's (2018) work. They critiqued what they call the 'algorithm as fetish', or the aura of power that surrounds the algorithms as they are vested with the attributes of 'capability, promise, faith and possibility' (2018: 4). Their analysis – quite similar to our argumentation – hinges on four main aspects: (1) the algorithm is 'imbued with capabilities that are not inherently' linked with them; (2) such 'excess of capability' results from the contact between 'differently positioned people' (in particular between developers and common users); (3) 'social cultural and economic outcomes' are misrecognised and appear to belong to the 'fetishised object' itself; and (4) this misrecognition is 'efficacious', inasmuch as it provides the opportunity or dealing with something otherwise unknown and not knowable (ibidem). Needless to say, the reason the algorithm is 'granted an agency' is exactly due to its ability to process large-scale amounts of data, which makes evident the affinity between the authors' argument and ours.

Our analysis is based on a retroductive theory-building approach (see Steiner, 1988: 97ff.) combined with a literature review, for which we applied an adjusted version of the integrative review method (Cronin & George, 2020;

7 The extent to which the data discourse is in line with the material processes of datafication – or whether it is rather overestimating them – is an important question, but the question cannot be resolved at the purely theoretical level. Contrarily, this task will require specific empirical research into the actual discursive strategies put in place by different social actors; and this is one of the reasons why we will conclude with an argument for the need of empirical analysis of textual corpi.

Torraco, 2016). This method, which seeks ‘to review, critique, and synthesise ‘representative’ literature to generate new theoretical frameworks and perspectives’ (Fan et al., 2022: 173), combines rigour with a conceptual reflection of the reviewed material, which made it highly suitable for our purpose.

This method also allowed us to produce a multidimensional model of data fetishism, which identified – at the intersections between the material and the discursive axes – six dimensions of data fetishism: de-contextualisation; reification; misplacement; displacement; centralisation; and de-humanisation.

4.1 *Fetishism as De-contextualisation*

Fetishism as *de-contextualisation* refers to data being taken out of their context and mobilised to explain more general processes or societal facts, which are actually external to the original domain of the investigation. This is a broader version of what León (2001: 124) – discussing AI fetishism – labels dehistoricification. This dimension also captures the obscuring of the specificity of data generation processes, and the impact these processes have on data, which is, in Freudian terms, similar to the disconnection of the object of desire and the body it is affiliated with. In the case of data, the emphasis on data-as-object comes at the expense of the processes through which the data is generated, and the relations of production in which they are framed and premised (Fuchs, 2020: 2571; Gezgin, 2020: 191; Miconi, 2023: 5–9). Honneth’s earlier-mentioned reading of Lukács also comes to mind, which deals with the separation of a given discourse from its own premises (2008: 55–60), so that, when it comes to data, their rationale is taken out of the picture, along with the methodological choices beneath their collection and aggregation, and the ideological connotations by which they are shaped. In line with this tendency, we can also mention the practice of substituting explanation by correlation (Mayer-Schönberger & Cukier, 2013: 50–72; see also Barabási, 2010; Rouvroy, 2020), or even making the scientific methods ‘obsolete’, to quote an influential statement by Anderson (2008). These de-contextualisations can have a serious impact, as is illustrated by the classic example of Western scholars using demographic data to frame the increasing and decreasing trends in non-Western populations, and their connection with macro-economic parameters (i.e., Wilson & Oeppen, 2003). The built-in biases in these data aggregations seriously limited the understanding and representation of social reality (i.e., Fleming & Bruce, 2021: 9).

4.2 *Fetishism as Reification*

Reification can be seen, at least in Marxism, as the ‘purest’ case of fetishism. A formulation of reification in Marxist theory can be found in Lukács’ *History*

and *Class Consciousness*,⁸ where he writes that 'a man's own activity [...] becomes something objective and independent of him, something that controls him by virtue of an autonomy alien to man' (1922: 84). In the case of data, reification comes in force when the data are presented as if they existed as a living creature, or in other words, when data become hypostatized, as if they come *before* the facts, in force of numbers appearing 'simple and incontrovertible' (Rosenberg, 2013: 17) and potentially serving the goals of decision-makers and 'those who exercise power' (Ruppert, Isin, Bigo, 2017: 3). Reification also feeds the transformation and reduction of social processes (in)to data, as 'we can see that computation in its need to classify identifies all things as code objects, raw data, which it is able to conceptualise as distinct objects, with properties that are all amenable to processing through their flattening via a computational ontology' (Berry, 2014: 126). One more material example is what Graham (2017: 4) calls the reification of language, which implies that 'anyone who uses the web communicates in a context where economic value alters every part of their linguistic landscape.' At a more discursive level, data gains an excessive authority as a living entity, to speak and communicate about the world, and explain it.

4.3 *Fetishism as Misplacement*

The dimension of fetishism as misplacement leads us the closest to the orthodox materialist interpretation, as codified in Marx's *Capital*: the fact that the 'social character of men's labour appears to them as an objective character stamped upon the product of that labour; because the relation of the producers to the sum total of their own labour is presented on them as a social relation, existing not between themselves, but between the products of their labour' (1867: 47–48). Commodity fetishism, this explanation goes, is due to the attention being placed to the final outputs of the production processes, thus eclipsing the social relations implied by, and the human work necessary to their realisation. Two sub-dimensions of data fetishism can be identified here, which respectively deal with the exclusion of human labour from the discourse around automated and synthetic data (or AI, at that), and with the underestimation of the industrial procedures required by the so-called data capitalism, and their harmful impact on the living environment. In respect to the latter topic, the widespread metaphor of the *cloud* can be held up as an

8 One problem here is that the two categories that Lukács uses – *reification* and *rationalisation* – frequently overlap with each other (1922: 111–112; for a review, see Habermas 1981: 356–358), but this is beyond the scope of this text.

emblematic example, inasmuch as it perpetrates the illusion and the misunderstood image of a non-material stage in the evolution of the digital economy.

4.4 *Fetishism as Displacement*

Similarly, we can speak of fetishism as displacement when the focus on a particular object of desire (e.g., data) is used as an epistemological shortcut, so that the 'belief [...] is directly incarnated in the fetishistic object' (Žižek, 1991: 249). In the case of data, data fetishism (as displacement) can be seen as a displacement of the desire for clear-cut and univocal knowledge about the world, and the permanent frustration over the understandability of the world, if taken in all its complexity. Here, the idea of measurability is key, as this shows the desire to know the world, often by ignoring the limits of statistics, and the impossibility of measurement to provide total knowledge. A second variation of displacement is theorised by Possati (2020), who argues that AI offers new forms of identification for humans, grounded in Lacan's concept of the mirror stage. As Possati (2020: 10) writes: 'this does not mean that the machine becomes a human being seeking identification, but that humans interpret the behaviour of machine in this way.' This approach implies a displacement of human characteristics or the humanisation of the machine and its data, driven by the desire for recognition.

4.5 *Fetishism as Centralisation*

Centralisation is eventually connected to the previous step, and it further radicalises the fetishist process by putting the data on top of the societal pyramid and articulating it as privileged knowledge tools, superior to other processes of inquiry. In Žižek's (Lacanian) terms, this moment would be marked by the 'autonomy of the signifier': the purely fetishist constitution of an external authority – the law, in his case; the data, in ours – 'that we must obey [...] not because it is just, good or even beneficial', but simply because it is there (Žižek, 1989: 34–35). To some degree, this approach helps us to analyze different processes: the equation of information with knowledge; the subsumption of a number of agencies under the umbrella of the data; and the unquestioned – albeit *questionable* – centralised design of the server-client architecture, by which data extraction and appropriation are fuelled.

One may notice here that centralisation has, in its turn, both a material and a discursive dimension. At the material level, it is all about the hierarchical configuration of the client-server architecture, with end users only being in control of a relatively limited amount of information, or 'small data' – which nonetheless may play a relevant role in organising people's life – and big data being stored and accumulated by the major companies. McKenzie Wark notoriously described this tension as the conflict between information workers, or

hackers, and *vectoralists*: those who control the infrastructure (2021: 45) and regulate the production process through a set of 'patents, copyrights, brands', and proprietary platforms (ibidem, 114).⁹ At the discursive level, the argument is that the data ideology has eventually taken on the status of a hegemonic discourse.¹⁰ The idea we would propose here is that this generalisation of an ideology to the whole system is in itself a process of fetishisation, requiring the split between its subjective elaboration, which originates within a specific milieu, and its spread in the other fields, combined with its consolidation as a seemingly objective entity. In this respect, centralisation does not simply refer to the data being materially appropriated by Big Tech: it also implies the imposition of Big Tech ideology on the rest of the world, and even on the social classes exploited by the very same digital companies.

4.6 *Fetishism as De-humanisation*

By de-humanisation, we refer to the entrenchment of the data discourse within the trans-human paradigm and the myth of machines eventually replacing mankind. Of course, it needs to be acknowledged that algorithms can exercise a certain degree of agency, and that, from this perspective, the human is no longer the only player at the user level (Bratton, 2016: 252–253). To use Berry's (2014: 124) words: 'This new data ecology is an environmental *habitus* of both human and non-human actors.' But de-humanisation captures the idea that data can 'handle things on their own', without human intervention, and that this situation is preferable. Data (and their infrastructures) are articulated to be capable of replacing humans, where this replacement is considered to be desirable, for instance, because of increased reliability and trustworthiness. León (2001: 124) summarises this as 'machine dominates men'. This results in the activation of data-driven solutions – whatever their definition – to perform a single decision-making process, which occurs in the most disparate fields: from urban planning to marketing strategies, from tackling misinformation to epidemiological measures, and more. In some cases, as Casilli (2019: 122–128) and Roberts (2019: 201–215) have argued, continued low-waged human involvement, still performing activities that algorithms are expected to

9 In our perspective, though, Wark's insistence on the novelty of this regime is not totally convincing, as such opposition actually replicates the features of the labour/capital dialectics, as originally laid out by Marx.

10 Reflections about the fetishist nature of hegemonic discourses are still underdeveloped, despite, for instance, discourse theory's (Laclau & Mouffe, 1985) intentions to deconstruct such hegemonic positions, and their work on the juxtaposition between chains of equivalence and constitutive outsides. Secondly, hegemonies are constituted through political struggles, and in the case of data ideology, we would argue, in contrast to León (2001: 124), the more dystopian approaches have been sidelined.

handle, is made invisible, which is another form of dehumanisation. Moreover, humans are reduced to the position of data providers. As Shipley and Williams (2023: 628) argue – writing about AI and objectification: ‘AI converts a person to data and then uses that data to create a limited representation of the person as an object,’ which adds, for, Shipley and Williams (2023: 623–624) a layer of oppression.

De-humanisation may also favour the de-responsabilisation of decision-makers, as the presence of data is used in post-political strategies, arguing that their presence makes the adoption of particular policies inevitable – what Jodi Dean defined as the ‘condensation’ moment, the ‘fetishist’ belief in technological solutions for social problems (2009: 38). Data-driven automation thus becomes a strategy for deflecting political responsibility, even when errors occur. In the latter scenario, malfunctions are blamed on the algorithm or the available data (or on the drone, to use a military example), rather than on humans to be held accountable, which is another version of dehumanisation.

5 Conclusions

In this essay, we presented a multi-dimensional model to frame and analyse the phenomenon of data fetishism, as it is impacting several domains of contemporary society. In order to do so, we have come to provide a dialogue between Marx’s and Freud’s seminal interpretations of the concept: in one way, by combining the material and the discursive dimension and by activating through Lacan the missing link between the societal and the individual scope, respectively addressed by the two classical authors. In our understanding, data fetishism is therefore a social construct, resulting from both material and discursive processes, giving shape to a new paradigm likely to replace previous cultural and ideological artefacts. In this sense – and as is always the case when a hegemonic representation takes shape – the data discourse has pushed away alternative views of the digital world, and in particular, it contributed to making obsolete the utopian interpretations of technological innovation, which were still relatively popular only a decade ago.

As a result of our theoretical endeavour, we singled out six dimensions of data fetishism: de-contextualisation, reification, misplacement, displacement, centralisation, and de-humanisation. This model thus also shows the presence of data fetishism in many societal layers, ranging from the organisation of scientific knowledge to the disciplining of low-skilled jobs, up to the broader dystopian perspective of machines eventually replacing the humans.

In all cases, this model is nothing but a first step in the exploration of a very complex phenomenon, and further research will be necessary in two directions

at least. At the theoretical level, the material-discursive framework – that we used for detecting the genesis of the fetishism concept itself – can be productively applied to the specific case of *data* fetishism as well, in order to tell apart the concrete state of the datafication process, and the discourse construction surrounding it (for instance, but this just an example, the hiatus between the constant reference to data and automatisisation on the part of public officers, and the real implementation of data-driven policies). Secondly, and relatedly, a more advanced operationalisation of the six dimensions will have to be reached, in order to support the provision of empirical evidence, looking at how data fetishism functions in different societal fields and how, for instance, scientists, journalists, social media influencers, politicians and regulators relate to this phenomenon.

References

- Anderson C (2008) The end of theory: The data deluge makes the scientific method obsolete. *Wired*, 23 June.
- Barabási A-L (2010) *Bursts: The Hidden Pattern Behind Everything We Do, from Your E-mail to Bloody Crusades*. Seattle: ThriftsBooks.
- Berry DM (2014) *Critical Theory and the Digital*. London: Bloomsbury.
- Bratton B (2015) *The Stack: On Software and Sovereignty*. Cambridge: The MIT Press.
- Carpentier N (2017) *The Discursive-Material Knot: Cyprus in Conflict and Community Media*. New York: Peter Lang.
- Carpentier N (2019) About dislocations and invitations: Deepening the conceptualisation of the discursive-material knot. In: Marttila T (ed.) *Discourse, Culture and Organisation. Inquiries into Relational Structures of Power*. Berlin: Springer, pp. 155–178.
- Casilli A (2019) *En attendant les robots: Enquête sur le travail du clic*. Paris: Seuil.
- Couldry N and Mejias U (2019) *The Costs of Connection: How Data Is Colonising Human Life and Appropriating It for Capitalism*. Stanford: Stanford University Press.
- Cronin MA and George E (2020) The why and how of the integrative review. *Organisational Research Methods*, 1094428120935507.
- Dean J (2009) *Democracy and Other Neoliberal Fantasies: Communicative Capitalism and Left Politics*. Durham: Duke University Press.
- Fan D, Breslin D, Callahan JL and Iszatt-White M (2022) Advancing literature review methodology through rigour, generativity, scope and transparency. *International Journal of Management Reviews* 24: 171–180.
- Fifi G (2024) On Antonio Gramsci's hidden concept: Fetishism. *Capital & Class* 48(3): 379–397.
- Fleming G and Bruce PC (2021) *Responsible Data Science*. New York: John Wiley & Sons.

- Freud S (1905) *Three Essays on the Theory of Sexuality*. London: Imago (1949).
- Freud S (1921) *Group Psychology and the Analysis of the Ego*. Translated by James Strachey. London: Hogarth Press (1949).
- Fuchs C (2020) History and class consciousness 2.0: Georg Lukács in the age of digital capitalism and big data. *Information, Communication & Society* 24(15): 2258–2276.
- Gezgin UB (2020) An invitation to critical social science of big data: From critical theory and critical research to omniresistance. *AI & Society* 35(1): 187–195.
- Graeber D (2005) Fetishism as social creativity: Or, fetishes are gods in the process of construction. *Anthropological Theory* 5(4): 407–438.
- Graham R (2017) Google and advertising: Digital capitalism in the context of post-Fordism, the reification of language, and the rise of fake news. *Palgrave Communications* 3(1): 45.
- Gramsci A (1929–1935) *Legemonia culturale*. Roma: *historica* (2022).
- Habermas J (1981) *The Theory of Communicative Action. Volume 1: Reason and the Rationalisation of Society*. London: Polity (1984).
- Honneth A (1995) *The Struggle for Recognition: The Moral Grammar of Social Conflicts*. Cambridge: The MIT Press.
- Honneth A (2008) *Reification: A New Look at An Old Idea*. New York: Oxford University Press.
- Jameson F (1977) Imaginary and symbolic in Lacan: Marxism, psychoanalytic criticism, and the problem of the subject. *Yale French Studies* 55–56: 338–395.
- Lacan J (1955–1956) *The Seminar of Jacques Lacan. Book III: The Psychoses, 1955–1956*. New York and London: Norton & Company.
- Laclau E and Mouffe C (1985) *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. London and New York: Verso.
- Laclau E (2006) Why constructing a people is the main task of radical politics. *Critical Inquiry* 3(2): 646–860.
- León M (2011) Fetishism, technology and science fiction. *Dilemata* 2(6): 123–139.
- Lukács G (1922) *History and Class Consciousness: Studies in Marxist Dialectics*. Cambridge: The MIT Press (1968).
- Marx K (1867) *Capital. A Critique of Political Economy. Volume 1: The Process of Production of Capital*. Translated by Moore S and Aveling E, edited by Engels F. Chicago: Charles H. Kerr and Co. (1909).
- Mayer-Schönberger V and Cukier V (2013) *Big Data: A Revolution That Will Transform How We Live, Work, and Think*. London: John Murray.
- Miconi A (2023) On digital fetishism: A critique of the big data paradigm. *Critical Sociology* 1: 1–14.
- Mouffe C (1979) Hegemony and ideology in Gramsci. In: Mouffe C (ed.) *Gramsci and Marxist Theory*. London and New York: Routledge, pp. 168–204.

- Nancy J-L and Lacoue-Labarthe P (1992) *The Title of the Letter: A Reading of Lacan*. Translated by Raffoul F and Pettigrew D. Albany: SUNY Press.
- Possati LM (2020) Algorithmic unconscious: Why psychoanalysis helps in understanding AI. *Palgrave Communications* 6: 70.
- Roberts ST (2019) *Behind the Screen: Content Moderation in the Shadow of Social Media*. New Haven and London: Yale University Press.
- Rosenberg D (2013) Data before the fact. In: Gitelman L (ed.) *Raw Data is an Oxymoron*. Cambridge: The MIT Press, pp. 15–40.
- Rouvroy A (2020) Algorithmic governmentality and the death of politics. *Green European Journal*, 27 March.
- Ruppert E, Isin W and Bigo D (2017) Data politics. *Big Data & Society* 4(1): 205395–1717717749.
- Shiple G and Williams D (2023) Critical AI theory: The ontological problem. *Open Journal of Social Sciences* 11: 618–635.
- Srnicek N (2017) *Platform Capitalism*. London: John Wiley & Sons.
- Stavrakakis Y (1999) *Lacan & the Political*. London: Routledge.
- Steiner E (1988) *Methodology of Theory Building*. Sydney: Educology Research Associates.
- Texier J (1979) Gramsci, theoretician of the superstructures: On the concept of civil society. In: Mouffe C (ed.) *Gramsci and Marxist Theory*. London and New York: Routledge, pp. 48–79.
- Thomas SL, Nafus D and Sherman J (2018) Algorithms as fetish: Faith and possibility in algorithmic work. *Big Data & Society*: 1–11.
- Torraco RJ (2016) Writing integrative literature reviews: Using the past and present to explore the future. *Human Resource Development Review* 15: 404–428.
- Van Dijck J, Poell T and de Waal M (2018) *The Platform Society: Public Values in a Connected World*. New York and Oxford: Oxford University Press.
- Virno P (2002) *Grammatica della moltitudine: Per una analisi delle forme di vita contemporanee*. Roma: DeriveApprodi.
- Wark M (2021) *Capital Is Dead: Is This Something Worse?* London: Verso.
- Wilson C and Oeppen J (2003) On reification in demography. In: Fleischhacker J and De Gans HA (eds) *Populations, Projections, Politics: Critical and Historical Essays on Early Twentieth Century Population Forecasting*. Lafayette: Purdue University Press, pp. 113–129.
- Žižek S (1989) *The Sublime Object of Ideology*. London: Verso.
- Žižek S (1991) *For They Know Not What They Do: Enjoyment as a Political Factor*. London: Verso.
- Žižek S (1997) *The Plague of Fantasies*. London: Verso.
- Zuboff S (2019) *The Age of Surveillance Capitalism: The Fight for a Human Future and the New Frontier of Power*. London: Profile Books.