



The Fetish of Intelligent Machines: From Ilyenkov to the *Neue Marx Lektüre*

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ABSTRACT: Recent critical scholarship in the nascent field of critical AI studies has vigorously defended the thesis that the forms of ‘machine intelligence’ deployed by data-intensive capital today (such as machine learning and deep neural networks) depend for their existence on material factors that range from rare minerals to human subjectivity, experience and social practice broadly speaking. Thus, the alleged ‘intelligence’ or ‘smartness’ of these technologies is often denounced as a mystified appearance of objectified human activity that ought to be unveiled. While accepting the contemporary relevance and importance of these interventions, in this article I will explore a different line of critique. I will dwell on the idea that machines appear in a certain way in virtue of their social form and the social relations they are entangled with. I will argue that, instead of dismissing the idea of ‘intelligent machines’ as a mere ideological semblance, it is crucial to also ask *why* and *how* it is that machines appear as intelligent or as endowed with ‘intellectual life.’ In other words, I will not defend or critique the idea that machine intelligence might be, at bottom, objectified human activity; nor will I denounce the attribution of any kind of intelligence to machines as false. Rather, my purpose is to present the argument that intelligence appearing as an attribute of capitalist technology is not merely an illusion, but rather a *necessary* appearance of capital’s development. To develop this Marxist critique of the notion of machine intelligence, I will draw primarily from two theoretical sources. Firstly, the systematisation of Marx’s critique of fetishism developed by authors in the tradition of the *Neue Marx Lektüre*, particularly in Clara Ramas San Miguel’s recent work. I will try to show how such readings demonstrate the fetishism of machines as a strict continuity of the commodity fetish. Secondly, this will be complemented with Evald Ilyenkov’s theorisation of the ideal as a phase of social practice. While Ilyenkov did not treat the problem of fetishism in a systematic fashion, I argue that his account of the dialectical relation between thought and being is crucial to understand how knowledge can be ‘absorbed’ in technology and how it can subsequently assume a mystified socially objective appearance.

KEYWORDS: Fetishism, machine intelligence, Ilyenkov, the ideal, *Neue Marx Lektüre*.

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Introduction

In his 1856 speech at the anniversary of the People's Paper, Marx observes that “all our invention and progress seem to result in endowing material forces with intellectual life, and in stultifying human life into a material force.”¹ While we might be tempted to write off this statement as a passing comment or a polemic jab, it is actually a poignant locution of a line of argument that is more systematically expounded by Marx in several other occasions. Perhaps one of the most salient instances is the famous (or infamous) section of the *Grundrisse* known as the ‘Fragment on Machines.’ There we can read the following: “The accumulation of knowledge and of skill, of the general productive forces of the social brain, is thus absorbed into capital, as opposed to labour, and hence appears [*erscheint*] as an attribute of capital and more specifically of *fixed capital*.” (Marx, 1973, 694). This short passage contains the essential elements that have been the starting point for many Marxian analyses of the relationship between labour, knowledge, and technology which might already be very familiar to us. Reading this passage can summon echoes of Harry Braverman's seminal deskilling thesis and what then became known as labour process theory, as well as (and perhaps more obviously) postoperaist discussions about the general intellect and its role in so-called postfordism. The various virtues and pitfalls of these accounts notwithstanding, the purpose of my own analysis is somewhat different.

Marxian theory has been a frequent source of inspiration for the analysis of socio-technical developments since it arguably presents us with “the most comprehensive critical account of the fusion of commodification and technology” (Dyer-Witheford et al. 2019, 3). When it comes to contemporary technological developments, recently a lot of attention has been drawn by the field of artificial intelligence and the crucial role that the range technologies assembled under this umbrella term might play for the future development of the capitalist mode of production. Among several other things, recent critical scholarship has vigorously emphasized that the forms of ‘machine intelligence’ which are predominantly deployed by data-intensive capital today (such as machine learning and deep neural networks) depend for their existence on material factors ranging from rare minerals to human subjectivity, experience, and labour. In particular, it has been emphasized that the data on which

1. <https://www.marxists.org/archive/marx/works/1856/04/14.htm>

these algorithmic systems are trained can be traced back to social practice broadly speaking. Such interventions can perhaps be described as subscribing to something akin to what Matteo Pasquinelli calls a “labour theory of machine intelligence,” a position which “declare[s] computing infrastructures as a concretion of labour in common” (Pasquinelli 2023 120). In opposition to a historiography of technology that might be tempted to narrate the story of artificial intelligence in purely scientific and mathematical terms, Pasquinelli argues that “the ‘intelligence’ of technological innovation [not only AI] has often originated from the imitation of these abstract diagrams of human praxis and collective behaviour” (Ibid., 6).

Materialist critiques of AI—or critiques of AI from the standpoint of labour—have insistently tried to cut through the hype which can often serve to occlude the precarious click-work labour (Altenried 2022) and the gargantuan amounts of socially-produced data that these systems require to operate. Instead of the rarefied or disembodied computational wizardry hailed by tech pundits, we are presented with an “expanded view of artificial intelligence as an *extractive industry*” which combines infrastructure, capital, and labour (Crawford 2021, 15). In such critical portrayals of AI one can identify a certain penchant for demystification. The point is to show that, underneath the ideological veil embroidered with Silicon Valley hyperbole, artificial intelligence is actually all-too-human. We find analogies comparing AI systems with fake ‘Potemkin villages’ and invitations to see automation as a charade that would be better described as “fauxtimation” (Sadowski 2018; Taylor 2018). In her influential book *Atlas of AI*, Kate Crawford portrays AI from the standpoint of labour in the following terms:

Contemporary forms of artificial intelligence are neither artificial nor intelligent. We can—and should—speak instead of the hard physical labour of mine workers, the repetitive factory labor on the assembly line, the cybernetic labor in the cognitive sweatshops of outsourced programmers, the poorly paid crowdsourced labor of Mechanical Turk workers, and the unpaid immaterial work of everyday users. (Ibid., 69)

Artificial intelligence, we are told, is neither artificial, autonomous, nor intelligent. Instead, it is fundamentally sociopolitical, and the act of ascribing it with ‘intelligence’ tends to hide more than it reveals. Pasquinelli claims that this is not an exclusive feature of our times: “Mythologies of technological autonomy and machine intelligence are nothing new: since the industrial age they have existed to mystify the role of

workers and subaltern classes” (Pasquinelli 2023, 9). The myth of machine intelligence, argues historian of science Simon Schaffer, is built on the rendering invisible of human labour: “To make machines look intelligent it was necessary that the sources of their power, the labour force which surrounded and ran them, be rendered invisible.” (quoted in *ibid.*)

One thing must be clarified before moving forward. I regard this materialist strand of critical AI studies as absolutely crucial to the extent that it has provided us with a much-needed counterpoint to the fanfare and ideological stupor that often surrounds these technological systems today. I find the labour theory of machine intelligence compelling insofar as it highlights “the role of collective knowledge and labour as the primary source of the very ‘intelligence’ that AI comes to extract, encode, and commodify” (*ibid.*, 9). However, the path that I want to follow into the problem of machine intelligence is rather different—albeit, I would argue, complementary. Another crucial aspect of the relationship between intelligence, labour, and machinery comes to the fore if we pay attention to the dialectical nuances implied in Marx’s own account of technology.

The path that I want to take reiterates, at a different level of concreteness, a central methodological motif of several contemporary readings of Marx such as the *Neue Marx Lektüre* and value-form theory. Authors in these currents suggest that Marx’s critique of political economy and his theory of value should not be reduced to an attempt to lay bare the exploitative class structure of capitalism at the ‘hidden abode of production’ and identify labour as the substance or content of value. While it is certainly true that an important conceptual move in *Capital* is the ‘descent’ from the appearance of capital as self-valorising value to its origin in the use value of commodified labour, this is only half of the story. Marx’s crucial innovation and central “expository move,” Backhaus argues, lies in trying to answer the question of “*why this content assumes that form*” (Backhaus 1980, 101), a question which, translated to Hegelese, addresses “*the dialectic between ground and phenomena*” (Ramas 2021, 248). In other words, it is the attempt to show how the surface appearances or false immediacies of the capitalist world are socially determined. If the aforementioned materialist critiques of AI achieve the unveiling of the ground—human labour—behind the phenomena—machine ‘intelligence’—what I intend to do is to tread the inverse path.

Thus, I would like to dwell on the idea that machines appear in a certain way by virtue of their social form and the social relations they are entangled with. In other words, it is not my aim to examine the possibility of attributing intelligence, of one kind or another, to machines. The concept of intelligence is a historical one, and it would certainly be possible to argue that machines (and other non-human entities) can be described as ‘intelligent’ if we think beyond our usual anthropomorphic models of what intelligence is and can be (Bridle 2022). However, instead of searching for a concept of intelligence that could be adequate to describe the peculiar capacities for problem-solving that these systems for statistical pattern recognition display, I want to start with something simpler or more immediate. I want to stay with the ideological semblance of ‘intelligent machines,’ that is, the vague and rather irreflexive understanding of sophisticated machines as displaying a form of intelligence which is of the same ‘kind’ that we humans display. This is the sort of intelligence attribution that the contemporary materialist analyses of AI so staunchly criticise. However, I want to dwell in it for a moment without trying to dispel or explain it away. I want to argue that, in addition to disclosing the objectified human activity at the heart of machine intelligence,² it is also crucial to ask *why* and *how* machines appear as intelligent or as endowed with ‘intellectual life’ in the first place. To advance a claim that will be elaborated in greater detail in what follows, my purpose is to develop the argument that intelligence appearing as an attribute of capitalist technology is not merely an illusion, but rather a *necessary* appearance of capital’s development.

Tracing this second path of inquiry requires that we focus on two interrelated processes or dynamics that are already present in Marx’s account: the processes of ‘absorption’ and ‘appearing.’ Or speaking in more precise terms, the process of objectification of knowledge into machinery and its relationship to the process of inversion of cause and effect whereby the products of social labour appear as inherent attributes

2. Despite the crucial role that the harvesting of socially-produced data has for these algorithmic systems, James Steinhoff has argued that the emergence of ‘synthetic data’ can be seen as a development wherein contemporary data-intensive capital threatens to dispense from the human element that it currently relies on. Synthetic data is artificially created through generative models (such as GANs) and simulated environments; it “is data which is not a trace, copy, or recording, but the product of a computational process. Synthetic data thus purports to attenuate the connection between data and people by synthesizing data” (Steinhoff 2022, 5). Furthermore, he claims that, beyond providing an alternative to surveillance as the source of data, synthetic data “also provides a novel technical means for continuing a historical tendency within capitalism toward the autonomisation of the circuit of capital” (ibid, 2). In other words, it can be seen as the ‘data adequate to capital’ since it would seem to comply with the tendency, immanent to the logic of capital, of “rendering the valorisation process autonomous from human subjectivity” (ibid, 9).

of capital itself, separated from and dominating labour as an ‘alien power.’ The first process is often described using notions such as ‘absorption,’ ‘embodiment,’ or ‘incorporation.’ What does this mean? How can social knowledge be embodied in technology and what transformation does it undergo in the process? More often than not, these questions are not broached, which in turn makes the subsequent inversion of appearances hard to understand.

To approach this question, I will first turn to the work of Evald Ilyenkov, and in particular his concept of the ideal. Ilyenkov was imbricated in the Cold War Soviet ‘algorithmic culture,’ an intellectual milieu which distinguished itself from its Western counterpart by endorsing a more holistic (and less mechanistic) approach to the problem of human activity and intelligent machines.³ Soviet AI theorists were critical of the mind-machine analogy of the American cyberneticians, and this “prevented [them] from regarding an intelligent machine, or computer, as a ‘thinking’ entity in its own right. For them, computers could only ever be tools to augment inherently human creative capacities” (Kirtchik 2023, 2). Ilyenkov himself engaged widely in these discussions, criticising such notions of machine intelligence for having misunderstood the social nature of thought and the dialectical character of human reason.⁴ On the other hand, he was also highly critical of the Soviet intelligentsia’s penchant for technocracy in their attempts to retrofit Marxist orthodoxy with cybernetics and other contemporary scientific novelties.⁵

Echoing the critiques of AI from the standpoint of labour mentioned above, in Ilyenkov’s view, “far from being individual, intelligence results from the social and material activity of generations of people” (ibid., 6). Ilyenkov’s concept of the ideal is useful to understand the notions of knowledge and social intelligence embodied in machines insofar as it presents us with “an original approach to an antireductionist understanding of the relationship between thought and being” (Levant 2015,

3. I thank one of the reviewers for pointing me towards this aspect of Ilyenkov’s work.

4. “The Western technical intelligentsia, including the cybernetic and mathematical intelligentsia, is therefore entangled in the problem of ‘man-machine’ because they don’t know how to formulate it properly; that is, as a social problem, as a problem of the relationship between man and man, mediated by the material body of civilization, including the modern machine technology of production.” (quoted in Kirtchik 2023, 2)

5. In a recent text, Keti Chukhrov (2020) incisively explores the relevance of Ilyenkov’s critique of cybernetic and machinic intelligence today, reading him alongside contemporary authors such as Reza Negarestani and Luciana Parisi. She pays special attention to his 1968 sci-fi/pamphlet “The Mystery of the Black Box,” along with several other sources yet untranslated to English.

169). After explaining this approach, I will question to what extent it can also help us elucidate how this process of externalisation can be derailed, leading to a fetishistic inversion of appearances whereby machines appear to be endowed with ‘intellectual life.’

The Ideal as a Phase of Social Practice

In the Postface to the Second edition of *Capital Volume 1*, Marx writes that “the ideal is nothing else than the material, transplanted into the human head and translated there” (Marx 1990, 102). While this could easily be regarded (as it has been) as an instance of the classic reflection theory of knowledge that prevailed in Marxist orthodoxy, Ilyenkov’s reading leads us towards an entirely different direction. We should not, he argues, interpret the notion of ‘the human head’ naturalistically but rather cultural-historically,⁶ and if we read the passage in its proper context as a polemic against Hegel, we “must conceive the act of birth of the ideal from the process of social man’s objective-practical activity” (Ilyenkov 1977, 270).

One of the main sources of inspiration for Ilyenkov’s concept of the ideal is Marx’s theorisation of the value-form. As many contemporary readers of Marx have emphasized, the whole thrust of his critique of the classical concept of value is predicated on the attempt to elucidate its paradoxical reality as an abstract form which bears no relation to the material properties of the commodity in which it is ‘incarnated,’ but is nevertheless endowed with a socially objective reality. In a similar vein, Ilyenkov reads the value-form as an ideal form, and as the key to understand the ‘sensuous-suprasensuous character’ of commodities. However, Ilyenkov goes well beyond the critique of political economy to identify, in Marx’s theory of value, a broader philosophical insight about the relationship between the ideal and the material vis-à-vis social practice—an insight which today is more commonly identified through the notion of *real abstraction*. Like value, “the ideal has an objective existence in human activity—in the process of creating ideal representations

6. “When Marx defined the ideal as the material ‘transposed and translated inside the human head,’ he did not understand this ‘head’ naturalistically, in terms of natural science. He had in mind the socially developed head of man, all of whose forms of activity, beginning with the forms of language and its word stock and syntactical system and ending with logical categories, are products and forms of social development. Only when expressed in these forms is the external, the material, transformed into social fact, into the property of social man, i.e. into the ideal” (Ilyenkov 1977, 262).

of the material world, and the reverse process in which these representations inform human activity” (Levant 2014, 7).

What do these ideal representations that emerge through social practice comprise? Ilyenkov invokes the notion of ‘social consciousness’ from the German Idealist tradition and frames it as the “historically formed and historically developing system,” a series of “forms and patterns ... of humanity’s ‘collective reason’” (Ilyenkov 2014, 47). For Ilyenkov, this system encompasses all kinds of norms and rules with varying degrees of ‘thickness’ (Daston 2022) and formalisation, from “ritually legitimised patterns of activity” to “the logical norms of reasoning” (Ilyenkov 2014, 47-48). Borrowing—and modifying—a term from Bogdanov, Ilyenkov also describes these patterns as ‘socially organised experience’ grounded on “stable, historically crystallised patterns, standards, stereotypes and ‘algorithms’” (ibid., 52).⁷ These are ‘social algorithms,’ independent and opposed to individual will and consciousness as external and objective social forms.⁸

This is, however, only half of the picture. For Ilyenkov it is crucial to avoid the idealist derailing of such a viewpoint, one which would take this social objectivity as always already idealised. To avoid this, he emphasizes the constitutive entanglement of the ideal and the material within the same dialectical process. Thus, the real problem is not the particular social reality of the ideal per se, but rather “the mutual transformation of the ‘ideal’ and the ‘material’ *occurring in the course of an actual process*” (ibid., 36). Alex Levant argues that this processual dimension is one of the most striking features of Ilyenkov’s concept of the ideal. The ideal is understood as a *phase* in the broader process of the transformation of matter by social practice. Levant writes that understanding the ideal in this way,

enables [Ilyenkov] to capture several moments of its existence—matter invested with meaning in the process of human activity, which comes to inform

7. In Bogdanov’s tektology, the term ‘socially organised experience’ is predicated on a radically empiricist epistemology which was attacked by Lenin (among others) as idealist or subjectivist. See Backhurst (1991, 35-36). In light of Ilyenkov’s dialectical conception of the ideal-material, it would be safe to assume that he is repurposing this term in the context of these theoretical disputes. I thank one of the reviewers for pointing this out to me.

8. “This system comprises all the common moral norms regulating people’s daily life-activity, as well as the legal precepts, the forms of state-political organisation of life, the ritually legitimised patterns of activity in all spheres, the ‘rules’ of life that must be obeyed by all, the strict regulation of the workplace, and so on and so forth, up to and including the grammatical and syntactical structures of speech and language and the logical norms of reasoning.” (Ilyenkov 2014, 47-48)

the subsequent transformation of the idealised material world ... As individuals, we enter an already *idealised material world*, which we continue to transform, as we materialise the ideal we inhabit in our own activity. (Levant 2015, 176–177)

To emphasise this processual definition, instead of the notion of ‘the ideal’ (which can lead us to represent it as a substance distinct or opposed to the material) perhaps it is more useful to think about it in terms of *idealisation*. As such, we ought to understand idealisation as a particular phase of the broader process of the human transformation of the material world. Its dialectical counterpart is the phase of *materialisation*, that is, the objectification or reification of the ideal. In the following quote from *Dialectics of the Ideal* Ilyenkov makes this clear:

The process by which the *material* life-activity of social man begins to produce not only a material, but also an *ideal* product, begins to produce the act of *idealisation* of reality (the process of transforming ‘the material’ into ‘the ideal’), and then, having arisen, ‘the ideal’ becomes a critical component of the material life-activity of social man, and then begins the opposite process – the process of the *materialisation* (objectification, reification, ‘embodiment’) of the ideal. (Ilyenkov, 2014, 36)

This process whereby the ideal is objectified is absolutely crucial to Ilyenkov insofar as, without it, “ideality can only have an illusory, phantasmal existence. It becomes real only in the course of its reification, objectification (and de-objectification), alienation and dis-alienation” (Ilyenkov 2014, 60). In other words, taking his cue from Hegel, Ilyenkov argues that the ‘forms and patterns’ that constitute ‘humanity’s collective reason’ remain invisible, unknown, or ‘phantasmatic’ to ourselves until they are made tangible in the ‘inorganic body’ of humanity; until they are embodied in the “system of things (their forms and relations)” (ibid.) which mediate between individuals engaged in the collective task of social production and reproduction.⁹ These mediating cultural artefacts assume various shapes, such as,

9. “Yes, Hegel understood the situation with greater breadth and depth than the ‘Fichtean philosopher’; he established the fact that before it is able to examine itself, ‘spirit’ must shed its purity, unblemished by ‘tangible matter,’ and its transparent nature, and must turn itself into an object and in the form of this object oppose itself to itself. At first in the form of the word, in the form of verbal ‘embodiment,’ and then in the form of instruments of labour, statues, machines, guns, churches, factories, constitutions and states, in the form of the grandiose ‘inorganic body of man,’ in the form of the sensuously perceptible body of civilisation which for him serves only as a mirror in which he can examine himself, his ‘other being,’ and know through this examination his own ‘pure ideality,’ understanding himself as ‘pure activity.’ Hegel fully realised that ideality as ‘pure activity’ is not directly given and cannot be given ‘as such,’ immediately, in

... words, books, statues, churches, social clubs, television towers, and (above all!) the instruments of labour, from the stone axe and the bone needle to the modern automated factory and computer technology. In these ‘things’ the ideal exists as the ‘subjective,’ purposeful form-creating life-activity of social man, embodied in the material of nature. (Ilyenkov 2014, 77)

In Marx’s account, the concept of value is the key to understanding a historically specific form of the socialisation of labour and the organisation of social reproduction that follows from it. From an Ilyenkovian perspective, we can understand value as an ideality which emerges from certain patterns of social activity and is ‘incarnated’ in the products of labour. Although it has nothing in common with the corporeal form of the commodity, it is only by means of this ‘expression’ or ‘reification’ that it can acquire an objective reality¹⁰ and can then face the individual consciousness as a real abstraction with a certain normative import. As it was already mentioned, Ilyenkov extracts the main features of a more general philosophical framework from Marx’s theorisation of the value-form. However, I think that he does not place enough emphasis on a crucial part of this theory: the problem of fetishism.

In *Dialectics of the Ideal* Ilyenkov does not treat the problem of fetishism in a systematic manner. He explains that fetishism enters the scene when “properties are attributed to an object, precisely in all its crude corporeality, in its directly perceived form, that in actual fact do not belong to it and have nothing in common with its sensuously perceptible appearance” (Ilyenkov 2014, 46). As we saw, these properties are the “forms and relations of things” resulting from human activity

all its purity and undisturbed perfection; it can be known only through an analysis of its ‘incarnations,’ through its reflection in the mirror of palpable reality, in the mirror of the system of things (their forms and relations) created by the activity of ‘pure spirit.’ By their fruits ye shall know them – and not otherwise. The ideal forms of the world are, according to Hegel, forms of ‘pure’ activity realised in some material. If they are not realised in some palpable-corporeal material, they remain invisible and unknown for the active spirit itself, and the spirit cannot become aware of them. In order to be examined they must be ‘reified,’ that is, turned into the forms and relations of things. Only in this case does ideality exist and possess determinate being; only as a reified and reifiable form of activity, a form of activity that has become and is becoming the form of an object, a palpable-corporeal thing outside consciousness, and in no case as a transcendental-mental pattern of consciousness, or the internal pattern of the ‘self,’ distinguishing itself from itself within itself, as it turned out with the ‘Fichtean philosopher.” (Ilyenkov 2014, 59-60)

10. “Therefore, Marx characterises the commodity form as an ideal form, that is to say, as a form that has absolutely nothing in common with the real, corporeally palpable form of that body, in which it is represented (that is, reflected, expressed, reified, objectified, alienated, realised) and by means of which it ‘exists,’ possesses ‘being.” (Ilyenkov 2014, 61)

which now appear as properties of things themselves (ibid., 77). Ilyenkov describes the existence of “fetishism of all kinds, from religious to commodity fetishism, and, moreover, the fetishism of words, of language, symbols and signs” (ibid., 54). He, however, does not seem to rigorously distinguish between them, identifying the fetishism of commodity and money with every other form of idol-worship.¹¹

It would seem that, by framing the value form as one instance of the ideal among others, Ilyenkov also elides the possibility of distinguishing the specifically capitalist form of fetishism—a rather considerable shortcoming if we consider that Marx used the term as a rigorous concept and not merely as an analogy or metaphor. In other words, if we understand fetishism merely as a common by-product of the idealisation of matter, we miss the opportunity to further specify the way that this takes place under capitalist conditions and the role that the value-form plays in this dynamic. If the ideal is a phase in the process of the social transformation of the world, then the way this process unfolds will depend on *how* social practice is organised. How would social practice have to be organised for the process of idealisation-materialisation to result in commodity fetishism? What can this tell us about the process whereby the products of labour become bearers of ideality?

Fetishism and Marx’s ‘Theory of Appearance’

While the concept of fetishism was almost entirely neglected by orthodox Marxism, it would later be regarded by other strands of Marxism as the key to interpreting the critique of political economy as an immanent critique of the process whereby capitalist society constitutes itself. A common thread running through these readings is the idea that fetishism is not just a matter of contingent and subjective confusion but is rather anchored in the everyday social practices of capitalist society. Several contemporary interpreters of Marx have also granted a central place to the problem of fetishism in the overall architecture and methodology of Marx’s critical project. Isaac Rubin was the earliest proponent of this view, going as far as to claim that the “theory of fetishism is, *per se*, the basis of Marx’s entire economic system, and in particular of his theory of value” (Rubin 1973, 5). Currents such as the *Neue Marx*

11. “Of course, real talers in no way differ from the gods of primitive religions, from the crude fetishes of a savage who worships (precisely as his god!) a real, actual piece of wood, a piece of rock, a bronze idol or some other similar external object.” (Ilyenkov 2014, 45)

Lektüre and so-called value-form theory have followed suit, emphasising the strategic role of fetishism in showing how classical political economists were “incapable of thinking an abstract objectivity, the spectral objectivity of the socioeconomic object” (Backhaus 1980, 57).

More recently, in her remarkable book *Fetiches y mistificación capitalistas*, Clara Ramas San Miguel has taken these ideas even further. She uses the concepts of fetishism (and mystification) as the organizing principles for a systematic reconstruction of the entire critique of political economy, and extrapolates them in order to sketch a broader ‘theory of appearance’ that, she argues, is implicit in Marx.¹² In her view, Marx’s project implies a particular ‘concept of reality’ and a specific way of approaching the latter through a critical materialist method. She claims that we should read the critique of political economy as the critique of a process of social constitution and reproduction in which “the traditional relationship between being and reality is altered” (Ramas 2021, 55). She goes as far as to claim that we can read Marx’s critique of political economy as a “sort of ontology that inquires about the being of things in their historical determination, that is, it asks what it means to be a thing in general ‘under the conditions of the capitalist mode of production’” (ibid., 264).

What kind of ‘reality’ is given in modern society and what are the specific tools that Marx’s critical materialism provides us with? How does it differ from the positivist or vulgarly empiricist approaches that one can find in sociology, economics, and orthodox Marxism? As a *critical* approach, Marx’s mature work contains this problem ‘in negative’ form, i.e. it is more a “question of not-being, of the effectivity of not-being, a protagonism of appearance in an order of things, that of modern society, defined by a play of forms of appearing and modes of displacement, inversion, and transfiguration of what can only appear and be effectively real *in this way*.” (ibid., 256) Thus, it is a question of the *necessary form of appearances* and the role they play in capitalist society. The specificity of Marx’s ‘materialist method’ lies in the fact that he is not content with showing the essence behind these inverted appear-

12. A great deal of Ramas’s work focuses on distinguishing fetishism from another specifically capitalist structure of appearance: that of mystification. In her view, previous commentators have elided this distinction and have seen the terms as interchangeable, while in fact they are entirely different and pertain to different sections of Marx’s critique. This is not the place to delve into the topic of mystification since, if we accept her argument, it enters the picture at a different level of concretion in Marx’s categorical development that does not concern us here directly.

ances—something that Ricardo had already done by showing that behind value lies labour time—but instead focuses on immanently unveiling the way in which they come into being. As he writes in a famous footnote from *Capital Vol. I*:

It is, in reality, much easier to discover by analysis the earthly kernel of the misty creations of religion than to do the opposite, i.e. to develop from the actual, given relations of life the forms in which these have been apotheosized. The latter method is the only materialist, and therefore the only scientific one. (Marx 1990, 494n4)

Where does fetishism originate? In his analysis of the commodity fetish, Marx clearly states that “it arises from the peculiar social character of the labour which produces them” (ibid., 165). In other words, it arises from the particular way that, in capitalist society, private or individual labours come to be part of the totality of social labour *only* through the mediation of the market. The market is, to put it roughly, a space where the products of labour are related, commensurated, and compared to each other. What this means, then, is that under these conditions the social relation between people *can only* take place through the mediation of relations established between things in the market; it is only the exchange of things that allows individual labours to relate to each other and become ‘active members’ of the totality of social labour. In short, “private labours receive their social character only through establishing a relationship between things” (Ramas 2021, 79). It is precisely here that the fetishization of social relations takes place, manifesting themselves under the interrelated social forms of the commodity-form, the value-form, and the money-form.¹³ However, in the capitalist mode of production, the fetishism that arises with commodity exchange and money spreads far and wide. As Marx writes:

All forms of society [*Gesellschaftsformen*] are subject to this distortion, in so far as they involve commodity production and monetary circulation. In the capitalist mode of production, however, where capital is the dominant category and forms the specific relation of production, this bewitched and distorted world develops much further. (Marx 1981, 965-966)

13. “Men are henceforth related to each other in their social process of production in a purely atomistic way. Their own relations of production therefore assume a material shape, which is independent of their control and their conscious individual action. This situation is manifested first by the fact that the products of men’s labour take on the form of commodities. The riddle of the money fetish is therefore the riddle of the commodity fetish, now become visible and dazzling to our eyes.” (Marx 1990, 187)

Ramas argues that social forms can be understood as *ontological constituents* of things insofar as they determine the way things, people, and their relations manifest themselves under specific sociohistorical conditions (Ramas 2021, 180).¹⁴ As we know, instead of the commodity as a mere empirical thing, the object of Marx’s analysis is the *commodity form* as the social form that the products of labour take under capitalist conditions. In this vein, Ramas argues that fetishism is nothing but a determination of social forms which is specific to capitalism.¹⁵ It is the particular ‘structure of appearance’ (ibid., 18) of a ‘bewitched and distorted’ social reality characterised by the inverted manifestation of social relations as relations between things.¹⁶

Machines and Fetishism

By crafting a series of categories that attempt to theoretically reproduce the capitalist social whole, what Marx elucidates is the “totality of determinations of entities under capitalist conditions” (Ramas 2021, 81). The commodity form occupies a central place in this totality as “the nuclear form of ontological determination of things under capitalist conditions” (ibid., 83) which, as we have seen, is marked by a fetishistic structure of appearance. In her skillful reconstruction of Marx’s categorical development, Ramas traces the reappearance of fetishism as an essential aspect of the categories of money and capital. Unlike the commodity and money, Marx did not offer a systematic account of the fetishism of

14. “It is a *form*, form used here as an ontological constituent, determinant of a mode of being, the peculiar being of things, men, and their relations under certain conditions of existence ... Marx starts, as he says, from a ‘social form’ in which the ‘product of labour’ is presented, that is, a thing. What is being investigated is the series of ‘forms’ which determine that things are what they are under certain historical conditions.” (Ramas 2021, 180)

15. Ramas argues that “the name that Marx uses to designate these ‘circumstances,’ using the language of the German philosophical tradition is ‘form-determination’ [*Formbestimmung*]” (Ramas 2021, 292). In other words, the *Formbestimmung* comprises the sociohistorical determinations of a form or essence of a thing; that which determines the form under which something exists. In this sense, her whole book is devoted to the thesis of fetishism the *Formbestimmung* of social forms under capitalism. See also (Elson 2015, 139ff).

16. The idea of establishing a clear qualitative difference and rupture between pre-capitalist and capitalist forms of fetishism is not shared by Robert Kurz, who sketches a theory of second nature as ‘fetish system.’ In his view, second nature is always constituted in a fetishistic fashion, i.e. it always emerges from social practice through subjectless processes, appearing as external and alien to the latter. Furthermore, he argues that the commodity form, as a secularised fetish, is the “last and most advanced” fetish-form, from which the nature of the constitution of the fetish itself can be recognised, understood, and ultimately overcome. See (Kurz 1993).

capital. This absence has left room for several interpretations which have tried to locate it, in germinal state, in Marx's sporadic allusions to the 'automatic fetish' in Volume 1 and in his treatment of interest-bearing capital in Volume 3 of *Capital*, i.e., in the D-D' movement where capital appears to spawn more value by itself in the rarefied sphere of financial operations. Ramas, on the other hand, offers a different (and ultimately more convincing) interpretation. According to her, the *origin* of the fetish of capital can be traced back to the fourth section of Volume 1, that is, to the chapters where Marx discusses cooperation, division of labour, and machinery as means to enhance the productivity of labour and as mechanisms for increasing relative surplus value. What we find in these sections is Marx's classic account (already mentioned at the beginning of these pages) of the reification and autonomisation of social relations of production as an 'alien power' that towers over the workers and presents the properties and potentialities of social labour as if they were its own.¹⁷ Another text cited is the *Results of the Immediate Process of Production*—originally planned as Part 7 of *Capital* and reprinted as an appendix in the English edition of Volume 1—where Marx writes:

Since—within the process of production—living labour has already been absorbed into capital, all the social productive forces of labour appear as the productive forces of capital, as intrinsic attributes of capital, just as in the case of money, the creative power of labour had seemed to possess the qualities of a thing. (Marx 1990, 1052)

This is, in short, the fetishism of capital—or more precisely, of the capital *relation*.¹⁸ We are dealing with processes of organising labour which result in the productive forces of social labour appearing as an external reified power instead of as the result of social labour itself. Capital turns into a “thing-subject that embodies all the forces of social labour. Relations between things appear as properties of an object” (Ramas 2021, 107). This involves the double inversion characteristic of fetishism: a twofold process of personification of things (things appearing to possess

17. In this she agrees with Michael Heinrich, who in *Wissenschaft von Wert* writes: “Finally, in the immediate process of production, the *fetish of capital* shows itself: the productive forces of social labour that are developed through cooperation, division of labour, and the introduction of machinery, appear as the productive forces of capital.” (quoted in Ramas 2021, 99)

18. Ramas defines the fetishism of capital in the following way: “the increased productive force of labour appears under capitalist conditions as a productive force of capital, as if it were its own work, as if capital, as a mysterious entity, was by itself productive” (Ramas 2021, 232).

the attributes of social labour) and thingification of persons (the fragmented worker as the living appendix of a system that dominates her). Following Amy Wendling, we can describe this as the phenomena of *machine fetishism* whereby machines become ‘metaphysical objects’ or, alternatively, ‘fetishized subjects’ which come to display the very functions that the worker is henceforth deprived of (Wendling 2009, 57-58). In her account, the machine holds a highly significant place in Marx’s work. The machine is the

final ‘metaphysical object’ ... occupying the same structural position as God in Feuerbach or the absolutist state in Rousseau. Relationships with machines and other means of production in capitalism are correspondingly mythologized, and in no less baroque a fashion than God and the state (Wendling 2009, 58).

In this way, we can understand the fetishistic endowment of machines with the attributes of social labour as a necessary form of appearance which can be regarded as “the strict continuation of the commodity and money fetishes” (Ramas 2021, 99). As we saw, these fetishistic appearances can be traced back to the particular way that labour is socialized under capitalist conditions, predicated as it is on a social objectivity that reifies and automatises social relations as the properties of the things exchanged in the market. The same structure of appearance now reappears at a different level. As Ramas writes: “In the same way that the social form of labour is embodied in money as the property of a thing, the productive forces of social work manifest themselves as capital, that is, as properties of a thing” (ibid., 109).

Going back to Ilyenkov at this point, we can now explain the specific way that a particular subset of the products that result from the social transformation of the world (i.e. the instruments of labour themselves) are idealised under the fetishistic structure of appearance proper to capitalism. The ‘social algorithms’ that constitute the productive capacities of social labour are materialised in the means of production, and this happens under specific conditions such that they appear as their natural or intrinsic attributes. If we return to the quote from the “Fragment on machines” that we started with, we can begin to understand the full weight behind the notions of ‘absorbing’ and ‘appearing’ that we find there:

The accumulation of knowledge and of skill, of the general productive forces of the social brain, is thus absorbed into capital, as opposed to labour, and hence appears [*erscheint*] as an attribute of capital and more specifically of

fixed capital, in so far as it enters into the production process as a means of production proper. (Marx 1973, 694)

Geistige Potenzen and the Spiral Movement of Capital

Following what has been said so far, we can advance the argument that the ‘endowment of material forces with intellectual life’ and the concomitant ‘stultifying of human life’ can be regarded as the two aspects of the necessary fetishized semblance resulting from capital’s own ‘structure of appearance.’ In short, the fetishized appearance of machines as possessing the attributes of social labour is a necessary appearance of capitalist technologies. Following Ilyenkov, we can say that this is a consequence of the way in which the dialectics of idealisation and materialisation are ‘derailed’ towards the specifically capitalist form of fetishism. I believe there is, however, something more to say about this derailment and of the material effectivity of such fetish once “it is incorporated into the acts, ideas, and behaviours of the ensemble of human relations within a particular mode of production” (Read 2003, 42).

In various places of the *Grundrisse*, Marx inquires on the difference between the ‘becoming’ and the ‘being’ of capital, that is, between the coming into being of capital or “the history of its formation” and its “contemporaneous history” as an already constituted totality. Marx describes this process as that in which “once developed historically, capital itself creates the conditions of its existence (not as conditions for its arising, but as results of its being)” (Marx 1973, 459). In the following page, this transition is described using Hegelian language:

These presuppositions, which originally appeared as conditions of its becoming—and hence could not spring from its *action as capital*—now appear as results of its own realization, reality, as *posited by it—not as conditions of its arising, but as results of its presence*. It no longer proceeds from presuppositions in order to become, but rather it is itself presupposed, and proceeds from itself to create the conditions of its maintenance and growth. (ibid., 460)

The idea of a transition whereby capital crosses a threshold to overcome its “antediluvian” phase and constitute itself as a ‘meta-stable’ system that “sets the conditions for its realization” (ibid., 363) encapsulates many of the great complexities and aporias that inevitably emerge when trying historicise the capitalist mode of production. This is not the place to delve into these particular issues.¹⁹ However, there are some aspects

¹⁹ See (Wood 2002)

of the notion of capital positing its own presuppositions that concern us here.

This form of ‘retroactive causality’ of capital is often depicted by Marx as a ‘spiral-like’ movement (*ibid.*, 266, 746, 620), a figure that Ilyenkov also adopts in various places of his work. Following the passage (quoted above) where he describes the relationship between idealisation and materialisation as interlocked phases of the material life-activity of human beings, Ilyenkov points out that this process tends towards “the transformation of the material into the ideal and then back ... constantly clos[ing] in ‘on itself’” in a spiral-like manner.

These two actually opposite processes eventually lock into more or less pronounced cycles, and the end of one process becomes the beginning of the other, opposite one, which leads in the end to the motion of a spiral shape with all its ensuing dialectical consequences. A very important fact is that this process—the transformation of the ‘material’ into the ‘ideal,’ and then back, which constantly closes in ‘on itself’ into more and more cycles, spirals – is highly specific to the socio-historical life-activity of human beings. (Ilyenkov 2014, 36)

This ‘spiral movement’ and the ‘dialectical consequences’ that Ilyenkov alludes to can be understood as the process whereby the embodiment or materialisation of ideality becomes “a critical component of the material life-activity of social man” (*ibid.*, 36) giving rise to what David Backhurst calls the “normative character of reality” (Backhurst 2011, 112).²⁰ In a strikingly similar vein to Ilyenkov’s account, the Brazilian Marxist José Arthur Giannotti also describes how materially incarnated socially produced ‘essences’ can determine behaviour: “it is in view of these essences, these ideals incorporated into natural things by an immediate process of social relations, that human behaviour is oriented and determined” (Giannotti 1983, 95). All of these accounts are relevant to understand the role of ideal social forms in the process whereby capitalism is reproduced as a social totality. Ramas argues that “these forms are reproduced alongside material and thingly reproduction: therefore, they perpetuate themselves as the appearance of things” (Ramas 2021, 245). The historically specific (and thus contingent) social form determination

20. Backhurst draws his understanding of normativity from the Pittsburgh school of philosophy. More specifically, he is critical of Brandom while drawing from the work of John McDowell, his thesis supervisor (I thank one of the reviewers for pointing this out). Unfortunately, this is not the place to delve deeper into these authors and the way that Backhurst reads Ilyenkov’s concept of the ideal through them.

(*gesellschaftliche Formbestimmtheit*) of the different elements of production is naturalized as their inherent property, perpetuated as their mode of existence.²¹ In short, the fetishized embodiment of capitalist social forms in the ‘inorganic body’ of humanity sets into motion a spiral movement with consequences that go beyond the realm of appearances or the *Erscheinungsform* of capital as a “‘mystical being’ appearing to generate its own conditions of possibility” (Read 2003, 43).

The ‘spiral-like’ character of capital can be understood as the establishment of a certain ‘path dependency’ resulting from the fetishized entrenchment of capitalist social forms as a constitutive aspect of material and social relations. In a striking passage from his latest book, Søren Mau describes how, although capital came into being in a world where the valorisation of value was not the main logic organising society, it then revealed a propensity to create “a world in which profitability is the condition of life” (Mau 2023, 294). He writes:

Initially, capital was a social *form* imposed on precapitalist *content*. As soon as its grip on the conditions of social life was established, however, this form revealed itself to possess a strong propensity to *materialise* itself, to transcend its own formality and incarnate itself in a mesh of limbs, energies, bodies, plants, oceans, knowledges, animals and machines—a process which continues to constantly reshape the world to this day. This is what the concept of *real subsumption* captures (ibid., 294).

From an Ilyenkovian standpoint, this passage might elicit objections insofar as talking about ‘purely formal’ capitalist social forms which are materialised only after a certain point would ostensibly signify an idealist relapse. However, the depiction of real subsumption in terms of a restructuring of social reproduction through materialised social forms is useful to illustrate the spiral movement described by Ilyenkov.²²

21. As Marx writes: “Their social character in the capitalist production process, determined by a particular historical epoch, is an innate material character natural to them, and eternally so, as it were, as elements of the production process” (Marx, 1981, 964).

22. The term real subsumption is used by Marx in *Results of the Immediate Process of Production* to describe the process whereby the social and material components of production are reorganized with the purpose of relative surplus value production. This term has acquired a lot of popularity in the recent decades, often being used in a non-rigorous way to describe our historical moment as that in which capitalism has supposedly ‘taken over everything.’ Several authors have been critical of this popularisation of the term. Endnotes (2010) has advocated a more restricted use of the term. Mau (2023, chapter 10) has argued that, while we should avoid the pitfalls of using this term in too lax a manner, it is also useful for analysing phenomena such as the capitalist transformation of natural processes. For a superb account that traces the origins of the term back to Hegel and Marx, see Saenz de Sicilia (2022).

In *formal* subsumption, the labour process exhibits a technical and organisational structure which is not itself the result of capital's own logic. As such, it can be regarded primarily as a matter of property relations insofar as capital can begin to accumulate itself without having to restructure the labour process itself (ibid., 234). In *real* subsumption the organisation, structure, and technical composition of the labour process are fully shaped in correspondence with capitalist social forms (Heinrich 2012, 118). It is through real subsumption that the logic of capital "seizes labour power by its roots" (Marx 1981, 481), transforming it into "a potential whose condition of actualisation is the mediation of valorising value" (Mau 2023, 247). One could certainly argue that this can also apply to formal subsumption: while the labour process itself might still be left relatively untouched at this 'stage' of capital's material restructuring of social reproduction, the fact that it is already mediated by market forces might already imply its transformation into a potential that can only be actualised when needed by capital.²³ However the labour process still preserves an organisational structure which is not itself a by-product of the logic of surplus value production, meaning that "a transition from formally subsumed capitalist production to non-capitalist production would not require a reorganisation of the production process" (Ibid., 234-235). By the same token, labour ostensibly preserves the skills and organisational abilities to produce without capital's intervention. Real subsumption, on the other hand, implies a radical upending of the whole process which tends towards revoking even the last shred of labour's own capacity to actualize itself. Through its implementation for the division of labour, automation, and deskilling, technology plays a crucial role in this process.

Mau distinguishes between two conditions of actualisation of labour from which labour is dispossessed: *objective* and *social* conditions. The first refers to the separation of labour from the means of production (i.e. the most basic class division), while the latter emerges when the cooperative potential for social labour cannot be actualised except when mediated by capital. As we saw, the appearance of capital as possessing the productive powers of social labour already emerges with cooperation and the division of labour, but it is not until the real subsumption of the production process through automation and labour-saving technology that the worker, already transformed into a partial and fragmented individual through the division of labour implemented in manufacture, is turned into a mere 'appendage' (Marx 1990, 799) of the machinic system.

23. I want to thank one of the anonymous reviewers for presenting me with this counter-argument which, I hope, has been convincingly addressed.

... all social powers of production are productive powers of capital, and it appears as itself their subject. The association of the workers, as it appears in the factory, is therefore not posited by them but by capital. Their combination is not *their* being, but the *being* of capital. Vis-a-vis the individual worker, the combination appears accidental. He relates to his own combination and cooperation with other workers as *alien*, as modes of capital's effectiveness (Marx 1973, 585).

It is under such conditions that we can see the 'dialectical consequences' that the spiral movement driven by the process of idealisation-materi-alisation has in relation to technology. The form-determination of the instruments of labour by capital's social forms leads both to their material reorganisation and redesign as well as to their acquisition of a fetishistic semblance whereby they display the attributes of social labour as their own intrinsic properties—an inverted appearance which in turn conditions how their uses and applications can be conceived. As Marx writes in *Results of the Immediate Process of Production*:

The transposition of the social productivity of labour into the material attributes of capital is so firmly entrenched in people's minds that the advantages of machinery, the use of science, invention, etc. are *necessarily* conceived in this *alienated* form, so that all these things are deemed to be the *attributes of capital*. (Marx 1976, 1056)

In the fourth section of *Capital Volume 1*, Marx introduces another term which is relevant to us here. While discussing what we now understand as the fetish of (fixed) capital and the dispossession of labour's or cooperative potentialities, Marx also presents us with the notion of *intellectual potentialities* (or *geistigen Potenzen*) as another aspect of labour which cannot be actualised except through the mediation of capital.

The intellectual potentialities of production expand in one direction, because they vanish in many others. What is lost by the specialized workers is concentrated in the capital which confronts them. It is a result of the division of labour in manufacture that the worker is brought face-to-face with the intellectual potentialities of the material process of production as the property of another and as a power which rules over him. This process of separation starts in simple co-operation, where the capitalist represents to the individual workers the unity and the will of the whole body of social labour. It is developed in manufacture, which mutilates the worker, turning him into a fragment of himself. It is completed in large-scale industry, which makes

science a potentiality for production which is distinct from labour and presses it into the service of capital. (Marx 1990, 482)²⁴

Although one might argue that this term is very similar to the notion of the general intellect famously used in the ‘Fragment on machines,’ I think that it sheds a somewhat different light on the issue. While the notion of the general intellect has often been interpreted as referring to the collective knowledge embodied in technology, *geistige Potenzen* points us to something that has not been actualized, something for which Capital possesses the conditions of actualisation. In short, it depicts a situation where, as a consequence of the consolidation of technoscience as a productive agent that towers over the worker, labour’s ‘social brain’ has been dispossessed of the conditions for the actualisation of its potential for collective intelligence.

Conclusion: The Myth of Intelligent Machines Today

The presence of technologies such as smart environments, machine learning systems, and predictive algorithms have brought to the fore, once again, the old question of the intelligence of machines. Since its inception in the mid 20th century, the field of artificial intelligence has revolved around the “technological myth” of the possibility of creating intelligent machines using the tools provided by digital computing (Natale & Ballatore 2020). During its formative years, AI research was structured by a ‘semantic field’ that revolved around the anthropomorphisation of computers and the idea of ‘thinking’ or ‘intelligent’ machines through analogical arguments and cross-domain translations that imported concepts and ideas from other disciplines. Recent approaches to machine learning are very different from the kind of AI research that took place in the 1970 and 80s and which explicitly aimed to reproduce human intelligence machinically by imitation or analogy. Although nowadays many of those who are involved in the development of these task-oriented machine-learning systems might distance themselves from the AGI pipe dreams, there is nonetheless still a persistent reference to the human mind and its neurophysiological processes in claims that neural networks replicate the functioning of the brain.

Human intelligence itself remains a mystery and the attempts to define it (or even quantify it) are rife with problems. Depending on what we understand as human intelligence—is it merely the capacity to adapt

24. Translation modified. For some reason, in the Ben Fowkes translation the first ‘*geistige Potenzen*’ is translated as “the possibility of an intelligent direction.”

to new situations, or does it involve consciousness, creativity, and understanding?—we will be able or unable to defend an attempt to present machine performance as analogous. There is a certain circularity or groundlessness to the whole endeavour: in a recent report on the current state of the field, AI research was described as “a branch of computer science that studies the properties of intelligence by synthesizing intelligence” (Stone et al. 2016, 13).²⁵ Thus, many have advocated for dropping the analogy between human intelligence and machine performance altogether, arguing that there are more useful and fruitful ways to understand these algorithmic systems. Elena Esposito, for instance, has argued that we should stop focusing “on the parallels and differences between human intelligence and machine performance, observing their limits and making comparisons” (Esposito 2022, x). Instead, she argues, what we observe today in our interactions with algorithmic systems “is not necessarily an artificial form of intelligence, but rather an artificial form of communication” (ibid., 2). In a way that resonates with what we described above as a “labour theory of machine intelligence,” she argues that what is being reproduced (and transformed) artificially by machine-learning algorithms is not intelligence but communicative capacities, “and they do so by parasitically exploiting the participation of users on the web” (ibid., 3).

However, as it is hopefully clear by now, the purpose of these pages was not so much to denounce the myth of intelligent machines in its contemporary manifestation as the questionable attribution of an anthropomorphic notion of intelligence to what essentially are mechanistic (albeit inscrutably complex) procedures of statistical pattern recognition. Instead, the purpose was to explore the hypothesis that we can perhaps trace some of this myth’s determinations back to the core struc-

25. Instead of a dead-end, some argue that there is a productive side to this circularity or groundlessness: it seems that we can’t (or at least not yet) really answer the question of what intelligence is, but practical attempts to simulate or synthesize it have tested certain hypotheses which, although perhaps ultimately unconvincing up until now, have nevertheless forced us to reconsider—and hopefully refine—the parameters of the question itself. Reza Negarestani for instance, sees AGI as presenting us with ‘an outside view of ourselves.’ According to him, the ongoing search for AGI can be seen as the formulation of “an idea through which we begin to identify what we consider as our distinctive features, determine how they are realized or possible, and investigate whether these qualities can be reconstructed and realized in something else, and if so, how. From this perspective, the idea of AGI is an external frame of reference by means of which we inquire into our own conditions of realization and possibility only to reimagine that which makes us knowers and agents in the context of something else that might transcend us.” (Negarestani 2018, 94)

ture of capitalist social relations. To be sure, the myth of intelligent machines most certainly predates capitalism, and has taken different forms throughout the centuries—from 18th-century clockwork automata (Jones-Imhotep 2020; Kang 2011; Schaffer 1999) all the way back to Greek antiquity (Liveley & Thomas 2020). The problem, rather, was to attempt to delineate the specific character it assumes under capitalism, where productive technologies fetishistically appear to be endowed with the properties of social labour.

In the previous pages, I argued that the portrayal of contemporary algorithmic systems as ‘intelligent’ machines might not be merely a marketing strategy or ideological veil to get rid of, but rather a necessary fetishized appearance of these technologies under capitalism. To develop this claim, I started with Ilyenkov’s dialectics of idealisation and materialisation, a model which allows us to understand the complex interaction between social practice and ideality and to formulate an understanding of fetishism in these terms. Departing from the observation that Ilyenkov—despite his profound insights and his enduring relevance as a balm against vulgar materialist conceptions of knowledge and cognition—does not treat the problem of fetishism in a sustained manner, I moved on to other currents of contemporary Marxian thought such as value-form theory and the *Neue Marx Lektüre*. Drawing primarily from Clara Ramas San Miguel’s systematic reconstruction of Marx’s critique of political economy from the vantage point of fetishism, I retraced the road starting from the social form of labour characteristic of capitalism and the way that it gives rise to commodity fetishism, up to the impregnation of fixed capital by this same form determination leading to the fetishism of machines, i.e., the double inversion that involves the personification of things and the thingification of persons. Lastly, in order to avoid the impression that this fetishistic structure of appearance might be something pertaining to the order of illusion, I pursued Ilyenkov’s insight about the ‘spiral-shaped’ ideal-material dialectic along with Marx’s description of capital’s development using similar terms. What these formulations intimate is the idea that fetishistic social forms can themselves be re-materialised in our objects, institutions, tools, and machines with very real and material effects. These structurally distorted idealities, embodied in the ‘inorganic body of humanity,’ are able to restructure our processes of social reproduction and, in the case of technology, predetermine the way we approach and conceive our machines and devices.

It is in this last point that we can perhaps glimpse the political valences of the line of argument presented in these pages. While delving into this problem with the detail it deserves lies outside the scope of this essay, I would merely like to suggest that it is tightly related to the protracted discussion around the problem of fetishism, i.e., the question of whether it is to be regarded as an ideological false belief, or rather, as a practically real element of social reality. Defending the latter interpretation, Nicole Pepperell writes: “For Marx, the fetish character of capitalist relations is not a veil of illusion to be penetrated but an important qualitative characteristic of a special kind of social phenomenon that helps to distinguish especially capitalist relations from the kinds of social relations characteristic of other forms of social life” (Pepperell 2018, 35). From such a standpoint, a critique in the mode of unveiling, useful and revealing as it may be, is not enough to deal with the fetish character of machines. What would be needed, following Pepperell, is the “practical abolition of the socially real—but transient and transformable—phenomenon of a social relation that, so long as it continues to be reproduced, will generate fetish properties” (ibid., 36). As it has been argued in these pages, these fetish properties are not the consequence of some sort of subjective or cognitive misapprehension, but rather the result of a structurally phantasmatic social configuration that can be traced all the way back to a particular social form of labour. To take a phrase from Gilbert Simondon, using it in a way that he would most likely not be happy with, we can say that this is the *mode of existence of technical objects* insofar as they are historically determined by the social forms that follow from the value-form.²⁶

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26. Here, we are following Ramas’ reading of Marx’s ‘analysis of forms’ (Elbe 2013) as a “sort of ontology that inquires about the being of things in their historical determination, that is, it asks what it means to be a thing in general ‘under the conditions of the capitalist mode of production.’” (Ramas 2021, 264)

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Biography

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