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Symbolic misery and digital media: How NFTs reproduce culture industries[1]

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Abstract

This contribution will attempt to propose a critical and philosophical engagement with the discussion around NFTs by focusing on the articulation of materialisms and digital media in artistic practices. The philosopher Bernard Stiegler argued that culture industries led to the formation of a symbolic misery, disrupting aesthetic experience through the creation and imposition of practices of consumption;[2] a process reinforced by the technological reproduction of works of art. In recent years, the discussion around Web 3.0, blockchain technologies, and their implementation through non-fungible tokens (NFTs) also reformulates the question of digital reproduction and distribution of works of art.[3] Indeed, in a market dominated by centralised streaming platforms such as Spotify, many artists see in NFTs a way to regain control over their own works and tools, by creating a form of artificial scarcity, mimicking the limited quantity and binding ownership of physical artefacts, as a kind of magical individuation, to paraphrase Simondon.[4] The authors ask to which extent those technologies, although often posited as a liberation from corporate giants, might lead to an exacerbation of the process of proletarianisation which is at the core of Stiegler's thesis on symbolic misery, even if they are being procured in an ethos of social justice and responsibility, thereby functioning as what Michel Serres called a virtual object.[5] Moreover, it will be argued that by trying to reproduce an artificial idea of scarcity, NFTs also tend to reduce materiality to the object being sold and possessed, consequently reproducing the constitution of 'art' as a market, where new practices of consumption and competition are being championed as commodities at the expense of aesthetic experience.

Keywords: NFTs, blockchain, parasite, proletarianisation, real abstraction, negentropy

Out on the open sea:[6] Navigating the digital art markets

We are at a wine bar in Munich – not too far from the Pinakotheken and Technische Universität buildings – where a friend presents her latest exhibition. Reaching for the bottle of an overpriced Bourgogne, we come across a sheet of paper, bearing the exhibition title and a QR code sending us to the artist's website. Below the code is a list of artworks for sale displayed around the bar – also available as NFTs. It seemed surprising at first (and this moment of surprise only denotes the level of our ignorance) that such lively, very physical, and deeply material works of art are being sold as non-fungible tokens. As if they were reduced to digital avatars, flat reductions, broken into bits, lists of 1s and 0s.

There is more to this than meets the eye, however. By buying one of our friend's artworks as an NFT, you not only gain complete ownership of that particular digital object (in that case, a jpeg file representing its physical counterpart), unique and traceable, i.e. non-fungible, but you receive extra content, added to the transaction. It could be anything from an actual print of the artwork to access to online content (such as a Discord server, a gifted subscription to a Patreon page, etc.). But you do not necessarily receive the actual physical artwork with your NFT, at least not in this case.

Navigating NFT marketplaces, platforms, contracts, etc. is not easy. Between spaces of newness efficiently mirroring post-human aesthetics, a promised land emerges, announcing metaverses as Gibsonian cyberpunk spaces of freedom. To someone accustomed to the rules of the traditional art market, the NFT artist can seem like an individual(-ist) Neuromancer, the online community like a guild without borders and states, or rather like another canvas put on top, redefining territories and relations: Web 3.0 as populated by blockchains, NFTs, acronyms, and aphorisms.

In this article, we would like to show that, beyond their easy denomination as 'fad' or 'trend', those technologies challenge our understanding of materiality. Materiality here is not understood as the opposite of either idea, the symbolic, the social, or the subject, but instead – and following authors as diverse as Bruno Latour and

Karen Barad – we insist that it should be grasped as realisation or objectification; as that which resists, i.e. ‘objects’.[7] As we shall demonstrate through the example of NFTs, this inherently performative-technological conception of materiality includes what in historical materialism is referred to as ‘real abstraction’ and exposes how we are engaging with technology and art, both as ‘producers’ and ‘users’.[8] It is therefore the transactional act defined by the process of selling/buying NFTs that is of particular interest to our inquiry. In this, we would like to show that in their experimental design, NFTs are reproducing, if not aggravating, the symbolic misery that Stiegler diagnosed as having become the prime definer of aesthetic experiences.[9] Without generalising their implementations and thus proposing an abstracted and reduced critique, we would like to point out the parasitic character of NFTs in the sense of Michel Serres as a third-term,[10] disturbing as well as generating relations in which that which had been seemingly rendered obsolete returns as the ambivalence of danger and saving power.

Defining NFTs: Digital tokens as immaterial objects?

To put it very simply, NFTs are often presented as digital collectibles, such as stamps, records, or trading cards, and are defined as:

unique items verified and secured by a blockchain [...]. An NFT provides the authenticity of origin, ownership, uniqueness (scarcity), and permanence for any particular item.[11]

Without going into too much detail, a blockchain, which constitutes the groundwork of the NFT, is composed of a consecutive order of linked blocks of data. They allow for presumably safer data verification (for instance in transactions) and provenance checks (by following the chain).[12] One advantage of such a technology is its decentralised design,[13] meaning that verifications are not typically performed by only one particular instance and unilaterally, but instead by every potential user.[14] In the particular case of NFTs, the ‘token’, e.g. a work of art, resides on a blockchain and is therefore traceable and unique; every transaction involving it can be verified. In other words, the main appeal of such a technology

is the creation of a higher level of trust and security in transactions involving digital items in a 'decentralized ecosystem'.^[15]

If NFTs-as-collectibles seem to mostly exist as digital pixel art or something similar,^[16] including the option of extra content, there is a gain of interest for musicians and artists, who operate beyond the production of those 'digital trading cards'.^[17] In times when streaming is the main mode of music consumption,^[18] independent artists and labels struggle to exist within superstructures such as Spotify, as their per-stream revenue is close to nothing.^[19] In that situation, a system based on decentralisation, stronger ownership, and presumably 'fairer' revenue seems more than needed – it becomes vital. The promise of NFTs, therefore, shifts from data security and transaction verification to the organisation of culture industries and markets, and questions the role of 'intermediaries' such as labels or platforms in promoting and selling art.^[20] This is where so-called 'smart contracts' at the base of NFTs come into play. Easy to integrate within blockchains and executed automatically if certain conditions are met, those contracts can take many forms and are seen as a deliverance for an independent artist.^[21] In some instances, such a contract would allow 'users' or 'consumers' to take part in financing a project through the acquisition of 'shares', upon which they would receive dividends as returns on investment.^[22] Even if it sounds that way, smart contracts are not limited to reproducing financial speculation, of course, and some examples actually propose alternatives.

One of those alternatives would be to integrate a condition in which each time an NFT is being re-sold, its creator would receive a percentage of the transaction price. In theory, therefore, NFTs and smart contracts, in the example of art but also beyond, do have the potential to redefine what ownership and property mean and how they are being practiced. Some of their most active advocates, such as musicians Mat Dryhurst and Holly Herndon or artist Ruth Catlow (and through the Furtherfield gallery she co-directs), even theorise the possibility to re-invent artistic communities through smart contracts and blockchain technologies labeled a 'DAO' (Decentralised Autonomous Organisation).^[23] The presented goal, through those organisations, or 'guilds' as Dryhurst calls them,^[24] is to counter the 'platform

capitalism' model and propose an alternative to artists, to self-organise digitally as smaller communities beyond the simple trade of NFTs. As Dryhurst notes:

DAOs offer a means to reinvigorate the concept of traditional staples such as galleries, publications or record labels by introducing mechanisms to democratically curate and fund new works around a fluid membership base. In a DAO format, one can hardcode a mission statement, thus releasing an oracle, or autonomous agent, to manifest that vision in perpetuity. If a DAO (X) is encoded with the intention of rewarding an action (Y) with dues gathered from members (Z), it will execute the process for as long as there is sufficient activity to do so; it is an impregnable vending machine.[25]

For Dryhurst however, those guilds or communities, even if defined through transactional relations, are actually proposing a political alternative to 'platform economy', interestingly comparing them to the Hanseatic League of the 12th century as parallel economic structures to the actual states:

One perspective on Blockchain futures suggests that they will signal a mass migration of users from the current reigning platform monopolies to decentralized consensus systems – which I have a hard time visualizing. Another, more conceivable, future is one of turbulent co-existence, not dissimilar to the relationship between the free settlement zones of the Hansa and their state hosts. You cannot extricate the formation of Blockchains from their libertarian origins, and as such, they operate best as a separatist force, with their explicit focus on privacy, censorship resistance, and financial autonomy: space for kin to plot and coordinate outside.[26]

The parasitic character of the NFT

The premise (or rather the promise) NFTs bear, at least in the way Dryhurst and others are depicting them is, as evoked above, the need for a revival of the relation between the artist and her audience, without the mediation of intermediaries like labels or ubiquitous streaming platforms. In other words, thanks to blockchain technology, NFTs and smart contracts can re-create a sense of community revolving around art. This is important to repeat because it presupposes a direct relationship between two or more 'groups', redefined through technology. In this understanding, NFTs and smart contracts are facilitating, or rather enabling, the relationship between the artist and the audience, where it seems intermediaries were merely disturbing it, becoming parasites in the distribution of works of art

to the public. In advertising that it ‘listens to the needs of artists and fans – not just corporations and major labels’, a motto declined in their ‘white paper’ describing the model, the platform for music streaming Audius clearly points to the problem of the current music industry (and platforms such as Spotify) and sets to change or bypass the relation towards intermediaries.[27] As the designers point out in the paper, it is through their tokenised streaming model that a direct and secure relationship between artist and audience is being nurtured.

However, following Michel Serres’ analysis, we would like to argue that the mode in which NFTs (either as collectibles or integrated within streaming structures) are creating this relation is itself parasitic. Not only as a disturbance, like signal noise, but producing the relation itself. Serres argues that the parasite is the virtual object that emerges as the third term of a relation, but always presupposes and precedes it, like a channel, which through its existence creates a possibility for communication. The parasite thus becomes this virtual paradoxical entity which is at once enabling and disturbing the relationship.[28] The relation between an artist and their audience must be mediated, not only by the work of art itself but by its distribution ‘channels’, to exist at all. One could therefore point out that NFTs are themselves important non-human intermediaries supplanting a label or gallery owner, ‘enabling’ new modes of relating to artworks.[29] To come back to the Audius example, the relation artist-fan seems much more direct because it is based on monetised streaming rather than direct transactions.[30] However, even in this case, it is still being mediated by so-called ‘content nodes’ regulating and managing the actual transfer of data and the actual tokens remunerating the artists.[31] Regardless of their existence as ‘collectibles’ or their implementation through streaming services, NFTs never exist ‘on their own’ but rely on a multiplicity of other actors, from so-called marketplaces, smart contracts, protocols, designers, coders, and even the platforms and DAOs where communities participate in creating/reproducing, enabling, as well as disturbing – at least according to Serres – the presumed relation artist-audience.

Another aspect of this parasitic relation is the actual mode in which it is presented and acted upon,[32] namely the mode of the transaction. The transactions implying works of art in their various occurrences – and thus beyond NFTs themselves

– are parasitic in that they are at once enabling a relation between artist and audience and disturbing that very relation through a capitalist logic and questions of property/ownership. An NFT might be a ‘noise reduction’ in this instance (in comparison to a label or streaming platform) but remains the unescapable third term, itself mediating that relation. Just because it highlights one type of transaction, namely that of ownership, does not mean that an NFT does not also invoke a host of other factors that remain hidden, especially those related to art-as-work (rather than artwork). This is its parasitical function. In feeding off art-as-work (turning it into art-work, whose main concern is that of ownership) however it also makes visible that art-works are real abstractions.

Many critics of crypto and NFTs mistakenly suggest that crypto is introducing financialization, inequity or scarcity to our digital lives. This is false. Public blockchains, through making visible latent forces such as financing, unequal returns, or scarce and valuable ownership, are bringing long existing dynamics to the surface to be scrutinized. These forces are not new, they are nude.[33]

While this is true that through the parasite, one type of relation (e.g. the transaction of ownership) is made visible, one could wonder about what is made invisible during the process of its unfolding. If the transaction is made visible, open, controllable, irreversible, and under scrutiny,[34] it is both the platform and the very parasitic character of the capital – that which DAOs and NFTs are presumably an answer for – that is rendered invisible. Who has access? Who has the required skills? And who does not? Furthermore, looking at the DAO, the league, the guild: where are they operating? How is value being generated? The platform is itself a parasite as that which enables equivalence and exchange. Making the platform invisible is a prerequisite for the transaction, as an ‘équivaluateur’, assessor, and appraiser.[35] The emerging concern, however – again invoking Serres – is: who is parasitical on whom? If the DAOs and NFTs may be thought of as parasites of/against capitalism, the contrary might also be conceivable: capitalism itself is parasitical on the artist/audience relation, reproduced in DAOs and NFTs. This is why the parasitical nature of NFTs can also work in favor of a further proletarianisation of art-as-work (as different from the artwork). The rendering invisible of that which does not enter the blockchain is what Stiegler referred to as ‘negentropy’, a diffusion of associations that hold matter-reality together.[36]

Negentropy is experienced as fragmentation, loss, and disorientation and is increasing an incapacity to act.

Commodity fetishism and dark magic

We have now established that through this parasitic relation called the NFT, the work of art which – at least in our vernacular understanding of cultural objects – mediates the relation between artists and audiences and thereby also becomes part of a transaction, in turn, affects the way the work of art ‘works’. NFTs not only inscribe a relation of ownership, sponsorship, or patronage but also enable this relationship to be monetised for the purpose of circulation and accumulation of value. In other words, through its very association with an NFT, the artwork is being transformed into a commodity-in-circulation, either as singular ‘tokens’ or content to stream. This is what Marx called real abstraction as the basis of commodity fetishism. The value of NFTs as commodities is neither defined by their utility, for example as the exclusive ownership of an authentic and unique object nor as an index of the quantity of work implied (or perhaps invested) in their realisation. Under real abstraction, what Marx calls the fetish character of the commodity defines its own value as if by magic, in and out of itself.[37]

Whereas many Marxists – including for example Adorno, Horkheimer, Marcuse, and Zizek – were quick to point out the ideological function of commodity fetishism – that is, real abstraction leads us to lose ourselves in the realm of the Symbolic – this is only part of the issue. There is no denying that the magical lure of commodity fetishism is easily exposed in what in the second half of the previous century unfolded as consumerism; however, the technological facilitation of real abstraction may have a much closer parasitical relationship to the capitalist mode of production. A key insight into this has already been developed before the publication of Adorno and Horkheimer’s critique of culture industries, namely in Walter Benjamin’s classic thesis *The Work of Art in an Age of Mechanical Reproduction*. [38]

As a parasite/mediator, NFTs enable relations and circulations of works of art, but as such, this is nothing new. As Walter Benjamin observed almost a century ago,

mechanical reproduction, in particular photography and film, had deeply affected the nature of the work of art. The mechanical reproducibility of images, which can be mass-produced and thus widely circulated, generates the destruction of the aura of a work of art as singular and unique, bound to a single place and owner. Aura is derived from this place-event ('presence') of encountering a work of art and this is highly dependent on institutionalised forms that function as guardians of the sacred or the sublime.[39]

Technological reproducibility, however, separates the 'magical' bond between authority and authenticity that defines the aura of a work of art. Images that are instantly reproducible, however, obtain their primary value not from unique ownership but from their circulation. This is where the culture industries come in, as it does not only apply to photography and film, but to a wide range of electronic entertainment media such as radio and television and their impact on a wide range of cultural products including news, documentaries, and music.[40] In this sense, NFTs are perhaps not more than the latest addition to the cultural-industrial transformation of artistic production and aesthetic experience.

However, as Van Loon has argued,[41] we cannot simply treat mechanical, electronic, and digital reproduction as identical. Form matters; it is not a mere addendum to materiality. Only matter that informs has the capacity of objection. In the case of NFTs, the digital form operates both as a virtual object and as a currency and it can circulate globally and instantaneously. This has vastly expanded possibilities for 'speculation', where the token itself, as digital representation/reproduction of an artwork, or constituting the artwork itself, is being sold on digital platforms. The virtual is neither the opposite of the real nor of the material. Instead, virtual objects remind us of the technological-performative materiality of objection because their agency cannot be ignored. The sheer speed, intensity, and potential reach of NFTs are reliant upon their ephemerality, and this is what empowers them. The commodity fetish has been transformed and upgraded: utility value is still being eclipsed by a mystical force surrounding that very token, but this mystical force is now even more deeply entrenched in the dark magic of digital

encoding. NFTs are thus a radical amplification of commodity fetishism. The paradoxical contours of this phenomenon had been surprisingly well evoked, decades before the digital revolution, in Guy Debord's *Society of Spectacle*:

Here we have the principle of commodity fetishism, the domination of society by things whose qualities are 'at the same time perceptible and imperceptible by the senses.' This principle is absolutely fulfilled in the spectacle, where the perceptible world is replaced by a set of images that are superior to that world yet at the same time impose themselves as eminently perceptible.[42]

There is, however, still a missing link here: How can we connect real abstraction to the paradox of perception/imperception that drives magical digitalism? The familiar route is the one followed by Debord and passes through ideology. As we have argued, this tends to downplay the pivotal role of technological performativity, as has been shown by, for example, Benjamin. Reading technology as a parasite/mediator in this context enables us to understand the transformation of modes of subjugation that have the potential to erode existing structures of authority, but they may equally also generate new, and even more insidious, modes of authoritarian subjugation. The magical digitalism as an ideology surrounding NFTs has generated a kind of 'fetish' mainly represented in those digital 'trading cards' or collectibles.[43] In other cases, depending on smart contracts implementations, one could imagine that the price and value of the artwork reflect the quantity of work the artists had to put in or even explicitly prevent speculation (if this is possible). Those possibilities might defuse fetishising artworks or tokens, but even there, the commodification remains, attached to the transaction at the heart of the producer/consumer-relationship, as Adorno argues.

Indeed, the 'fairness' or autonomy of the artist, which could emerge from smart contracts and NFTs, is often being carried out through a form of digital scarcity, linking the token to an identifier, as if they were mirroring the 'actual world', where physical objects are understood as unique specimens. The idea of tokens mirroring actual worlds is the mode of reification called fetishism. By divorcing materiality from its technological performativity, the fetish of scarcity is implemented in code – it is itself artificial, only guaranteed by the blockchain algorithm and the ownership rights attached to it. But in actu, those files can still be copied, and reproduced 'ad nauseam'. Digital scarcity might protect the artist, or help to

get her fair payment, it might have the intent to revive a sense of aura of the art-work – scarcity bringing exclusivity and ‘the unique apparition of a distance’[44] – but it does not reconstitute it, quite the contrary.

Hence, the missing link that the invocation of the technological points towards is not a relation of determination, but a bifurcation. When considering blockchain algorithms, we can see a mode of abstraction that is different from the real abstraction described by Marx, as one that stems from the circulation of money to facilitate commodity exchange. In *Intellectual and Manual Labour*, Alfred Sohn-Rethel develops a thoroughly historical-materialist account of the intersections between modes of production and modes of thought.[45] That is to say, rather than treating the history of the latter as an unfolding of epistemology by the force of great intellects, he focuses on thinking as a material practice, as labor. The epistemological break that is referred to as ‘modernity’ – and usually associated with the three Critiques of Immanuel Kant – is for Sohn-Rethel nothing but a translation of how human labor could be commodified. That which enabled commodification – namely the circulation of currency (itself abstracted as capital) – also enabled the abstraction of value from labor. These initially relatively simple practices of abstraction could be repeated through increasingly elaborate forms of calculation and mediation, which required more elaborate technologies, to whom the practical work of real abstraction could be increasingly delegated.

Focusing on the question of how the technoscientific revolution and the industrial revolution coincided with the rise of (Kantian) idealism, Sohn-Rethel posits that what enabled the idealist abstraction that informed Kant’s critiques was nothing less than real abstraction derived from commodity exchange itself. The possibility that commodities can be exchanged on a market through the mediation of money gave rise to the idea of abstract value, that is, a reification of value. Reification enables the creation of concepts that are seemingly separated from experience and their materiality; the fact that they then need to be linked back together in order for thoughts to work, for example for a conceptual bridge to become a functioning bridge, is then a ‘mere’ matter of application.

The non-empirical concepts drawn for the real abstraction describe that action reduced to bare-bone physical reality. It is a reality carrying universal social validity among all exchanging agents ... [they] are, in their origin, the forms of the act of commodity exchange, and in their content, the basic categories of the object-world in antithetic contrast to man's own social world. The content of these concepts bears absolutely no reference to money. Their only trait relating to money and to exchange is their abstractness.[46]

NFTs are also engaged in real abstractions, and they are themselves real abstractions. This double nature is at the heart of their parasitical mediations and implies the need for taking into account both ideology and technology, as both are generated from the same mode of real abstraction that also goes by the name of capitalism. That is to say, the hope that they may localise and anchor artistic communities without reliance on platforms or institutions could be seen as a farcical replay of the hope of the bourgeoisie that they could trade on free markets outside of the control of feudal, sovereign estates. Yet, at the same time, this bourgeoisie effectively ended the sovereign rule of feudal lords and instead gave rise to a new kind of estate: the nation-state in which they dictate the rules of the game but are at the same time also haunted by them.

The 'dark magic' of digital technology, however, is not a mere weapon that can be wielded to advance every kind of interest. As we have seen, it is still very strongly tied to the real abstraction of capital. In fact, it is the parasitical nature of capital itself that transforms NFTs (and not, as some vociferous advocates of cryptocurrencies sometimes claim, the other way around). Even if NFTs may take on the form of a currency, their applications remain historically, technologically, and materially objectified through concrete practices of real abstraction, they are not, as 'objects' being magically individuated,[47] freed of ideological and economical concerns. And this has severely debilitating consequences that inhibit the hopes of those who aim to establish more autonomous communities. In short, NFTs are parasitical and thus have two sides: rendering visible and rendering invisible, which is a logical consequence of their involvement in practices of real abstraction.

Symbolic misery

Operations of 'recording' (input, encoding) and 'reading' (reception, decoding) are integrated into early analogic devices such as the first Edison phonograph. With the advent of networks of input and reception devices, these operations tend to be

separated. These two poles are the extremities of a network: at one pole, industrial manufacturers, at the other, consumers. If the current continuous flood of information develops into true memory consumerism, it would tend as much toward the delegation to machines of ‘expertise’ and ‘writing skills’ as technical tendency’s full fruition and toward the commodification of memory. Such development would be impossible without such delegation.[48]

NFTs therefore not only reproduce but often even increase the commodification of artworks. This constitutes for Bernard Stiegler the core of what he understands as ‘symbolic misery’, directly picking on the critique of culture industries or ‘cultural capitalism’.[49] Stiegler argues that since the middle of the 20th century, culture industries have developed a situation of monopoly over aesthetics. Not only did it lead to the separation of producers and consumers of artworks – as we have seen above – but the very core of artwork as a practice changed as well: from aesthetic experiences to consumption. In other words, as Stiegler argues, the individual became a consumer as her ‘affective and aesthetic dimension’[50] shifted, from participation as aesthetic experiences in experimentation and engagement to mere consumption.

Of course, Stiegler’s critique of consumerism follows a long tradition that spans the entire political spectrum for almost a century. What is original, however, is the structure of the argument itself. Whereas most cultural critiques of consumerism imply a hierarchical notion of aesthetics and as a result will ultimately risk becoming trapped in reactionary moralisations to evade the exposure of arbitrariness of their preferences, Stiegler explicitly follows Sohn-Rethel (as well as Derrida) and traces the roots of the problematic in the historical-material process of reification. Criticising Sohn-Rethel for failing to adequately integrate a historical-materialist engagement with technology into his conception of manual and intellectual labor, Stiegler develops a reading of real abstraction that is technological from the outset (rather than an addendum).

For Stiegler, therefore, it is entirely inadequate to develop a critique of consumerism as if it is a mere mindset produced by marketing (ideology). Much more im-

portant is how technology has modeled desires to serve the interest of the industry. This modeling is not merely cognitive but anchored in the externalisation of memory and affect beyond lived, bodily experience. It is based on the insight that it becomes imperative to re-think the participation of 'the individual' in aesthetic experiences, where the lack thereof leads to a loss of individuation: the individual no longer takes part in the construction/production of symbols which are the tools that shape and organise the making of sense.

Loss of individuation must not be interpreted as a romantic lament for a return to the authentic, individual human being, quite simply because for Stiegler such a being never existed. Human being has been a technical being from the outset. Instead, loss of individuation must be understood as a depletion of the capacity to resist negentropy. This capacity that Stiegler called life is collective, not individual.[51] The depletion of this capacity is what Stiegler, invoking Marx, also refers to as 'proletarianisation'. Proletarianisation – as the loss of ability to do and make [savoir-faire] and to live [savoir-vivre] – affects at once producers and consumers, through 'technological progress'.[52] Indeed, if it is true that technology made the production and consumption of artworks much easier, for Stiegler it also removed the individual from active engagement, from participation, from taking part in the aesthetic experience – either because of a loss of technicity as 'savoir-faire' (in the case of the producer) or because of a loss of sensibility due to the lack of participation to the 'aesthetic fact' (in the case of the consumer).[53]

It is important to stress that Stiegler describes a state of things, and neither regresses into an elitist critique of consumer culture as the lowest common denominator nor suggests the secretive work of a 'diabolical intention', brooding within culture industries, pronouncing a fatal destiny. Instead, he reiterates the importance of truly engaging with the technological, to overcome the distinction artist/non-artist, or rather producer/consumer, which has been posited as an 'état de fait'. And this is precisely where NFTs become even more ambivalent and paradoxical in their parasitic existence. On the one hand, one can easily see how the transactional and speculative dimension some NFT constructs bear are deepening a sense of symbolic misery. Between the separation of producer/consumer as an

aestheticisation/fetishisation of speculation, which co-opts the aesthetic experience (a mechanism also very often represented in modern video games with currency systems) and produces quick satisfaction, and the apparent participation located on digital marketplaces and platforms, all contribute to this misery posited as liberation. On the other hand, taking seriously what Dryhurst and others are trying to develop (through DAOs for example), one can also conceive ways in which new communities can be brought together, re-evaluating the relation of artist/non-artist through other modes, re-defining the aesthetic experience. Consequently, such 'bindings' to technological devices through practice and the mode in which the aesthetic is being experienced or experimented with could challenge processes of proletarianisation and lead to a deepening of individuation capacities through participation. However, in invoking DAOs as freed guilds operating beyond the state, there is also an aestheticisation of how we relate with others and with the world, neglecting or deceptively hiding the chains of mediators in play.[54] The magic of metaverses and Web 3.0 seemingly reunites subjects and objects in a 'virtual world'. However, as Nelms et. al. and Lana Swartz show, even those kinds of 'just us' economies, wishing to bypass trust in money through code, tend to be constituted around a leap of faith, a belief in the market, another transaction as a real abstraction.[55]

A pharmacology of NFTs

To describe the controversy surrounding NFTs as one between promises of reinvigorating artistic autonomy (as resistance against proletarianisation) versus the impending doom of nihilistic entropy has started to sound like a broken record. This itself is already a sign of negative dialectics. Critique has not only run out of steam, but it has also become that which it was always opposed to: utter banality. The parasite, however, neither favors critique nor banality and may therefore provide us with the necessary guidance to handle the ethos of despair that often accompanies such negative dialectics. Echoing Stiegler and asserting that NFTs are a pharmakon – at once poison and cure – is therefore not without consequences and needs to be followed through. Conceived as a mode of objection, the materiality of NFTs is their agency and agency is always political.

What characterises blockchains can be summarised in three words: decentralisation, irreversibility, and irreducibility. As we have already seen, decentralisation is the most obvious and perhaps therefore the most often mentioned aspect. Bundling localised entities, for example through symbiosis, is indeed a tried and tested method against entropy. However, the question remains whether NFTs are an appropriate medium to enable such bundling; instead, they seem far better equipped to accelerate fragmentation.[56] Irreversibility is at the heart of the blockchain, as it follows an exclusively additive logic. Irreversibility does not oppose circulation, but as every transaction is itself inscribed into the blockchain, it obliterates the concept of immutable mobility that is so central to, for example, money. It instantiates a permanent record of traces, each one adding a residue of a transaction. Irreversibility is often related to entropy, but whereas entropy is always irreversible; irreversibilities are not always entropic, as some may function to forge and strengthen local bonds. Irreducibility is the third component of NFTs and operates closely with the other two. Despite NFTs being bought and sold on 'markets', they cannot be reduced to mere commodities or capital. They are virtual objects and concrete abstractions in their own right.

Decentralisation, irreversibility, and irreducibility could be conceived as attempts to retain that which capitalism – according to Albert O. Hirschman – always seems to attack: loyalty.[57] In a simplistic dyadic framework, loyalty can be opposed to interests. Even in the most cynical moments of a transaction, NFTs still keep a trace, a signature, of every entity it has been associated with; functioning as a kind of organic archive, a form of tertiary retention as Stiegler calls it. By retaining a trace of the transaction, value is added without necessarily being expressed in exchange value. This loyalty is not passionate but parasitical: once allowed in, it does not leave. However, at the same time, NFTs do not circulate in interest-free environments. Their circulation enhances the speculative value and promises a higher return with interest. Whereas Hirschman conceives of loyalty vs. interests as hot vs. cold (or as voice vs. exit) as a mono-dimensional opposition and thus understands historical processes as iterations between two poles, the neoliberal takeover that took place during the last 50 years seems to suggest that interest-based exit-oriented strategies have become prevalent. Therefore, it is perhaps that Hirschman has become the darling of reactionary political thought (such as that

advocated by Nick Land),[58] even if his stance on the matter has always been far more lucid. Merely opposing the exit strategies of cold, rational neoliberal individualism with a cozy sense of communal loyalty is precisely that which has fueled the reactionary tribalism (as an anti-program to globalisation) of the alt-right. This is why Stiegler stresses technology as a *pharmakon*, rather than either danger or saving power; it forces us to always be mindful of both dangers and saving powers.

Introducing negative dialectics at this point may help us avoid both dyadic simplifications as well as reductionist determinism. NFTs do not offer an exit: they are a medium of appropriation and retention. Yet at the same time, their very function derives from their ephemerality, that is, from the built-in desire for exit and circulation. Indeed, from the insistence on being singular and unique derives the promise of higher returns. Whereas Nick Land posits that cryptocurrencies are truly peer-to-peer and do not require a trusted third party (which he refers to as ‘the state’), it has now become abundantly clear that NFTs always invoke and require a platform.

When Yanis Varoufakis referred to the end of capitalism, he was not talking about some kind of post-revolutionary utopia, but about a dystopia, which he called techno-feudalism.[59] The central role in techno-feudalism is played by corporate platforms that have completely obliterated the laws of supply and demand and thereby destroyed market capitalism. He thereby confirms Stiegler’s thesis that proletarianisation cannot be reduced to the needs of capitalism but have a deep-rooted history in the evolution of technicity, which is also the evolution of human being. NFTs always imply the logic of platforms and their very ambivalence as both entities of relation and circulation make them very effective conduits for further entropic proliferation of techno-feudalism. In a techno-feudalist order, all works of art are in the final instance property of one or other platform, and all acts of production and consumption take place if they are permitted on one or other platform. Ultimately, NFTs as parasitical mediators are themselves appropriated by platforms, which are thus the ultimate parasite of negentropy – the ever-increasing fragmentation of relations. Relying too heavily on DAOs or NFTs as saviors or exits might be considered as what Varoufakis calls a ‘fallacy of composition’,[60] in relation to John Maynard Keynes’s use of the term: the belief that what works

on a micro scale, or locally, will also work for society at large. Is the model of the DAO expandable to every artist, and is the NFT a solution for every artwork? Nothing is less certain.

Therefore, the fight for more autonomous communities needs to always cultivate symbiotic life forms, slowing down negentropy, and resisting real abstractions to colonise our matters of concern. Whereas this may sound vague and abstract, it can be traced to the desire that has generated the hope that NFTs can enable the redevelopment of communal life forms upon which our future depends. However, without adequately revealing art 'work' as real abstraction, investing this hope exclusively in the deployment of NFTs is more likely to exacerbate rather than inhibit negentropy. Only if the deployment of NFTs is anchored in the technological-performative materiality of objection-creation, it will not so easily be negated by the dominant modes of real abstraction. Therefore, the pharmakon of technology reveals itself first in excessive obsolescence before it may be retrieved as a radical agent.

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Notes

- [1] The authors would like to thank Mark S. van Loon for inspiring conversations on the philosophy of technology.
- [2] Stiegler 2012.
- [3] Benjamin 2008.
- [4] Simondon 2005.
- [5] Serres 1980.
- [6] OpenSea, like Rarible or Mintable.app, are NFT marketplaces.
- [7] Latour 2005; Barad 2007. For an account of methodological implications, see Kissmann & Van Loon 2019.
- [8] Akrich 2006.
- [9] Stiegler 2012.
- [10] Serres 1980.
- [11] Fortnow 2021, p. 10.
- [12] Summers 2022.

- [13] It is important to note however that the status of the blockchain (private or public) determines its level of decentralisation. A private blockchain limits its number of users and thus, of possible verifications.
- [14] Quiniou & Debonneuil 2019.
- [15] A security which is being disputed nonetheless (see Fortnow 2021; Summers 2022).
- [16] See for instance 'CryptoPunks': <https://www.larvalabs.com/cryptopunks>.
- [17] Fortnow 2021.
- [18] Liz Pelly 2017.
- [19] Liz Pelly 2018.
- [20] Fortnow 2021.
- [21] Catlow et al. 2017.
- [22] Through services such as Royal. See <https://royal.io/>.
- [23] Catlow et al. 2017.
- [24] Dryhurst 2020.
- [25] Ibid.
- [26] Ibid.
- [27] Rumburg & Sethi & Nagaraj 2018, p. 12.
- [28] Serres 1980.
- [29] Latour 2005, pp. 39-40.
- [30] Although the platform also proposes NFTs as collectibles, see <https://blog.audius.co/article/audius-nfts-and-wallets-faq>.
- [31] Rumburg & Sethi & Nagaraj 2018.
- [32] To be more exact, this use of NFTs can only be referred to as the 'current usage', as it is repeatedly noted that the potentials of blockchains and smart contracts have not been exhausted yet. See for instance Mat Dryhurst's own podcast with Holly Herndon 'Interdependence', or his participation on this NFT panel: <https://www.youtube.com/watch?v=nfcFSdPkGvA>.
- [33] Herndon & Dryhurst 2022.
- [34] Ibid.
- [35] Serres 1980, p. 198.
- [36] Stiegler 2009.
- [37] Marx 2009, pp. 83-85.
- [38] Benjamin 2008.
- [39] Van Loon 2008.
- [40] Adorno 1932.
- [41] Van Loon 2008, p. 53.
- [42] Debord 1994, p. 26.
- [43] See 'CryptoMarx', the Karl Marx pixel-art NFTs. Or how the critique becomes the fetish: <https://opensea.io/collection/crypto-marx>.
- [44] Benjamin 2008, p. 23.
- [45] Sohn-Rethel 2021.
- [46] Ibid., p. 60.
- [47] Simondon 2005.
- [48] Stiegler 2009, p. 130.
- [49] Stiegler 2012, p. 174.

- [50] Ibid., p. 17.
- [51] Tsgadis 2022.
- [52] Stiegler 2010.
- [53] Stiegler 2012, p. 190.
- [54] Simondon 2012.
- [55] Nelms et al. 2018; Swartz 2021.
- [56] Catlow et al. 2017.
- [57] Hirschman 2004.
- [58] Land 2018.
- [59] Varoufakis 2022.
- [60] Varoufakis & Morozov 2022.