

Phantasy, Technology, Critique On Bernard Stiegler's Pharmacology of the Imagination¹

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Abstract. *Bernard Stiegler's philosophy of technology gives a central role to the imagination. Among the philosophers with whom he establishes a critical dialogue (Kant, Simondon, Adorno, Derrida), Husserl's reflections on memory, imagination and phantasy count as decisive influences on Stiegler's critique of the industrialized imagination in *Technics and Time*. This paper begins by briefly introducing Stiegler's anthropological account of technics, in which technics is understood as an exteriorization of memory (1998). I will reconstruct how Stiegler's critique of Husserl substantiates the role of technics as memory through the concept of tertiary retention, while his critique of Kant connects technical mediation with the schematic function of imagination. Next, I will examine Stiegler's critique of the industrialization of the imagination as part of a cultural industry (2011). Although the politicization of the technologized imagination is not entirely new (Marcuse 1968), Stiegler's account displays original elements. If technical objects and media function as supports for memory and imagination, then the imagination is not merely an internal, unconstrained, and individual faculty, but it is decisively formed in the interplay between subject and milieu with its associated power relations. Thus technology, for Stiegler, stands as a pharmakon – both cure and poison – of memory and imagination. I will argue that for social critique in the contemporary age, Stiegler's notion of exteriorized imagination highlights the political stakes in the co-constitutive relation between imagination and technical media. Furthermore, the conception of imagination as a partly technical faculty also invites reflections on digital reality and developments in AI (Romele 2020; Wellner 2022a). Ultimately, this perspective provides a standpoint to view imagination as a transformative political faculty, which reflects the structure of desiring subjects in their movement toward the future.*

Keywords. Stiegler, imagination, technology, externalization, industrialization.

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Introduction

This paper aims to reconstruct the relationship between technology and imagination in Bernard Stiegler's philosophy, focusing primarily on *Technics and Time*, while also highlighting the elements of social critique inherent in this conception and its role within a broader project of social transformation. While being neither a phenomenologist nor a critical theorist strictly, but rather an eclectic thinker of the technical condition, Stiegler develops a "pharmacology" of the imagination that underscores the co-constitutive and metastable

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relation with technical artifacts and systems. In his philosophy of technology, Stiegler accords a central role to imagination. Across the *Technics and Time* series, he develops a nuanced account of the relationship between imagination and technology through critical dialogue with key figures such as Kant, Husserl, Simondon, Derrida, Adorno, and Horkheimer. His analysis culminates in a social critique of what he describes as the industrialization of imagination (Stiegler 2011, 82) in the contemporary era, wherein the imagination becomes a product and tool of industrial processes.²

The paper is structured in two main parts. In the first part, I will briefly examine how Stiegler both draws upon and moves beyond Kant and Husserl in his treatment of memory and imagination. I will introduce Stiegler's conception of technics as the «exteriorization of memory» (Stiegler 1998, 173) and demonstrate how his critique of Husserl's notion of memory leads to the development of the concept of «tertiary retention» (Stiegler 2011, 18), which shapes both primary and secondary retentions. Furthermore, I will highlight that, despite Stiegler's critique, Husserl's concepts of time-consciousness, phantasy, and fiction remain pivotal to Stiegler's social critique of the industrialized imagination, a topic that will be elaborated in the second part of the paper. The reconstruction of Stiegler's treatment of imagination will then identify three key moments: (a) imagination in relation to memory-enabling devices; (b) imagination in the generation of knowledge and sense-making; and (c) imagination as shaped by phantasy objects and technical reproduction.

In the second part, I will investigate Stiegler's interpretation of consciousness as having a cinematic structure, as well as his conceptualization of imagination as embedded within the cultural industry, which enables him to articulate his theory of the industrialization of imagination (Stiegler 2011, 82). It will become evident that, for Stiegler, if technical objects and media serve as supports for memory and imagination, then imagination is not merely an internal, autonomous faculty, but is fundamentally shaped through the interaction between the subject and their milieu, along with its associated power relations. Thus, technology, in Stiegler's framework, functions as a *pharmakon* – both remedy and poison – of memory and imagination. Stiegler's sustained interest for the imagination justifies the claim toward a *politics of the technologized imagination*. Ultimately, I will argue that Stiegler's notion of exteriorized imagination offers a critical framework for theorizing how the human subject is co-constituted with technical prostheses in the context of high-technology societies, making it a vital tool for social critique in the digital age.

1. Stiegler on technics, memory, and imagination

As a philosopher of technology, Stiegler's reflections on the imagination are contextualized in his larger conception of technics. In this perspective, the imagination works in tight connection with memory-enabling devices. To gain a deeper understanding, I will first present briefly Stiegler's philosophical anthropology as an anthropotechnics (elaborated in the

² Stiegler alternates between the terms “technology” and “technics” (in French *technologie* and *technique*), without always drawing a clear distinction. This oscillation can be understood as reflecting a continuity between technics and technology when viewed through the lens of exteriorization. This article employs the terms with an overlapping spirit, drawing on their semantic and conceptual connections within Stiegler's philosophy. While emphasizing their continuities as forms of exteriorization, the article also associates “technology” mainly with the technics of the industrial era—objects and processes reliant on advanced scientific abstraction and industrial organization, such as mass media and digital platforms. In contrast, “technics” is treated as a broader term encompassing technical practices in general, tied to the logic of inorganic supplements through which human life constitutes itself over time. Readers should remain mindful of this semantic ambivalence throughout the text. See also the translators' note in Stiegler (1998, 280).

first volume of *Technics and Time*), and then focus on his problematization of the imagination (mostly with reference to *Technics and Time III*).

1.1. The human as a prosthetic animal

In *Technics and Time I*, Stiegler deals with the question of technics as a general feature of human life. The origin of the human is not to be found in a biological or transcendental essence, but in a dynamic relationship between living and non-living matter. Following paleo-anthropologist André Leroi-Gourhan, such a relationship is what Stiegler calls «exteriorization»: namely, a process in which the interiority of human beings becomes inscribed and co-dependent with the exteriority of tools and artifacts (Stiegler 1998, 141-142). Leroi-Gourhan's prehistoric studies reveal technics as a transhistorical phenomenon, leading Stiegler to claim that human history is fundamentally a history of exteriorization (see Johnson 2013).

Technics works as an extension of human presence in the world. In this sense, tools are «protheses» which allow human beings to act, and «technics is the pursuit of life by means other than life» (Stiegler 1998, 17). As a being always in a dynamic relation with a milieu, the human being finds through technics the fundamental domain pointing to the relation between the organic and the inorganic. In other words, human life is always co-constituted with its “dead” technical supplements, or with «organized inorganic matter» (Stiegler 1998, 49). At the same time as humans invent technical extensions, however, technicity invents the human in turn, such that technicity is not reduced to an anthropocentric extension. Anthro-po-genesis is thus coextensive with techno-genesis. Technical protheses are no mere support, but rather extensions that can be both enabling and disabling. Following Derrida's characterization of writing as a pharmakon of memory, Stiegler considers technology in general as a “pharmakon” – namely, as both *remedy* and *poison*.

Stiegler further illustrates this anthropotechnical position with a reading of the myth of Prometheus and Epimetheus.³ In the myth, Epimetheus creates animals but forgets to bestow humans with any natural advantage. To rectify this, Prometheus steals fire for humanity. While traditional interpretations focus on Prometheus's gift of fire as a symbol of technics, Stiegler emphasizes Epimetheus's initial forgetfulness (Stiegler 1998, 185). For Stiegler, the human is fundamentally a forgetful animal, whose existence is perpetually redefined through the interplay of interiority and exteriority. This relationship underscores the intimate connection between technical exteriorization (as humanity's ontological condition in space) and time (where memory is supplemented by objects, granting permanence to expression).

Through the traces humans leave in objects, artifacts, and environments, these technical elements become cultural objects. At the same time, humans experience their past through technical objects inscribed with memory, allowing them to project themselves into the future. In this sense, technical prosthetics play a crucial role not only in human existence but in shaping the experience of time itself.

³ While the term “anthropotechnics” is more commonly associated with Sloterdijk (2014), the concept is implicit in Stiegler's theory. This notion aligns with Stiegler's vision of the human as historically constituted through the dynamic interplay between the “bio-anthropological” and “techno-logical” dimensions (Stiegler 2009, 7). Although Stiegler's philosophy extends beyond an anthropology of technics, it undeniably incorporates a significant anthropological dimension, in acknowledging the significant role of technics in shaping the human. These ideas, however, are developed more in dialogue with Leroi-Gourhan rather than Sloterdijk. For a discussion of Stiegler's and Sloterdijk's philosophies as anthropotechnical perspectives, see Lemmens and Hui (2017).

1.2. Technics and memory

The nexus between technology, memory, and imagination has been a central theme throughout Stiegler's work, as evidenced by his first published text, *Technologies de la mémoire et de l'imagination* (Stiegler 1986), which laid the foundation for his exploration of these concepts in the *Technics and Time* series. Stiegler's anthropotechnical definition of the human as a forgetful animal serves to contextualize his interest in memory and imagination.

For Stiegler, technics, conceived as exteriorization, is memory. In *Technics and Time III*, Stiegler develops the crucial idea of technics as memory through a critical appropriation of Husserl's notion of time-consciousness [*Zeitbewusstsein*] (Stiegler 2011, 13). Husserl's concept of time-consciousness holds that every perceptual experience is temporal. In the life of consciousness, each moment is a succession of lived experiences [*Erlebnis*] interconnected within a horizon of sense. Every present experience becomes past as soon as it is lived, and some experiences make sense only in connection with the previous moments that precede it. Husserl gives the famous example of the melody as a coherent succession of events that can be grasped only in virtue of the previous instants that compose it. When a single instant of a melody is considered in isolation, it appears merely as a musical note, not as a melody. The phenomenality of the melody lies in its flow, and as such, melodies are purely temporal phenomena.

Husserl holds that the structure of consciousness itself is temporal. Every living experience happens in time and becomes «registered» in consciousness through «retention», which is the basis for memory, and point to a future through «protention», the basis for future anticipation. Importantly, in his 1905 lectures *On the Phenomenology of the Consciousness of Internal Time*, Husserl distinguished between «primary and secondary memory» [«primäre Erinnerung und sekundäre Erinnerung»] (Husserl 1991, 47), which Stiegler calls «primary and secondary retention» (Stiegler 2011, 21). The primary one is an operation of inscription of the contents of lived experience as they happen in the present through perception (involving merely a modification of a “now” into a “no-longer now”). On the other hand, secondary memory refers to a mode of reproduction of those contents inscribed in primary retention (recollection, remembering).

Stiegler discusses the distinction between primary and secondary retention, arguing that they should be distinguished but not opposed. By taking up Husserl's example of the melody as a purely temporal object, Stiegler notes that sound recording devices allows for the identical repetition of a given temporal object. However, when listening to a melody a second or third time, the new experiences captured in primary retention are never exactly identical. Primary retention always retains a partial amount of experience and never its totality; indicating that memorizing implies forgetting, as a figure emerging from a ground. This «retentional finitude» is the «grounding condition of consciousness-as-temporal-flux» (Stiegler 2011, 20). What occurs is a selection of retained experiences; then, according to Stiegler, the secondary retention in-forms new primary retention according to selection criteria: «a reduction of what passes by to a past that retains only what the criteria constituting the secondary retentions allow it to select: secondary retentions inhabit the process of primary retention in advance» (Stiegler 2011, 19).

However, these selections are themselves informed by previous criteria of selection. Here Stiegler introduces the key concept of «*tertiary retentions*» to account for the role of technics in memory. Melodies are reproduced insofar as there are technologies of reproduction, which substantiate memory (secondary retention) and allow for new perceptive experiences via repetition (primary retentions). If a single temporal object corresponds to two or more sets of primary retentions, then these retentions must be shaped by something preceding them – that is, for Stiegler, both secondary memory, tertiary memory, and

their associated protentions. In other words, this technical, tertiary form of memory creates an imprint that is fundamentally prior to our primary retentions; it is through this process that we temporalize ourselves and the world around us.

What are tertiary retentions? As a tertiary retention, technics is memory. Because technics refers to inorganic matter, tertiary retentions are forms of objective memory: «we must mark as tertiary retentions all forms of “objective” memory: cinematogram, photograph, phonogram, writing, paintings, sculptures – but also monuments and objects in general, since they bear witness, for me, say, of a past that I enforcedly did not myself live» (Stiegler 2011, 28). We may identify two classes of artifacts as agents of technical memory. Some artifacts actively record experiences and engender their reproduction according to the automatic functions of machines (e.g. recording devices), while others simply embody human traces in their materiality.

In general, however, the concept of tertiary retention indicates an “objective” memory. In other words, technics as a tertiary retention indicates an exo-somatic, artificial memory interrelating with biological memory. The exteriorization of memory through tools represents a third kind of memory distinct from the internal, individually acquired memory of our brain (epigenetic) and the biological, evolutionary memory inherited from our ancestors (phylogenetic). Stiegler refers to this as «*epiphylogenetic memory*» (Stiegler 1998, 177).⁴ Far from indicating that objects have or experience memory akin to vital beings, the notion of tertiary retention highlights the centrality of the object-side in the constitution of memory. If for Husserl the focus is on the noetic side of the *noesis-noema* correlation, namely on the conscious intentional act, Stiegler broadens the scope to centralize the relation between subject and technical milieu.

In this sense, technics plays a fundamental role in culture, and it decisively informs temporality, both by shaping our sense of time directly through the effects on personal and collective memory, but also by connecting us with a temporal dimension that is broader than our own personal lives. In its most general sense, a tertiary retention is «the prosthesis of consciousness without which there could be no mind, no recall, no memory of a past that one has not personally lived, no culture» (Stiegler 2011, 39). In Stiegler's account, technical objects provide the fundamental platform for the transmission of culture over time, connecting us with the past, and projecting us toward the future.

Before moving to the nexus technics-memory-*imagination*, however, we should note that the technical prosthesis is also a *pharmakon*. On this basis, Stiegler develops the notion of «*pharmacology*», as a philosophical methodology that does not only consider the ambiguous character of technology but is also a way for critically assessing the ethical-political content of the relation between human organs and technical organs (Stiegler 2013). In turn, the later concept of a «*positive pharmacology*» (Stiegler 2021, 367) takes on a more active and constructive dimension, whereby societies are called to take up the challenge of re-defining and re-designing technology to foster the development of collective intelligence against generalized commodification.

Hence, as pharmacological entities and tertiary retentions, technical objects also stimulate a degree of ignorance and forgetfulness on the human side. When prosthetic devices take over certain tasks – whether manual or related to memory – humans are gradually relieved of these functions. In this sense, technical automatization raises important

⁴ As Yuk Hui noted, Stiegler occasionally changed the wording to refer to the third type of memory, but ultimately maintaining the same idea: «Epiphylogenetic memories constitute the prosthesis of individual and collective memory [...] In the past thirty years Stiegler has from time to time changed his formulation of these terms from tertiary retention to epiphylogenesis, and more recently to exosomatization, as responses to specific questions, yet all of these terms concern the same subject – namely, technics as “the pursuit of life by means other than life”» (Hui 2019, 218).

questions about knowledge (*le savoir*), as we will explore. Simultaneously, technical-cultural forms shape not only what we remember from the past but also what we anticipate and project into the future, as retention is always connected to protention. In other words, as *pharmaka* of memory, technical devices filter both the protentive structure of consciousness and the schematizing process of the imagination. This is central to the intimate link between technics, memory, and imagination in Stiegler's thought, which we will now examine.

1.3. From memory to imagination

Understanding technics as prosthesis implies that not only bodily organs, but also mental faculties have their own prostheses. The third volume of *Technics and Time* deals extensively with the prosthetization of the imagination, and Kant's schematism is the point of departure. In Kant's *Transcendental Doctrine of Judgment* in the *Critique of Pure Reason*, the concept of "schematism" refers to the process by which the imagination mediates between the pure concepts of the understanding (the categories) and the sensory data of intuition. This mediation is essential for the application of these abstract concepts to our sensory experiences, thus enabling knowledge and guaranteeing the unity of consciousness.

The imagination generates these schemata through its ability to produce images or representations, ultimately allowing for sense-making. In this process of sense-making, the imagination has then a crucial function and serves to orient the subject's interpretation of the world. In analogy with memory, Stiegler argues that imaginative acts rely on technical prostheses too – books, films, media, and artifacts in general (Stiegler 2011, 58). On one hand, Stiegler's critique of Husserl establishes the role of technics as memory, while the discussion of Kant bridges the schematic function of the imagination with its technical mediations.

The concept of technical memory (tertiary retention) is central to Stiegler's development of the technicized imagination. This becomes evident when contrasted with another theorist of the technical imagination, Don Ihde. As Wellner (2022a, 196) noted, Ihde primarily explored imagination in relation to technics and perception, focusing on everyday and scientific technologies, whereas Stiegler's reflection centres on memory and communication technologies. While both thinkers address the role of technology in shaping human experience, Stiegler's focus on memory reveals a deeper engagement with the question of time, namely how external devices mediate experience and knowledge across time.

What is the relationship between technics-as-memory and imagination, then? Despite being deeply interlinked, memory and imagination are not synonymous in Stiegler's thought. On one hand, the imagination is a condition to technics as memory. Exteriorization into cultural objects relies on an imaginative and inventive act of gesture and speech. Further, the social direction of exteriorization is often oriented by imaginaries: accordingly, human consciousness is «constituted by the co-evolution of its dreams and its technics» (Stiegler 2014, 33). On the other, the very working of the imagination relies on an already existing milieu with its own tertiary retentions. Technical objects and recording devices constitute a materially sedimented cultural reservoir that informs the imagination and its capacity for schematizations. Thus, imagination and memory (in its technical form) are co-dependent and mutually influence one another.

At the same time, this co-dependence is not without problems. If the imagination is dependent on technology, then given technical forms of life will condition its schematics – sometimes even destroying its potential, according to Stiegler. The question of judgment is central in Stiegler's thought, and his interest in the schematic power of the imagination signals precisely this concern for judgment, which is at once philosophical and political. For example, Turner (2023) explores how the imagination plays a vital role in Stiegler's politics

of judgment, whereby profit-driven algorithmic mediation works against the critical knowledge of the thinking subject. As technologies of profit and control, digital media operate an attack on attention and imagination, constraining the “critical labour” of judgment and ultimately implying the de-skilling of the capacity of judgment.

Stiegler dedicates substantial reflection to the weakening of critical judgment and develops it further in later works, both through the critique of what he (following Simondon) calls «proletarianization», and by discussing how automatization contributes to losing certain forms of knowledge (see Stiegler 2013, 2018).⁵ For our purposes, it is sufficient to note here that the technologized imagination is indeed implicated in these epistemic and political processes around knowledge.⁶ As a matter of knowledge production and transmission, these considerations also have implications for the thinking and practice of education in relation to digital media (Lindberg 2020; Bradley & Kennedy 2019).

However, there is another element of the imagination that Stiegler considers as central, namely phantasy. The salience of a pharmacology of the imagination lies in the future-oriented character of the imagination, defining anticipations and expectations toward the future. Hence the stakes around technics and imagination concern the possibility of the future, and the kind of future that human societies move toward. In this context, when it comes to defining imaginative possibilities, Stiegler discusses another relevant aspect of the imagination, which is its function to deal with phantasy objects.

1.4. Imagination and phantasy

Stiegler's concern for the imagination, in connection with technology, includes both its schematic function in the generation of knowledge and critical thinking, as well as the question of phantasy and fiction. *Technics and Time III* takes up precisely this question of orientation for thought in our techno-scientific age where the line between fiction and reality becomes often blurred due to technical reproduction (Stiegler 2011, 6).

Stiegler discusses the opposition between phantasy or imagination, and perception, in reference to Husserl's reflections on the topic. For our purposes, it suffices to say that Husserl distinguished between perception as a form of presentation, and imagination as mode of presentification. «Presentation» [*Gegenwärtigung*] presents something actual and present, while «presentification» [*Vergegenwärtigung*] presents something absent *as if* it were present (Husserl 2005). Presentifications include both memory and imagination. Husserl distinguished between at least two forms of imagination, that is, «image-consciousness» [*Bildbewusstsein*] and «as-if consciousness» [*Als-ob Bewusstsein*]. The first involves a kind of perception, specifically of an image on a physical supplement which is then related with an external image subject; while the second refers to a mode of engaging with objects of experience that neutralizes belief in their actual existence, e.g., as in “pure phantasy”, and it includes experiences such as daydream or art forms like theatre (see Carreño Cobos 2013; Cavallaro 2017; Alves 2019).

Hence the imagination – whether conceived as “image-consciousness” or as a broader form of “as-if consciousness” – is distinguished from the domain of “actuality” to which

⁵ «Systemic stupidity is engendered by *generalized proletarianization*, from which there is no escape for any actor within the consumerist industrial system, proletarianization resulting precisely from a pharmacological development, where the *pharmakon* short-circuits those whom it inscribes in the circuit of production, consumption and speculation, and does so by destroying *investment*, that is, *the desiring projection of imagination*» (Stiegler 2013, 22).

⁶ In this respect, Stiegler affirms that contemporary big data contribute to «*liquidate all forms of knowledge (savoir vivre, savoir faire and savoir conceptualiser, knowledge of how to live, do and think)*» (Stiegler 2018, 51).

perception gives access.⁷ Both memory and imagination are forms of presentification because they allow for absent objects to be taken as present. In this perspective, the crucial difference between (reproductive) imagination and memory is that in memory what appears as absent indicates a really existing past, while imagination indicates a non-actual, possible state of affairs. Stiegler attributes to Husserl's account a separation between imagination as a mode of engagement with non-actual objects of phantasy, and perception and memory as granting access to actual reality (Stiegler 2011, 38).⁸ The question of the actual or non-actual status of imaginary forms is very relevant for Stiegler, especially in relation to technical reproduction and the corresponding saturation of the conscious life of subjects (including memory and imagination) with fictional objects. The effectivity of fictions to guide the imaginative and protentive power of subjects disallows a strict separation between actual perception and non-actual imagination. In order to deal with this question, Stiegler moves to the discussion of cinema.

2. Cinematic consciousness and the industrialization of the imagination

2.1. The question of cinema: on cinematic consciousness

Through the notion of tertiary retention, Stiegler attributes a material dimension to Husserl's concept of time-consciousness, considering it as a system defined in relation with the technical milieu. If consciousness is time, and consciousness is «the general system of tertiary retentions» (Stiegler 2011, 54-55), then time consciousness itself will be conditioned by exteriorization devices. In this context, *cinema is the emblematic form to understand consciousness as temporality and as system of tertiary retention*. If the melody shows consciousness to be a temporal flux, cinema complements the flux with images.

Stiegler explains the highly attractive power of cinema through the provocative hypothesis that consciousness itself has a cinematographic structure: «A film [...] is essentially a flux: it consists of its unity in and as flow. The temporal object, as flux, coincides with the stream of consciousness of which it is the object: the spectator's» (Stiegler 2011, 12). When immersed in a cinematic experience, the spectator's attention is immersed in the cinematic flux because consciousness is itself an audio-visual flux. In this account, consciousness is inherently cinematic, it is a cinematic consciousness.

In relation with the imagination, cinema occupies a special place because «its technics of image and sound [...] re-invent our belief in stories that are now told with remarkable, unparalleled power» (Stiegler 2011, 9). As a system of audio-visual flux, cinema is both a tertiary retention and a vehicle of imagination. We may thus call it an *objective imagination*, in parallel to *objective memory*. Without providing a clear-cut definition of imagination, when it comes to cinema, Stiegler treats it as the ability to produce images and to re-assemble them, such that «there can be no mental image without an objective image» (Stiegler 2011, 53).

This form of objective imagination, as derived from the Stieglerian perspective, does not necessarily imply a machinic imagination. The question here is not about whether machines can imagine, as it has been recently discussed in some instances regarding imaginative AI

⁷ In Husserl's words: «[c]onsciousness of what is not present belongs to the essence of phantasy» (2005, 63).

⁸ Stiegler's interpretation appears to align more closely with those emphasizing the primacy of perception in Husserl's phenomenology as a foundational model for other modes (e.g., Drost 1990). However, some scholars have challenged this view, arguing instead that imagination plays a pivotal role in shaping the understanding of reality in Husserl's account (see Dufourcq 2011).

(Wellner 2022b; Liberati 2022). Rather, Stiegler's point allows to define the imagination in terms of a structural interplay with technical supplements, exemplified in this case by cinema as a paradigmatic form. A more compatible position can be identified in the concept of «tertiary protention» (Hui 2016, 221), which brings Stiegler's idea of «tertiary retention» to the level of the imagination, partly attributing predictive functions of the imagination to digital algorithms, while simultaneously remaining centred on the feedback cycle between human projection and digital anticipations. Algorithmic mediation in digital reality leads to a condition characterized by the interplay between tertiary retentions and tertiary protentions, where the contents of experience are not merely stored in externalized reservoirs but are pre-emptively collected and processed. Nony (2024) describes this mediatic situation as a new stage in the proletarianization of the mind, where artificial intelligence processes extracted data to re-modulate user behaviour according to inaccessible norms.

Thus, consistently with the individual-milieu correlation (Simondon), and the conception of hominization through exteriorization (Leroi-Gourhan), Stiegler argues for a conception of the imagination in connection with the material and cultural reality of exteriorizations. The concept of cinematic consciousness as an objective imagination serves as a theoretical foundation to analyse the specific forms in which the technologized imagination plays out in different contexts of socio-technical life. The coincidence between consciousness and the cinematic audio-visual flux leads to the question of how fictions can increasingly in-form the imaginative structure of subjects and their movement toward the future, in conditions of intense technical reproduction. If technical objects and media function as supports for memory and imagination, then the imagination is not merely an internal, unconstrained, and individual faculty, but it is decisively formed in the interplay between subject and milieu with its associated power relations.

2.2. Industrialization of imagination

Stiegler's concept of cinematic consciousness as an audio-visual temporal flux which is co-constituted with the socio-technical milieu, with its system of retentions operating selections and influencing the protentional possibilities of the subject, implies an important political dimension in relation to the culture industry. Cinema is not simply consciousness that refers back to itself through audio-visual exteriorization. Cinema is the apex of an industrial system of culture. In other words, cinema coincides with the *becoming industrial* of imagination. Dominant cinematic forms produce fictions and stories that shape the self-understanding of spectators. As a global industry, cinema produces global temporal objects that become global retentions and, consequently, global protentions. Cinema constitutes a key moment in the history of imagination because it is when the imagination becomes an object of industry, alongside the industrialization of memory (Roberts 2006).

In relation to this matter, Stiegler discusses Adorno and Horkheimer's critique of the culture industry. In the *Dialectic of Enlightenment*, they maintain that «[t]he active contribution which Kantian schematism still expected of subjects [...] is denied to the subject by industry. It purveys schematism as its first service to the customer» (Adorno & Horkheimer 2002, 38). In addition, for the Frankfurt theorists, the culture industry is a form of control in which it is increasingly difficult to distinguish real life from film. In essence, what they denounce is the automation of the imagination as a process that favours capitalist reproduction. Differently from the Frankfurt theorists, Stiegler does not consider technical mediation as being itself the problem because of the intimate, co-constitutive relation between the imagination and tertiary retentions: «if there is an "industrial schematism", it is because the schematics are originarily, in their very structure, industrializable: they are

functions of tertiary retention; that is, of technics» (Stiegler 2011, 41).⁹ In other words, the novelty of technical industrialization is possible on the premises of a deeper continuity grounded on technical exteriorization itself.

Stiegler's technical conception of the schematism ties with fiction and phantasy. Stiegler contends that Husserl, Adorno, and Horkheimer share a common «obsession» with separating perception from imagination, reality from fiction – because without this separation, there would be only mental disorder (Stiegler 2011, 38). Stiegler argues that this distinction must not be seen as an opposition, once we affirm that technical reproducibility (as a site of objective memory and audio-visual production) shapes and filters perception. Once Stiegler conceives of imagination as conditioned by the retentions and protentions, including objective memory as sediments of imaginative supplements, the salient point becomes that fiction is not merely in-actual but somehow actualizes itself in reality by conditioning the imaginative possibilities of human subjects. Bergson's concept of virtuality fits well here, as that which mediates between the potential and the actual. In other words, the intensification of technical reproduction renders the concept of purely non-actual fictions untenable. The saturation of the contemporary technical milieu with reproducible content – even more now today with social media, videogames, and all sorts of entertainment platforms – rather calls the critical theorist to the task of questioning how the regime of production and distribution of fictions shapes the collective imagination and its potential to imagine future possibilities.

The industrialization of the imagination not only shapes the content of imaginative objects but also the imaginative process itself. This form of industrial monopoly leads to pathologies of the imagination. One aspect is the *standardization* of consumer-citizens: industrial control of the imagination leads to «the confusion of all possible /'s in an undifferentiated flux [...] [which] is condemned to dissolve into a globalized, impersonal *One*» (Stiegler 2011, 4). Without appropriate critical-schematic functions, there occurs «the cancellation of the possibility of exceptions» (Stiegler 2011, 103). Another important aspect is the exclusion from the means of imagination-production. Drawing from Simondon's account of the industrial worker in the automated factory, Stiegler notes a parallel de-skilling and exclusion in relation to the imagination: «just as the worker has been deprived of individual technical potential by machine tools, the subject-conscious-of-objects has become a consumer-of-products deprived of all possibilities of participating in the process of defining, constructing, and implementing the retentional criteria for a life of the mind» (Stiegler 2011, 103).

These two aspects – standardization and exclusion – can be detected in contemporary mediatic forms. Although digital media offers an enlargement of cultural expression, the unequal social structure and profit-driven design result in an oversaturation of content within a competitive environment. The catchiest and quickest-to-consume products dominate attention, marginalizing alternative forms of expression and thinking. The audio-visual flux is accelerated on contemporary streaming platforms and social media, reshaping both the temporality of consumption and the modes of appearance of the flux. This analysis supports a critique of the attention economy (Stiegler 2018), which contends that an emphasis on instant gratification undermines judgment, memory, and imagination. De Preester (2021) builds on Stiegler's critique, demonstrating that the commodification of attention affects not only the capacity to concentrate but also care and desire themselves.

In considering new forms of cultural expression with AI, we might view ChatGPT as a mode of cultural production that privileges specific standards of expression – such as

⁹ For a broader discussion of the relation between Stiegler's philosophy of technics and the Frankfurt School critique of instrumental reason, especially Adorno, Horkheimer, and Habermas, see Stiegler (1986), and Van Camp (2009).

clarity, logical structure, and the avoidance of potentially offensive language. This contributes to an infosphere of standardized cultural expression in which the imaginative subject is immersed. The standardization of cultural products, critiqued by theorists of the culture industry, including Stiegler, can be applied to generative AI technologies. Despite their vast databases and recombinatory capabilities, these systems are inherently biased toward the statistically most probable reply within a given informational milieu. Thus, they appear more inclined to reflect prevailing patterns of thought and sentiment than to serve as genuinely imaginative technologies or sources of novelty (although this does not preclude their possible role in assisting the imaginative subject in creating texts or envisioning new possibilities).

These considerations point to an intrinsic connection between technology, imagination, and desire. The industrialization of cultural products allows for the shaping and modulation of desires in a way that informs imaginative possibilities. The ultimate political problem, according to Stiegler, is the destructive effect on desire. As cinematic consciousness, the flux of the *I* is constituted by a past (retention) that always points to a future (protention). The possibility of projection is constitutive of the present and orients aspirations both individual and collective (Stiegler 2011, 76). It is on this basis that consciousness projects itself into a possible future. The automation of the imagination corresponds to an automation of the protentional possibilities of desire. Contemporary industrialized media trap human desire into presentist modalities by treating it as a commodity. Because this situation mortifies desire, the very possibility to truly desire a future is at risk: «all human social grouping [...] is above all the sharing and projection, through the group itself, of a desire for a common future» (Stiegler 2011, 88). Therefore, it appears evident that the question of desirable futures in alternative to global techno-economic destructivity must remain open, and that this question involves directly the imagination.

Conclusion

This paper attempted to reconstruct Stiegler's conception of the imagination as constitutively related to technical media, alongside three main dimensions: (a) imagination in relation to memory-enabling devices; (b) imagination in the generation of knowledge and sense-making; and (c) imagination as shaped by phantasy objects and technical reproduction. We have seen that the idea of imagination implied in the concept of cinematic consciousness draws from Kant's transcendental schematism, Husserl's notion of time-consciousness, as well as his reflections on phantasy. We mentioned that the schematism connects the data of our experience with our understanding, but this connection is crucially dependent on the constitution of consciousness in its socio-technical milieu. Further, the idea of cinema as a form of imagination not only is a paradigm for understanding imagination in its technical and socio-economic constitution, but it also brings to the fore the problem of how fictions shape our understanding of reality. Fictional objects, in Stiegler's analysis, are not simply abstract objects of phantasy with no grip on any actual reality, but rather, especially within a culture industry, fictions form the concrete imaginary that shape real future possibilities.

The reconstruction of Stiegler's treatment of imagination enables a reading of this concept in continuity not only with phenomenological perspectives (e.g., Husserl, Merleau-Ponty), but also with other philosophers and social theorists who recognized the value of the imagination in processes of social transformation. These include Ricœur, who explored its ideological and transformative power; Castoriadis, who highlighted its instituting function; Anderson, who focused on its role in fostering group belonging; and thinkers like Bloch, Lefebvre, and Marcuse, who saw the imagination as an opening toward future forms

of alternative social organization. While any comprehensive comparison lies beyond the scope of this paper, Stiegler's reflections on imagination resonate particularly with Marcuse's, especially regarding the relationship between imagination and technology. The politicization of the technologized imagination was already central to Marcuse's critical theory, who recognized a crucial relation between the imagination as a faculty of social transformation and its technological mediation in advanced industrial societies (Marcuse 1968), thus locating the theoretical and practical interest in the material, technical, and social production of imaginative forms.

This paper analysed the concept of imagination and demonstrated its role as a basis for Stiegler's political critique of the contemporary techno-economic system, with its detrimental effects on imagination and in shrinking the possibilities for social change. The analysis traced the development of a pharmacology of the imagination, primarily through Stiegler's trajectory from his early essay *Technologies de la mémoire et de l'imagination* to the *Technics and Time* series, up to the works on pharmacology, e.g., *What Makes Life Worth Living. On Pharmacology*. While it could be argued that the pharmacology of the imagination remains central to Stiegler's later work, particularly in relation to what Daniel Ross has termed the «neganthropological» phase (Stiegler 2018, 22), a full exploration of this theme lies beyond the scope of this paper.¹⁰

In conclusion, Stiegler's notion of exteriorized imagination provides a framework for theorizing how the human subject is co-constituted in the mediation with technical prostheses. By identifying cinema as the locus of the industrialization of imagination, Stiegler offers valuable theoretical tools for analysing contemporary technological realities. The conception of imagination as a partly technological faculty also invites critical reflections on current digital realities and advancements in artificial intelligence (Romele 2020; Wellner 2022a). Stiegler's pharmacology of the imagination considers both the pathologies and possibilities inherent in its relationship with technology. In this way, it complexifies Adorno and Horkheimer's critique of the culture industry by showing how technological media inherently function as co-constitutive forces that both enable and constrain memory and imagination. Ultimately, Stiegler's approach positions imagination as a transformative political faculty, historically embedded in socio-technical milieus. From this perspective, imagination not only reflects but actively shapes the desires and future orientations of subjects. However, this transformative power is always co-dependent on the *pharmaka* – the technological supports – that either foster or inhibit its development.

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¹⁰ See Ross' introduction to Stiegler's *The Neganthropocene* (Stiegler 2018), which divides Stiegler's work into three phases: «technological», «organological-pharmacological», and «neganthropological». See also Gilmozzi (2023) for a discussion of this tripartition, and Crogan (2010) for an analysis of the relation between Stiegler's *Technics and Time* and the activism of his later writings.

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