Digital materialisms

Beyond the media ecosystem[1]

Materialismos digitales
Más allá del ecosistema de medios

Materialismos digitais
Para além do ecossistema mediático

▶ CARLOS DEL VALLE ROJAS

carlos.delvalle@ufrontera.cl - Temuco - Universidad de La Frontera, Chile.

ORCID: https://orcid.org/0000-0002-9905-672X

▶ MAURO SALAZAR JAQUE

mauro.salazar@ufrontera.cl - Temuco - Universidad de La Frontera, Chile.

ORCID: https://orcid.org/0000-0003-2280-0378

ABSTRACT

The article develops a descriptive-analytical sequence that identifies the conceptual weaknesses of various communication models based on subjectivity, hermeneutics and the theories of the emitter, whose hegemony remains stable in anthropological mediations. Indeed, the gravitational center of the analysis is located in the postulates of the anti-hermeneutic turn, where structure is the basis of human sensibility, and a materialistic conception of the media that departs from phenomenology and anthropological discourse. Here, the so-called media archaeology works with supports, infrastructures, machines and expressive materialities that distance themselves from the qualitative analysis of the discourse and the paradigms of the subject –anthropomorphism– that have been prominent in authors of the relevance of Marshall McLuhan. In the field of contemporaneity, this leads us to distinguish between a medial geology and media, by means of some substantial theses of authors such as Friedrich Kittler and Jussi Parikka.

KEYWORDS: *media archaeology, anthropocene, machines, McLuhan, Kittler, Parikka.*

ORT
UNIVERSIDAD ORT
Uruguay

JANUARY - JUNE 2024

INMEDIACIONES

RESUMEN

El artículo desarrolla una secuencia descriptivo-analítica que identifica las debilidades conceptuales de diversos modelos de comunicación fundados en la subjetividad, la hermenéutica y las teorías del emisor, cuya hegemonía se mantiene estable en las mediaciones antropológicas. Todo ello en medio de los intensos cambios que ha significado el complejo concepto de *Antropoceno*. En efecto, el centro gravitacional del análisis se sitúa en los postulados del giro anti-hermenéutico, donde la estructura es la base de la sensibilidad humana, y una concepción materialista de los medios que se aparta de la fenomenología y el discurso antropológico. La arqueología de los medios trabaja con materias primas, soportes, infraestructuras, máquinas mediales que distan del análisis cualitativo y los paradigmas complejos del antropoformismo que han sido prominentes en autores de la relevancia de Marshall McLuhan. En el ámbito de la contemporaneidad, esto nos lleva a distinguir entre una geología medial y medios de comunicación, mediante algunas tesis sustanciales de autores como Friedrich Kittler y Jussi Parikka.

PALABRAS CLAVE, *arqueología de los medios, Antropoceno, máquinas,* McLuhan, *Kittler, Parikka.*

RESUMO

O artigo desenvolve uma sequência descritivo-analítica que identifica as fragilidades conceituais de diversos modelos de comunicação baseados na subjetividade, na hermenêutica e nas teorias do emissor, cuja hegemonia permanece estável nas mediações antropológicas. Tudo isso em meio às intensas mudanças que o complexo conceito de *Antropoceno* significou. De fato, o centro gravitacional da análise situa-se nos postulados da viragem anti-hermenêutica, onde a estrutura é a base da sensibilidade humana, e uma concepção materialista dos meios de comunicação que se afasta da fenomenologia e do discurso antropológico. A arqueologia mediática trabalha com matérias-primas, suportes, infraestruturas, máquinas mediáticas que estão distantes da análise qualitativa e dos paradigmas complexos do antropoformismo que têm tido destaque em autores da relevância de Marshall McLuhan. No campo da contemporaneidade, isso nos leva a distinguir entre geologia medial e mídia, através de algumas teses substanciais de autores como Friedrich Kittler e Jussi Parikka.

PALAVRAS-CHAVE: *arqueologias midiáticas, Antropoceno, máquinas, McLuhan, Kittler, Parikka.*

1. INTRODUCTION

It is commonplace to maintain that before World War II there was an abundance of functionalist models (Lasswell, 1948) that imposed the "hypnotic power" of the media on mass audiences under the aegis of the famous *mass communication research*. All of this migrated tepidly towards "mid-range" theories –"limited effects"–, mitigating electoral preferences and the construction of perceptions in mass communication (Lazarsfeld & Santon, 1949). Some time later, in the 1970s, more complex designs emerged that validated the *Agenda Setting* theory (McCombs & Shaw, 1972), which to this day embraces the media ecosystem in tertiary societies. Against the expected expiration of such models, media corporatism uses constructions of meaning, perception and discourse, appealing to three hegemonic signifiers that we would like to discuss in this paper.

In a sort of timeline, it is part of our interest to record the flood of Fordist (*alphabetic*) technologies of industrial society (20th century), the culmination of which is found in Marshall McLuhan (1975 and 1996). During/for the postwar period, the author's ideas were paradigmatic. In his book, *Understanding the Media*, he argues "that [if] Hitler came into existence politically it is directly due to radio and public address systems. This is not to say that these media effectively conveyed his thoughts to the German people" (1996, p. 307). In times of *cognitive capitalism* (Stiegler, 2013), the massification of media has been expressed in *informational globalization*. Currently, informational intensification has resulted in a new *numerical codification* of media (Manovich, 2006) and digital transitions that, phenomenological in nature (perceptions and sensoriality), do not allow the construction of an interpretative framework.

As salutary as it is to evoke McLuhan's findings, the clash/sharpness/dispute of change remained within normative epistemologies, adding new interactions between the human condition and electronic environments. Through the method of extended perception, McLuhan was able to understand –partially– the experience mediated by technology at the perceptual and experiential level (Gordon, 1997; Striegel, 1978). Without prejudice to the merits and historical limitations, in a world hegemonized by broadcasting, the creator of the sentence "the medium is the message" was a mediation within modern anthropology. It is not by chance that Jussi Parikka (2007), in allusion to German media theory (media mining, fossils and the non-organic), had made a reference to media natures:

> The gold, copper, aluminum, tantalum and mollejon that make up its structure are not only traces of [media] technology; they also represent the persistence of the elemental through various transformations. So, despite the merits of McLuhan's proposal, media have less to do with the extensions of man and more to do with the transformations of the elements. (Feigelfeld, 2015, p. 12)

The rupture with phenomenology, as the last redoubt of humanism, and hermeneutics (discourse, meaning and content) are the challenges explored in this article. Here we are interested in extending the notion of *media*, beyond the *hyper cultural industry* and its Frankfurtian vocation (Cuadra, 2008).

Regardless of our purposes, digital communication has remained captive to designs that, in turn, remain captive to the paradigm of consciousness (the so-called sovereign-emitter). An *ethos* that safeguards the way in which the media were conceived during Fordist progress is still in force. The fundamental advance of Mcluhanian analysis is an unavoidable transition –or mediation– in the last thirty years of the twentieth century. Admittedly, the author coined the thesis of the "global village" (McLuhan, 1972), and has the merit of transcending the theory of "direct effects". Nevertheless, here lies the illusion of the agent with hypnotic faculties, where his driving forces would be the last redoubt of classical cognition. From another perspective, for the Frankfurt School, the *mass media* perpetuate "alienation" and "authoritarian personalities" in the context of the "culture industry". According to Horkheimer and Adorno (1998), "all mass culture under monopoly is identical (...) Cinema and radio no longer need to give themselves as art. The truth [of their] business serves them as an ideology that must legitimize the filth they deliberately produce" (p. 177). The latter, insofar as it implies "mass culture" and contemporary media, has been duly portrayed by Umberto Eco (1984) in the context of modernity.

Later a burst of events can be recorded in *online* time. The Chernobyl nuclear explosion (1986) and its geological effects. Then, the attack on the Twin Towers in 2001, which expanded video surveillance, and the COVID-19 pandemic, the first post-Fordist virus, aggravated the installation of *platform capitalism* (Domínguez López, 2020). In short, we are entering *cybernetic societies* that include interaction disorders, digital bacteria, alterations of memorization, algorithmic communication, thermal audiences and a media ecosystem that no longer hangs from the nation-state.

Such intensification establishes anthropological dilemmas and a new epistemology for the post-humanism of media mining. Given the break between nature and culture that comprises the *Anthropocene* (Latour, 2013), there is no choice but to assume another *archeology of media*, since human perception is no longer central to the functioning of the new media architecture. After the rise of the *social market economy* (Castells, 1992; Giddens, 2000), the omnipotent power of multinationals that manage the *accelerationism* of metadata has been consummated. Four decades ago, it was Manuel Castells (1995) who warned, early on, about the morphological displacements –megatrends of nodes and networks– in the relations of production and power. Behind the material displacements, there were drastic alterations in experiential, cognitive

and perceptive forms, and in symbolic communication. The new transformations in the field of hegemony, experience and everyday life cannot be defined by the mere convergence of *cognitive* engineering, or reduced to headlines such as "post-industrial society" (Bell, 1973), or "world-economy" (Wallerstein, 1979). Today we face the unusual deployment of *artificial intelligence* (Crawford, 2021) that forces us to raise a descriptive-analytical synthesis of media archeology, expanding the debate beyond the media, hermeneutic and phenomenological field.

According to David Harvey (1998), "this entire industry specializes in the acceleration of turnover time through the production and marketing of images [and] organizes novelties and fashions and, as such, actively produces the ephemeral condition" (p. 321). Notwithstanding the above, it is in the context of a cognitive revolution where information ages too fast; the industry of emotions is expressed in massive images of selfies on Instagram, Pinterest portraits, TikTok and Flickr photos *(startup Emotient)*. All this has given rise to behavioral sciences –*emotion* capitalism– where facial technologies relate to internal mental states managed in automated measurements from image digitization (Microsoft, Face Api).

In concrete terms, a *network* is an architecture organized by knots that unfold in space. Such a design encloses a series of meanings: interweaving, weaving, node, connection and representation. Additionally, the accelerationism of *digital swarms* has expressed itself in hypermedialities, multitexts, *big data* and online audiences, which Byung-Chul Han (2016) has described "[as] isolated individuals [because] a casual concentration of men forms no mass" (p. 16), and administers the *sensorium* of the new *homo digitalis.* The empire of data –dataism– is not capable of imagining another reality beyond the "factual regime" –behind the data–, because we would be facing a totalitarianism without ideology. Hence, in *Infocracy*, Han himself (2022) maintains that "solitude is the first condition of total submission, [because] isolated data do not communicate" (p. 7).

To the above, we must add the Sillicon Valley paradigm. A Californian ideology of digital goods –entrepreneurs– that has tried to overthrow the "rules of virtuality" in the name of an *ethos* of hygienic integration of automated devices. Thus, Durand (2021) states that, "from Google to Uber, via Facebook and Amazon, Silicon Valley companies have not shied away from acting outside any legal framework, even against existing rules, to impose their innovations by fait accompli" (p. 39). Thus exposing a web of socio-technological changes that lead Manuela de Barros (2018) to ask:

> What [to say] about the fact that the executive creators of Silicon Valley prefer their children to go to schools where the technology they make is banished, especially those that use the Waldorf method, which favors artistic creativity and the relationship with the body, but forbids computers? (p. 13)

In tune with the latter, it is worth adding the ideologies of *transhumanism* that postulate the promise of improving the physical-cognitive power of subjects through the instrumental programming of technology, trying to overcome the idea of an empirical, transcendental or anthropological subject as the center emitting discourses (*anthropomorphism*), is a task that we must at least consign.

In short, the shift from narrative structures to network flows has meant the breakdown of the linear regime in our perceptual sociability of time and provides us with atomized temporalities. The fragmentation of historical time entails an epistemological displacement that translates into an alteration of traditional audiences, an issue that activates a break with the assumptions of humanism –the cognizing subject– in the geological epoch. All this has resulted in a dispersion of events without integration narratives. This is particularly relevant when we invoke *machine learning* systems, which emerge, fundamentally, not only as a mere technological tool, but constitute a vector of *hegemonic reproduction*: namely, they do not reflect the ideology of the algorithm (Crawford, 2012). Finally, the elaboration of a descriptive map of media archaeology is the overall purpose of this article.

2. SYNOPSIS OF MEDIA ARCHEOLOGY

The speed of digital capitalism has become an issue that transcends the paradigm of the "sender-omniscient" (paradigm of the direct effects of communication) that could perceive reality through semantic maps, perceptual elaborations and hermeneutic skills to access the ultimate meaning of the message (*intention, hermeneutics, interpretivism*). By virtue of this assumption, the modern project was able to summon audiences from the imperative of integrating messages and contents in their daily decisions (Gadamer, 1998). Against the "communicational catechism", we understand that human agency –and its mediations– has been exceeded by tertiary accumulation, which today is diversified in digital arts, culture and "digital freudisms" and accidents associated with climate change. The "drómica" speed (Virilio, 2006) of generational change has begun to constitute itself in inaccessible, incommunicable planes, and not for political-psychological reasons, but because of the new *techno-cognitive* supports of an "artificial whole". In short, and as Birardi (2010) states:

> The transformation brought about by the technologies of absolute acceleration (i.e. real time) entails a crisis of anthropological foundations. The virtualization of the exchange between speakers, the split between communication and corporeality, the deterritorialization of information sources are processes that break up urban communities into the forms we have known since the Renaissance. (p. 184)

When we invoke "the generational", we do not allude to pedagogical relations between transmitters and receivers –Hermes and translatability–, a question that can be referred to new attributions of meaning, semantic uses, normative understandings, but to a vast technological regime that has its roots in *medial natures* (Parikka, 2021) and that has diverse relations with the Heideggerian pessimism regarding the question of technique as an image of the world.

With regard to the *medial turn* that initiates Friedrich Kittler's philosophical enterprise, a generation is a set of codes and cognitive and experiential possibilities involving *storage, transmission and processing* (2009). Following the new architecture of the *microchip*, the transformation of the techno-cognitive environment continually redefines the ways of conceiving communication, beyond the media complex of the 20th century –radio, cinema, theater, television, newspapers and magazines of various kinds.
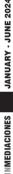
The approach to media materialism implies a perspective that, therefore, subverts any trace or symptom of Marshall McLuhan's (1996) paradigm, when he distilled the extensional thesis:

> All media are active metaphors because of their power to translate experience into new forms. Speech was the first technology with which man was able to let go of his environment and grasp it in a new way. Words are a kind of information retrieval that can encompass the whole environment and knowledge with great speed. Words are complex systems of metaphors and symbols that translate experience into our uttered or externalized senses. They are a technology of the explicit. (p. 78)

Friedrich Kittler observes an irreversible autonomy in machines and radically disagrees with McLuhan's thesis, who continued to understand the media as sophisticated extensions of man, something with which Loayza (2021) also disagreed by stating that "the media are not pseudopods to extend the human body" (p. 34). In a similar direction, Siegfried Zielinski (2011) points out that:

> Technique is not human, and in a specific sense it is even *inhuman*. As an optimally functioning apparatus it can only be conceived of in opposition to the traditional image of the living or the human, and not as its extension or prolongation. (p. 19)

As we have seen, what used to be a process of mental control or mediation is now open to new technologies and is self-managed through the autonomization of frequencies, through processes of representations extracted from the minds of individuals. Such would be the fractal structure of media archeology that displaces the old thesis based on the development of networks and swarms centered on humanism. Instead, from images, files, sounds, forms or behaviors, pixels, polygons, voxels, but especially fossils and media mining, the

contemporary understanding that exhausts and limits the virtual era in discursive formations, the order of syntax[2] and the essentialism of meaning in comprehensive mediations, is displaced. And so on until opening a field of explorations, without appealing to modern humanism (metaphysics of meanings). In short, "the connections between media technologies, their materiality, their hardware, energy, and geophysical nature matter: nature makes possible and supports the weight of media culture" (Parikka, 2021, p. 18)[3]. Media are themselves an archive in the Foucauldian sense, as a condition of knowledge, but they are also a source of perceptions, sensations, memory and time.

Therefore, and despite the importance of the previous communicational universe, the "dramatic speed" of digital communication[4] goes beyond the representational changes or breakdowns of the spectacle media complexes, which reduce communication to informative illustration (Ossa, 2016). Such a task has deeper implications that have placed the hermeneutic field, media ecosystems (paradigm of consciousness) and any media design "linked to models of an emitting consciousness" typically anthropomorphic, where human agency is the omniscient source of all meaning. Although the passage from structures to more mediatic flows is intense in societies of hyper cultural industry (Cuadra, 2008), the supports of informational capitalism have intensified the accelerationism of liquid subjectivities, paraphrasing Bauman (2003), and in a "frightening present" things "flow, spill, overflow, splash, splash, pour, seep, leak, drip, flood, spray, gush, ooze, unlike the solids typical of the labor society" (p. 8).

Despite the relevance of the diagnoses we have reviewed –succinctly–, the current datification-digitization displaces the dictum of digital swarms in its phenomenal version, since what is at stake is "a micro-fragmentation of the world" (Costa, 2021) and a mutilation of the possibilities of operating on it through "prosumption" in the midst of the Anthropocene[5]. Hence, allogarithmic governmentality is a biological and geopolitical key that is due to the "technologies of risk", but which equally reprogram the conditions of capital accumulation, by dispossession, namely, without claiming topographies or latitudes (Harvey, 2021). Such temporality does not require any "sharing of

---

[2]   According to Marinovich (2006), there are a number of antecedents of material-logical knowledge, and he tells how Charles Babbage, in 1833, began to design an apparatus that would become the analytical machine and already contained most of the main features of the modern digital computer. It used punched cards for entering data and instructions, "information that was stored in the machine's memory" (p. 5).

[3]   Parikka (2021) has noted that "data mining may be a buzzword for our current digital age, but it is only possible because of the kind of mining we associate with soils and their excavation. Digital culture begins in the depths and deep times of the planet" (p. 60).

[4]   Paul Virilio (2006) has developed a theory of the media based on the fact that each one generates a specific perception of speed, and they are not conceived as transmitters or connectors, but as cognitive systems that modify temporality and its reflection. Following this argument, communication has contributed –in the digital era– to accelerate the concentration of wealth through the organization of information.

[5]   Parikka (2021) says of the Anthropocene that "[it] had already arrived beforehand. These sudden revelations embedded in geological slowness allow us to see both the historical layers of discourse concerning technology, waste, and time, as well as the geological realities from which we collect and dispose of our resources" (p. 22).

the political", ethos or reflexive subject, since this would threaten to slow down the digital economy. In sum, cultural heritage –cultural memory– is increasingly discussed in relation to the planetary, the geological and the Anthropocene. This weaving of soundscapes involves chemical, geological, and biological changes that displace concepts and frameworks normally related to social, cultural, and medial realms (Parikka, 2023a). Overall, the Anthropocene, with its emphasis on the environmental implications of human actions, offers fertile ground for critical reflection on the intersection between art, media and future projections, where technology has a significant impact on the resignification of the historical determination of technical objects.

From what has been said, it is worth asking: what is media archeology? Indeed, it can be understood as

> a heterogeneous set of theories and methods that investigate the history of media through its alternative roots, forgotten paths, neglected ideas and machines. It explicitly challenges the supposed novelty of digital culture. Media archaeology gives new insights into understanding the cultural temporality of media. Definitions have ranged from emphasizing the recurrent nature of media cultural discourses (Huhtamo) to media archaeology as an archaeology, or variantology (Zielinski) which in its excavation of the deep layers of our media time of seeing and hearing attempts to find an alternative route to dismantle the fallacy of linear development. (Parikka, 2023a, p. 5)

In short, media archeology removes archives of visual and auditory texts, as well as collections of artifacts that do not respond to the *continuum* of a historical time in the creative articulation of raw materials and cultural techniques. Such a program, *symptom* or pathology (Elsaesser, 2018), has scopes in the fields of contemporary digital communication (cybernetics), as well as in philosophy, social sciences and visual humanities (arts and architecture).

The scene of the *media machines* establishes a rupture with the Frankfurt School, Gadamer's hermeneutics –art of interpretation– (1989) and the phenomenological tradition in the study of post-Fordist media. The expansion of digital media in its post-normative sense (beyond the paradigm of consciousness) provides a media infrastructure –the medium as mining– that has contributed as a support and catalyst of a space of appearance that did not exist two decades before and that made possible "flows of algorithms" where mediatizations break with the –hypnotic– idea of the "sovereign emitter".

The production of presence, paraphrasing Hans Ulrich Gumbrecht (2004), alludes to non-hermeneutic surfaces. *Presence* designates what is in front of us and what is tangible and reachable from our bodies. Such "communicational metaphysics" strips away paradigms that still attribute an "essentialist" value to the "meaning" of a phenomenon, rather than to its *material presence*; the

word points to a modern vision that always wants to go "beyond" (or "go deeper beneath") that which is "physical". As opposed to "presence", which in the case of the "talking boxes" –Argentina in the second decade of the 20th century" and the microphone lead us to a "singer [of tangos] saying, my first experience at the microphone was horrible, if it were not for my wife..., where she replaced the audience" (Gumbrecht, 2004, p. 135). Here, the word "metaphysics" plays the role of scapegoat in the little conceptual drama of humanism. Gumbrecht (2004), author of *In 1926, living on the edge of time,* reminds us of the importance of a *gramophone* and the fright of a singer when singing a tango occupies the microphone and there is no audience; "that is why Jorge Luis Borges declares that 1926 is the year of the degeneration of tango, due to the loss of acoustic authenticity" (p. 136), the crisis of the *aura*. On the other hand, when the musicians' bodies are absent, the more present the music is (Kittler, 1999).

Indeed, essentialist categories such as "hermeneutics", "Cartesian vision of the world", configure a modern, cumulative and linear episteme that extends to the semantic-writing field, documents, archives, and content analysis centered on anthropological or transcendental visions that assume a sender-source (*ethos of the medium*) in the communication processes (Kittler, 1999). In this case, the critique of the "angelology of communication" –analogical or digital– involves radically questioning the spiritual practice between God and the subjects replicated by political communication (marketing) models of broadcasting and behavioral submission in post-Fordist societies. All these fundamental shifts imply a community of concerns about the central status of media archaeology (Parikka, 2017), namely, whether it is possible to build a "program of explorations" that contributes as a cartography of understanding in its expansion towards humanities, technologies and the artistic field.

Consequently, from machinic alterations (Deleuze & Guattari, 2004), we have arrived at the *geological era*, opening the debate on media archaeology from an explicitly post-humanist and anti-hermeneutic vocation, at the risk of abstracting everything into processes of archaeology and digitalization. All this leads Elsaesser (2018) to insist on the same fundamental question, what does a media archaeology look like and how do we justify the term? For which he resorts to a collage of statements:

> Discontent with "canonized" narratives of media culture and history may be the clearest driving force (Huhtamo & Parikka, 2011). For Siegfried Zielinski (1996) it is a layer of stories, [that make up] media history [and] excavating secret paths in history could help us find our way into the future. [While] Lovink (2003) suggests that media archaeology is (...) a reading against the current, states Geert Lovink, a hermeneutic reading of the new against the current of the past, and not telling the stories of technologies from the past to the present. (Elsaesser, 2018, p. 26)

Such a reflection hints at the intricate effects that media archaeology has had, as it hints at a possible response to various kinds of crises associated with the concept of the earth, namely the Anthropocene. On the one hand, as a fetishization of memory and materiality in the form of trauma and loss. On the other hand, as facilitation of the capture –by the mass media industry– of the past and of memory, in the form of nostalgia (the retro and the vintage). In this sense, the challenge is to establish a relationship with memory and the past that is not reduced to the trauma-nostalgia pair (fetishization), or how to work with the various layers of time and history without making a purely utopian (modern) or dystopian reduction of the future. Here Elsaesser's medial-archae-ological emphasis rests on the microtemporal dimension of machinic time. The different temporo-spatial conceptions that result from a detailed analysis of cybernetic machine circuits show us that there is a fundamental difference between older techniques of measuring time (calendars, clocks) and machines that automatically produce their own synchronizations (Parikka, 2016). In this regard the author of *What is Media Archaeology* states the following:

> Media archaeology has sought to focus on the nineteenth century as the cornerstone of modernity in terms of science, technology and the birth of media capitalism. Media archaeology has been interested in excavating the past to understand the present and the future, it is not only interested in writing historical accounts [and has not been] a purely academic endeavor, but, since its early phases in the 1980s' and 1990s', it has also been a field in which media artists have been able to use themes, ideas and inspiration from past media to investigate what the new means in the new media. (Parikka, 2012, p. 4)

3. KITTLER AND THE MEDIAL TWIST

By virtue of the points discussed above, the work of Friedrich Adolf Kittler (1943-2011) has not yet been identified as a liminal thought. We allude to a philosopher of communication who breaks with hermeneutics and phenome-nology (Husserl, 1986) and moves towards an understanding of the media from a materialist and post-semantic field (2001). The late reception process of his work and the cybernetic lags in Latin America -perhaps with the sole exception of the Cybersyn project (informational machine inputs and output) under the government of Salvador Allende[6] (1970-1973)- helps us to understand the complex reception of German post-structuralism.

---

[6]   Fifty years after Popular Unity, in Chile, the Synco (Cybersyn) project was implemented. This took place in 1972 and, in an experimental way, sought to use science and technology to have greater control in the decisions of the economy and also fulfill one of its main objectives: to democratize science, technology and design, for the Chilean road to socialism. A project that aimed to turn Chile into one of the first cybernetic governments in history. It was headed by Fernando Flores, then in charge of Corfo (Development Corporation). The instructions came from one of the fathers of cybernetics, the British Stafford Beer, who in turn had strong influences from Chilean biologists Humberto Maturana and Francisco Varela. This has also been popularized as the "Internet of Salvador Allende". A classic on this subject is Revolucionarios cibernéticos. Tecnología y política en el Chile de Salvador Allende (Medina, 1913).

According to Kittler (2001, 2006a, 2006b and 2019), German cultural studies (Kulturwissenschaft) is constituted by radical differences to American studies. The old Eurasian continent needs to research and write its own cultural history, indeed, "between Tartars and Celts, Indians and Scholastics, Arabs and Germans, we have a lot to do" (Kittler, 2001, p. 12). When the author analyzes what has been called the Greek obsessions, he includes the phonic alphabet (Kittler, 2006b). This does not represent a fracture with his preceding work on hardware (2017). In sum, he does not abandon mathematization and relieves the, a priori, techno-material. He often highlights Greek culture as a complement to science and technology (Breger, 2006).

Kittler (2006a) notes:

> From Descartes to Hegel and up to Dilthey it was the "sense", placed by a subject over objectivities and means, an obstacle for not thinking technique. As is evident, numbers had to take distance from the human being and fall in the middle of automaton machines so that technique, as an assemblage that articulates being and thinking, could only just appear. (p. 58)

Kittler, "the alphanumeric theorist", according to Winthrop-Young (2006), was interested in the genealogies of image and sensation from the perspective of technical media and the quantification of physical bodies (data-signals). He therefore refers more to physics and mathematics than to psychology. His traces mark a colossal silence -a void- for the Spanish-speaking *media humanities* (2017) (Cultural Studies such as Birmingham *and Literary Studies*), of special absence in the regional case. Kittler, "sort of Derrida of Machines", analyzes the intersections between art and technology, aesthetics and epistemology, a question that transcends phenomenalist approaches and their "cognitive shortcuts" to understand technologies by displacing the Foucauldian distinction between discursive practices and extra-discursive practices through an *ontology of objects* expanding the possibilities of the infrastructure of meaning and media. The machine theorist distances himself from Michel Foucault's historical *a priori* - archeology - and emphasizes the technological-media dimension as a provider of meaning. Regarding the differences with the Foucauldian distinction between linguistic and extra-linguistic practices, (Foucault, 2010), *hardware* is an outside of the discursive field. As Ernest Wolfgang (2018) argues, the archive as hardware "is not a metaphorical body of memories. Its operating system is administrative; on its stored data, narratives (history, ideology and other discursive *software*) are applied only from the outside. Non-discursive practices are the reality of archives" (p. 2).

A fundamental aspect of Kittler's (1999) theory for music studies is the way in which technical media generated significant ruptures in the modes of fixation of musical information: while a score was exhausted on the symbolic plane of codes by recording only duration of sound, technical media made it possible

to store and transmit "real" sound, generating meanings beyond the symbolic. In the introduction to Kittler's (1999) book *Gramophone, Film, Typewriter*, Winthrop-Young and Wutz (1999) make evident the complex relations of the media turn with the Foucauldian heritage at the conceptual and epistemic level:

> Accordingly, Kittler links the rise of structuralism to the introduction of the typewriter, and criticizes Foucault for neither reflecting on the mediality of the discursive practices he analyzed nor going beyond the confines of the Gutenberg Galaxy. Thus, whereas Foucault's archives are based on the hegemony of written language, on the silent assumption that print is the primary (if not the only) bearer of signification, Kittler's archaeology of the present seeks to include the technological storage and media of the post-printing era(s). (1999, p. xx)

Before the formation of the nation states, based on the universities (Lutheran and humanist) and on a strong academic and religious control over the *circulation* of texts, the so-called *Republic of scholars* took place. All this implied that institutions and techniques configured source centers, with writing and copying processes, library storage and postal-interuniversity distribution (Kittler, 1993). Through the expedient of "medial materialism", the process of reception of poststructuralism (Derrida, 1989) took place by opening a "cognitive disruption" against the linguistic turn, that is, the revitalization of language in the analysis of social relations. This led the author to question Foucault's "bookish technology" centered on discursive formations and an extra-discursive plane. Against the discursive *a priori*, machines would be the supports of meaning and expressive structures, to the point of locating the hermeneutic field. In sum, Kittler recovers the *archaeological method* to analyze how technological means configure conditions of knowledge and play a fundamental role in the ways in which history is inscribed in various bodies or materials, as well as expressed, for example, in devices. Indeed, for Kittler (2019) the notions of *man, consciousness* and *self-consciousness* are part of the "sciences of the spirit" –metaphysics– that reduce everything to books, archives, hermeneutics and subjectivism, denying the fundamental place to the constitution of the technical world.

It is striking that some of the author's most influential proposals come explicitly from Heidegger's thought (1997). The Heideggerian comparison between traditional and modern technique is related in the ability of the word *Technik* to refer to ancient and modern, as well as human and machinic, styles of production, which is part of an exploration that scrutinizes the gulf separating technique and technology in the modern era. The standard English translation suggests that Heidegger (2000 and 2017) simply rejects technology. Indeed, Kittler, with his proposal to expel Spirit from the *Sciences of Spirit* (*Geisteswissenschaften*), crystallized in *information* materialism, acknowledges the Black Forest philosopher as one of his main influences.

ORT
UNIVERSIDAD ORT
Uruguay

In view of this, it is possible to speak of a materialist inheritance or legacy of the author of *Being and Time* (2017). The historical reconstruction that Kittler (1999) is oriented not only to demythologize German literature (and philosophy) of the nineteenth century, unveiling its technical-material conditions of production. At the same time, he proposes to overthrow the hegemony of *hermeneutics* as a paradigm in the "*Sciences of the Spirit*" in a hybridization with the Sciences of Nature leading to a new machinelike vocabulary. Such an enterprise radicalizes a technicist approach where "only that which can be turned on, turned off or switched on *is* [possible]" (1993, p. 182). In doing so, he proposes that the fundamental order of what there is is nothing other than *information techniques*.

In relation to the latter, Kittler offers a reworking of the Heideggerian diagnosis of the technical epoch, that is, of our present, where there is a special emphasis on technological processes in the generation of meaning. Along these lines, attending to both the formalizable nature and the conditions of *hardware*, the history of media proposed by Kittler is constructed on the basis of the tripartite definition of storage (phonograph, photography, film), transmission (radio, television) and processing (acoustic and optical electronics and cipher typewriters). Indeed, philosophers and hermeneuticists have abounded in the same. It is even possible to take an example from Kittler's own work (1990), who says that the emergence of psychoanalysis can be explained by the massification of the children's story, where it is the creation of the *figure of the mother* who –like a typewriter– is in charge of teaching the child the language. *Ergo*, psychoanalysis, with its semiological charge, is the result of a material process of semiologization of the maternal role.

This comprises a historical-epistemological journey from the typewriter to the computer. For Kittler, machines, far from being mute, take over that register of the symbolic, and this represents the only way for human beings to continue linking the real to the imaginary. In short, it is a matter of adhering to the world of machines without yielding to the thesis of alienation (dominant interests of the techne), nor to the apocalypse of disenchantment, either as intersubjectivity and intentions in science and technology as ideology (Habermas, 1984) –and the prevailing techno-ideological rationality, despite the intentions of reconstructing the modern program–, or by effect of the melancholy of the Frankfurt School and its translation of the hyper cultural industry for the Latin American case. In Kittler's reading, Jürgen Habermas[7], with his thesis of communicative reason (universal pragmatics) and speech acts, provides us with a dialogic paradigm in the public-deliberative sphere centered

---

7   The differences with Habermas (1987) stem from the uneasy relationship between critical theory and hermeneutics, as well as, when Habermas introduces Gadamer, from his hermeneutic project to restore what Kittler calls "the sciences of the spirit".

ORT
UNIVERSIDAD ORT
Uruguay

In**Mediaciones de la Comunicación** 2024 - VOL. 19 / Nº 1 - ISSN 1510-5091 - ISSN 1688-8626 (ONLINE) - MONTEVIDEO (URUGUAY)

on illocutionary speeches that produce consensus (Habermas, 1984). In short, a quasi-communitarian conception of memory and linear time –progress– through speech acts that, however, overlook something fundamental: machines and their programming systems open up a "new temporality", a question that implies displacing the scriptural humanisms, embodied among Frankfurtians, phenomenologists and hermeneuts, including in the theses of the network society and its affiliation to a perspective that subscribes to structure, but always presupposes a privileged place for "human agency".

For Kittler, as the architect of the Chip, media ranging from the typewriter to the computer, from the alphabetic system to hardware –in its broadest sense– determine media worlds freed from the fears of meaning, perception and discourse. The Work of Art in the Age of Technical Reproducibility, a famous essay by Walter Benjamin (1989)[8], and The Question of Technique, a famous text by Heidegger that appeared in 1954, are the precursors of a series of Kittler's essays. In other words, the human being coupled to radical technicity would have been transformed into something else, something other, for which we must embrace formulations other than the twin forms of anthropology and humanism. Technology seems to be more a condition than an alien intervention that imposes itself as an external element, namely an anthropological a priori. Although the media can be conceived as fully discursive objects, authors such as Kittler argue that the analysis has been restricted, as in the case of Foucault, because his descriptions limit the production of discourses and end up relegating everything to the study of the sources, the recipients and the channels that make it possible. The latter does not take into account the expansive force of an outside –or technological outside– and institutional outside that comprise the transformations –storage, transmission and processing of signals– where the historical a priori becomes technical (Rossi, 2021).

According to Kittler, we cannot understand the media as an intervention alien to human conditions, since the media determine our situation. His post-humanist perspective allows us to rethink the place of technical/infrastructural media development in contemporary society. Contrary to the apocalyptic approach described above, machines, or technological development, become the necessary register of our sensitive link with the world. Therefore, he believes that it is not possible to separate or limit technical developments from the constitution of *culture*.

In his work, the technical cannot be read as opposed to the human, but, above all, as co-constitutive. Thus, *culture and technique* are reworked in the

---

8   Kittler tends to avoid the Frankfurt School by denying our technical condition, as Rossi (2021) puts it, and by a certain sentimentality with respect to the humanities. Certainly his themes and treatments confirm this distance "rejecting, for example, notions such as ideology, instrumental reason or cultural industry" (p. 22).

light of a history of media (technique) that does not pretend to oppose or maintain them as repelling or mutually exclusive units. Culture cannot be abstracted from the technical environment which, with globalization, has become more and more increasingly so. In that direction, culture has a recursive knot with the technical environment. One of the most representative trends appearing at that time is the *philosophy of the media*, always within the framework of German aesthetics, where the technical media constitute culture. In contrast to the pessimism of the *Kulturkritik*, the tendency of the philosophy of the media affirms that it is not possible to think about culture if it is not based on technique as its own foundation. This represents a radical critique of the "dystopian boom" of cultural studies.

However, the digitization that organized and undermined the framework of Kittlerian analysis also deactivated the carefully cultivated distinction between the media and the cultural, technical and life sciences. Hence, in the opinion of Bernard Dionysius (2013),

> No media archaeology offers a solution to this dilemma. Instead, media genealogists must ask how and under what conditions cultural techniques strategically and temporally consolidate these forces into coherent technologies. (2013, p. 79)

Thus, paraphrasing Dionysius, Kittler (1999) seems to agree with the thesis of the loss of the *aura of the work of art* when museums incorporate postcards and photographs. Although the question that should be asked is not necessarily what would become of works of art in the era of their technical reproducibility, but to what standards of *transmission, storage and* signal *processing* they would be subject.

4. MEDIA GEOLOGY IN JUSSI PARIKKA. BEYOND *HOMO DIGITALIS*

Jussi Parikka (2021) tells us in a compendium of essays entitled Anthropobscene and other texts, that one fine morning Niklas Luhmann, the systems theorist, and Friedrich Kittler, the media theorist, met and shared a cab. The anecdote of this encounter portrays, for Parikka, an epistemic break that began to be woven in the last throes of the twentieth century. In this scene of scenes, Luhmann imputes to Kittler that while he is occupied with the content of the message brought by a messenger, Kittler is preoccupied with the type of horse on which he is riding. This hiatus between meaning and presence, between the inscribed and the surface of inscription, will be key to understanding what is relevant for an archaeological approach to media, namely: materiality. The centrality of this primary and sensitive link in which the technique and the subject's experience are situated.

From materiality, not only the question arises of an archeology of the media, that is, of that bodily condition that Nietzsche claimed[9], but of all those material, physical and, ultimately, violent processes to which we subject both humans and non-humans and which constitute the infrastructure of the digital and high-tech media that swarm in our hands and at the bottom of the oceans. This is the question that allows us to question the power relations and the neocolonial character of the so-called "immaterial" capitalism and the posthumanist condition of the Anthropocene, namely, geological epoch in Natural History and History of our prostheses called Culture collide head-on, disturbing the temporalities of the objects of research in the humanities and social sciences.

This explains that, unlike the theories of technology and media inspired by McLuhan, who pointed out that technological and media sets would operate as prostheses or extensions of Man (modern variant of anthropomorphism), the media archeology and the call for a media materialism that we will try to explore here, employs epistemological deviations that break with this tradition, recognizing to the technical media, their temporalities, their ensembles and the materialities that conform them, an autonomy and a rationality that cannot be reduced to the Human and the volition of the Subject. And the problem of the archaeology of the media is woven in something that can be identified as follows: we live in the time of the last humiliation of that empirical-transcendental double called Man, in which he even passes to a secondary plane of his own actions on the planet in the face of the liberation of technical and natural forces that he cannot control or, in other words: the time of the Anthropocene.

The geological epoch is the deepest manifestation of media natures, as heterogeneous cultural practices that do not respond to timelines, and that are the media in a deep time, avoiding the sequence between primitive and modern time (Huhtamo, 2007). Therefore, the materiality of the media must know how to combine an interrogation of the politics of inscription, transmission and storage of meaning, and also of all those processes that shape the media, long before, when it was just a mineral trapped in the rock.

That said, most of Parikka's work in the last ten years has been focused on connecting the fossil or glacier –material strata of the earth– as media technologies (Parikka & Sampson, 2009) through temporalities that connect nature and art, as well as, "cultural techniques (...) as historically changing sets of practices [that] relate to a materialization of the textual, the discursive, social practices and human finitude in relation to non-human agencies" (Parikka, 2013, p. 153). First, it is essential to take into account the usual level of

....

9   For our author, with it Nietzsche prefigures the modern and materialistic notion of means in a physiological and affective sense that restores to aesthetics its character of aisthesis and emancipates the theory of art from the domain of representation for our author, with it Nietzsche prefigures the modern and materialistic notion of means in a physiological and affective sense that restores to aesthetics its character of aisthesis and emancipates the theory of art.

media technology on the inscription of temporalities. Second, the media technologies through which we understand large-scale changes that are not always necessarily experiential. Here, media studies meets science and technology studies. Third, there is also a level of mediation that is not human; mediation is carried out by plants, soils, and many other levels of "natural" agency that have an impact on how we understand media technological knowledge. In his text A Geology of Media (Parikka, 2021), the immateriality center of computer media relates to the material, tangible footprint. Both referring to the "fossils of obsolete hardware" and to the space debris orbiting the planet. This is because the "programmed obsolescence" adopted by designers and industrial sectors has led to an artificial regression in the durability of consumer goods - in the same way that new trends make old clothes look outdated - increasing the speed of their obsolescence and simulating the need for replacement.

Finally, Parikka himself[10] argues that, in the breadth of recognizable texts within media archaeologies, one can find different –mixed– ways and understandings of the problems surrounding materialities that, without intending to go into a detailed explanation, could be identified as referring to technological media, fossils as the raw material of media, literature or digital archives, technified images and other archaeological materialities that are not inserted in a progressive timeline. The Finnish theorist argues that, at the nexus, between media theory and the new materialism of recycling, media devices as media resources and materiality in its intensified technological significance, obsolescent residues are exponentially extended.

All in all, dimensions such as practice, temporality and materiality are key axes where the author articulates media archaeology, not only in reference to itself, but to a vast field of articulations in humanities and digital arts. The crux is that media archaeology is partly inserted from new methodologies in the historical disciplines to the theorization on materiality found in many currents of feminist theory or science studies and technological arts. In sum, these are three methodological coordinates, but again, methodology itself is a rather generic word that can encompass these kinds of very general principles or topics of epistemic interest, and even incorporate very specific methodological advice and guidelines to be followed. A crucial point is the practice that begins with the concreteness of how media archaeology is carried out, in that it incorporates multiple types of practices, some of which use traditional historical methods of critical work, namely sources and the writing of historical narratives. Other forms may also use critical work with historical sources and archives, sculptural ones that include technological elements of media, or, in cinematic terms. Thomas Elsaesser (2018) is considered a media archaeologist due to the non-linear narratives that compose his works on military systems and operational images.

10   It should be noted that, as opposed to medial archeologies, described as hypothesis, marker, research program or symptom, the Finnish author speaks of "heuristic devices".

Finally, Jussi Parikka (2023b) focuses his most recent book on filmmaker Harun Farocki, whose work he has worked on Operational images.

Poet and creative writer J. R. Carpenter (2020) is another researcher whose work is based on historical archives and digital literature who has worked with Julio Cortázar's novel Rayuela, and composes truly amazing narratives in hypertext format that connect stories of observation, media, knowledge, and classification systems with themes close to the environmental humanities[11]. There is a strong element of media archaeology in his work. These are all legitimate practices of practice-based knowledge, which have gained a strong foothold also in media studies, for example, in the UK.

The "where" of practices and methods was addressed, in part, in some of the chapters of the book The Lab Book. Situated Practices in Media Studies (Wershler, Emerson & Parikka, 2022)[12]. In that work, and as an outgrowth of the activities around the media archaeology lab, the practical methodologies of experimenting with old technology are theorized and articulated as a historical and contemporary methodology that not only limits itself to writing narratives, but also reverse engineers, reconfigures and reflects, for example, on circuitry, as well as raising questions about the use and users of past media technologies with direct access to such technologies, such as old computers from the 1980s, old video game consoles, etc. In sum, a methodological paper could be written that displaces Siegfried Zielinski's (2011) idea of "deep media times" into the shallow media narrative that is addressed through the in-depth analysis of media technologies.

Parikka's (2015) project investigates materiality through the geophysical underpinnings of contemporary technical media. Such an enterprise relates to media ecologies-their hybrid entanglements-nature, ecology, and technology. In sum, a geology of media is where the materiality of media extends outside of media devices, that is, into the minerals of computational technology that enable its function and existence as an operable technology. The focus of the Finnish author's media and communication studies has given way to a perspective that can be built in alliance with approaches from critical geography, on unconventional issues, namely how media infrastructure reshapes the way we understand space, but also how it builds on historical layers especially in colonial contexts. For the author there is the sleepwalking media theory (2009) referring to the hypnotic movement of the twentieth century. However, the alterations of the Anthropocene open means that seek to exploit emotions and affect, the social context and the processing of experience already mentioned,

11   Author's official folder. See: http://luckysoap.com/webprojects.htm

12   In The Lab Book. Situated Practices in Media Studies, open and multidisciplinary archives, collections, works and practice-based artistic research are studied. The structure of the archive alludes to the organization of heterogeneous media. To say archive comprises more than one term, namely "archive" and "document" are part of media-archaeological thinking. The archive implies the idea of openness and excavation, as well as media-archaeological methods.

but that today must be thought from the "digital Freudisms". Today, however, experience design consultancies and neuromarketers have become means of persuasion, influencing banks and other financial institutions. Therefore, they can tap into the potential of connecting the end user with their brand through the visceral level of experience processing, appealing directly to the gut. This is what emotional design promises to do.

5. FINAL THOUGHTS

After Kittler's radical break with the metaphysics of hermeneutics, the "geology of media" is conceived by Parikka from a materiality that is not buried in the devices themselves, but unfolds beyond the material hardware to infrastructures, energies, biology, mineral materials and also the labor that underpins contemporary digitality. Such contributions are substantial for a new media culture, from an expanded perspective of *technicality* that departs from convention. If we think of infrastructures as ports –paraphrasing Raul Rodriguez (2021)– smartphones are also micro-supports that reinscribe time by enabling "machinic" interactions between the particular and the planetary. In short, the history of media also becomes the history of architecture. Media objects, including operationality, become questions of infrastructure, without which life, as we know it, would no longer be possible, but, at the same time, stains that make the very world we live in uninhabitable. "Undoubtedly, we will have to choose, bearing in mind, as we have seen, that an infrastructure is never a thing, but a "relation or an infinite regression of relations" (2021, p. 107). It is the understanding of this event, and not the modern distinction between culture and nature, that the "humanities" of the twenty-first century must deal with. The present work is inscribed in the context of the Anthropocene that comprises unequal planetary geographies, underlining strengths and limits of techno-digital models, as well as the "paradigm" of digital swarms that assimilate the alterations of time and space -autonomization of nodes- where articulations between subjects and virtual (autonomized) supports prevail under diverse conceptualizations about *likes, audiences and algorithms* within cognitive capitalism. In addition to the need for such research perspectives, the analysis is situated in the contexts of the anti-hermeneutic turn, mining or discursive machines.

However, making a fetish of *programmed obsolescence* could be the ideological function of media archeology. That is to say, the digital bursts in as the vector that not only enables possibilities of future without philosophy of history and rediagrams the past, but also puts an end to the subject in the name of machines and devices, criticized and deconstructed (Derrida, 1989; Deleuze, 2006), then called "metaphysics of presence" (fullness of conceptual structures that absorb the real from an excess of intelligibility).

So, the digital leaves us without a subject and declares itself non-dystopian in post-history, requiring new vocabularies for the future obliterating from its own modern representation. If media archaeology is yet another symptom of the unsustainability of our current way of life, both moral and ecological, what will be its relationship of power with the domains of artificial intelligence. The symptom of archaeology –to quote Elsaesser– is presented as a materialist epistemology of knowledge reflects the awareness that all knowledge –self and world– will be technologically mediated as Kittler would say. In sum, how do we know if his non-ideological whisper regarding the media arts of the twentieth reveals a new construct agentic in new forms of material power. That aseptic place of his engineering and its mechanisms or meanings must be sought only in his colonial-decolonial use of the post-Fordist world, since much of Kittler's thesis assumes a state of overcoming with respect to the assumptions that inform modernity without specifying its ideological status. The restoration of sedimentation and the philosophy of nature –fossil– is the allegorical device by which the human is reinterpreted in relation to new domains of accumulation. The more virtual and algorithmic, the more it would be expected to avoid imperfections and not be based on objects. Such would be the friction of media archeology, as a marker of the post-human. In sum, and appealing to Elsaesser (2018), media archaeology is the symptom of multiple pathologies that attempt to promote an enabling "non-place", with respect to the *vintage* and escape the destination of the new configurations of the 21st century Culture Industry. Thus, archeology appears as the imperative of an uneven era, which can become more than a research program or a hypothesis, namely, the symptom of "primitive modernities" where the field of disciplines is sheltered, once the socio-epistemic certainties have fallen.

Finally, what vitalism allows the epochal image offered by the archaeology of the media when it seems to stabilize a relationship of temporalities –neither dystopian nor monumental– between *nature and technology* preimmunized by the Anthropocene that makes its own optimism possible.

REFERENCES

Bauman, Z. (2003). *Modernidad Líquida*. Ciudad Autónoma de Buenos Aires: FCE.

Bell, D. (1973). *La llegada de la sociedad post-industrial: Una aventura en el pronóstico social*. Nueva York: Basic Books.

Benjamin, W. (1989). La obra de arte en la época de su reproductibilidad técnica. En *Discursos interrumpidos I* (pp. 15-57). Madrid: Taurus.

Berardi, F. (2010). *Generación post-alfa., Patologías e imaginarios en el semio-capitalismo*. Ciudad Autónoma de Buenos Aires: Ediciones Tinta Limón.

Breger, C. (2006). Gods, German Scholars and the Gift of Greece. Friedrich Kittler's Philhellenic Fantasies. *Theory, Culture & Society, 23*(7-8), pp. 111-134.

Caldera, P. & Benot, J. (2023). *Harun Farika contra la Industria del pensamiento.* Madrid: Shangrila editores.

Carpenter, J. R. (2020). *Esta es una imagen del viento*. Sheffield: Longbarrow Press.

Castells, M. (1992). *La nueva revolución rusa*. Madrid: Sistema.

Castells, M. (1995). *La ciudad informacional. Tecnologías de la Información, reestructuración económica y proceso urbano-regional.* Madrid: Alianza.

Castells, M. (2005). *La Era de la Información: economía, sociedad y cultura. Volumen 1, La Sociedad Red*. Ciudad de México. Siglo XXI.

Costa, F. (2021). *Tecnoceno. Algoritmos, biohackers y nuevas formas de vida.* Ciudad Autónoma de Buenos Aires: Taurus.

Crawford, K. (2021). *Atlas of AI. Power, Politics and the Planetary Costs of Artificial Intelligence.* New Haven: Yale University Press.

Cuadra, A. (2008). *Hiperindustria Cultural.* Santiago de Chile: Arcis-Lom.

Cuadra, A. (2022). Análisis de Discurso Digital: Hipermedia & Microblogging. *Revista Chilena de Semiótica,* 17, pp. 101-112.

De Barros, M. (2018). *Arqueología de los medios. La tecnología desde una temporalidad difusa.* Barcelona: Herder.

Deleuze, G. & Guattari, F. (2004). *El Anti-Edipo. Capitalismo y esquizofrenia*. Barcelona: Paidós.

Deleuze, G. (2006). *Diferencia y repetición*. Ciudad Autónoma de Buenos Aires: Amorrortu.

Derrida J. (1978). *De la gramatología*. Madrid: Siglo XXI.

Derrida, J. (1989). *La escritura y la diferencia*. Barcelona: Anthropos.

Dionysius, B. (2013). After Kittler: On the Cultural Techniques of Recent German Media Theory. *Theory, Culture & Society*, *30*(6), pp. 66-82.

Domínguez López, E. (2020). Transición y cambio político. Sobre la naturaleza dinámica del sistema y cómo estudiarla. En Domínguez López, E. & González Martín, O. R. (Coords.). *¿Cómo estudiar a Estados Unidos? Propuestas teórico-metodológicas para un proyecto transdisciplinario.* La Habana: Editorial UH.

Durand, C. (2021). *Tecnofeudalismo: Crítica de la economía digital*. Adrogué: La Cebra.

Eco, U. (1984). *Apocalípticos e integrados*. Barcelona: Editorial Lumen.

ORT
UNIVERSIDAD ORT
Uruguay

Elsaesser, T. (2018). Media Archaeology: a viable discipline or a valuable symptom? *Artnodes. Journal on Art, Sciencie and Ciencie and Techonology,* 21, pp. 11-22. DOI: http://dx.doi.org/10.7238/a.v0i21.3204.

Eribon, D. (1992). *Michel Foucault*. Barcelona: Anagrama.

Ernest, W. (2018). *El Archivo como metáfora. Del espacio de Archivo al tiempo de archivo*. *NIMIO*, 5, pp. 1-11. DOI: https://doi.org/10.24215/24691879e011.

Feigelfeld, P. (2015). *Arqueología mediática desde la naturaleza. Entrevista a Jussi Parikka*. Ciudad de México: Secretaría de Cultura.

Foucault, M. (2001). *La arqueología del saber*. Ciudad de México: Siglo XXI.

Foucault, M. (2010). *¿Qué es un autor?* Córdoba: Ediciones Literales.

Gadamer, H. G. (1998). *El giro hermenéutico*. Cátedra: Madrid.

Giddens, A. (2000). *Un mundo desbocado. Los efectos de la globalización en nuestras vidas.* Madrid: Taurus.

Gordon, T. W. (1997). *Marshall McLuhan: Escape into Understanding.* Toronto: Stoddart.

Gumbrecht, H. G. (2004). En *1926, viviendo al borde del tiempo.* Ciudad de México: Universidad Iberoamericana.

Habermas, J. (1984). *Ciencia y Técnica como ideología*. Madrid: Tecnos.

Habermas, J. (1987). *Teoría de la acción comunicativa*. Madrid: Taurus.

Han, B.-C. (2014). *En el enjambre*. Barcelona: Herder.

Han, B.-C. (2022). *Infocracia: la digitalización y la crisis de la democracia*. Santiago de Chile: Taurus.

Harvey, D. (1998). *La condición de la posmodernidad*. Ciudad Autónoma de Buenos Aires: Amorrortu.

Harvey, D. (2021). *Espacios del capitalismo global. Hacia una teoría del desarrollo geográfico desigual*. Madrid: Akal.

Heidegger, M. (1997). *La pregunta por la técnica, en Filosofía, ciencia y técnica.* Santiago de Chile: Universitaria.

Heidegger, M. (2000). *Ontología. Hermenéutica de la facticidad*. Madrid: Alianza.

Heidegger, M. (2017). *Ser y tiemp*o. Santiago de Chile: Universitaria.

Horkehimer, M. & Adorno, T. (1998). *Dialéctica de la ilustración*. Madrid: Editorial Trotta.

Huhtamo, E. (2007). Máquinas de diversión, máquinas de problemas. Una arqueología de los juegos de salón. *Arnodes. Revista de Arte, Ciencia y Tecnología,* 7, pp. 43-60.

Husserl, E. (1986) *Ideas Relativas a una Fenomenología Pura y una Filosofía Fenomenológica*. México: FCE.

Kittler, F. (1993). Die Evolution hinter unserem Rücken. Kaiser, G., Matejovski, D. & Fedrowitz, J. (eds.), *Kultur und Technik im 21. Jahrhundert* (pp. 221-223). Fráncfort: Verlag.

Kittler, F. (1999). *Gramophone, Film, Typewriter*. Stanford: Stanford University Press.

Kittler, F. (2001). *Kulturgeschichte der Kulturwissenschaft*. München: Fin

Kittler, F. (2006a). Number and Numeral. *Theory, Culture & Society*, *23*(7-8), pp. 51-61.

Kittler, F. (2006b). Thinking Colours and/or Machines. *Theory, Culture & Society, 23*(7-8), pp. 39-50.

Kittler, F. (2017). *No hay software y otros ensayos sobre filosofía de la tecnología*. Manizales: Universidad de Caldas.

Kittler, F. (2019). *La verdad del mundo técnico. Ensayos para una genealogía del presente*. Ciudad de México: FCE.

Laswell, H. (1948). *The structure and function of communication and society*. New York: Harper & Brothers.

Latour, B. (2013). Facing Gaia. A New Enquiry into Natural Religion. *Gifford Lectures 2013*, University of Edinburgh, Edinburgh.

Lazarsfeld, P.F. & Stanton, F. (1949). *Communications Research 1948–1949*. New York: Harper & Brothers.

Loayza, J. (2021). *Sensibilidades e imaginarios virtuales. Consumos tecnológicos electronales y consecuencias en la población juvenil*. Lima: Universidad Nacional de San Marcos.

Manovich, L. (2006). *El lenguaje en los nuevos medios de comunicación: la imagen en la era digital*. Ciudad Autónoma de Buenos Aires: Paidós.

McCombs, M. & Shaw, D.L. (1972). *The agenda-setting function of the mass media*. New York: Oxford University.

McLuhan, M. (1972). *La galaxia Gutenberg. Génesis del Homo typographicusu*. Madrid: Aguilar.

McLuhan, M. (1975) *La comprensión de los medios como extensiones del hombre*. Ciudad de México. Editorial Diana.

McLuhan, M. (1996). *Comprender los medios de comunicación. Las extensiones del ser humano*. Ciudad Autónoma de Buenos Aires: Paidós.

Medina E. (2013). *Revolucionarios cibernéticos. Tecnología y política en el Chile de Salvador Allende*. Santiago de Chile. Ediciones LOM.

Ossa, C. (2016). *El ego explotado. Capitalismo cognitivo y precarización de la creatividad*. Santiago de Chile: Departamento de Arte Visuales.

Parikka J. & Hertz, G. (2012). Zombie Media: Circuit Bending Media Archaeology into an Art Method. *Leonardo, 45*(5), pp. 424-430.

Parikka, J. & Sampson T. (2009). *On Viruses, Porn and Other Anomalous Objects from the Dark Side of Digital Culture*. London: Hampton Press.

Parikka, J. (2007). *Digital Contagions: A Media Archaeology of Computer Viruses*. New York: Peter Lang.

Parikka, J. (2012). *What is Media Archaeology?* Cambridge: Polity Press.

Parikka, J. (2013). Afterword: Cultural Techniques and Media Studies. *Theory, Culture & Society*, 147-159. DOI: http.//doi.org/10.1177/0263276413501206

Parikka, J. (2017). *Antropobsceno y otros ensayos. Medios, materialidad y ecología*. Santiago de Chile: Mimesis.

Parikka, J. (2021). Una *geología de los medios*. Ciudad Autónoma de Buenos Aires: Caja Negra.

Parikka, J. (2023a). ¿Qué es la arqueología de los medios, 10 años después? *Revista Perspectivas*, *16*(1). DOI: https://doi.org/10.56754/0718-4867.2023.3387.

Parikka, J. (2023b). *Operational Images.* Minneapolis: University of Minnesota Press.

Rossi, L. S. (2021). *Kittler, en la Galaxia Turing*. Ciudad Autónoma de Buenos Aires: Teseo.

Rubio, R. (2022). Información vs. sentido. Análisis y discusión filosófica de la propuesta de Friedrich Kittler para la renovación de las ciencias sociales y humanas. *Ideas y valores*, *LXXI*(178), pp. 117.136. DOI: http://doi.org/10.15446/ideasyvalores.v71n178.77546

Stiegler, B. (2013). *De la misère symbolique*. Paris: Éditions Galilée.

Striegel, J. F. (1978). *McLuhan on Media*. Tennessee: Unión University.

Virilio, P. (2006). *Velocidad y política*. Ciudad Autónoma de Buenos Aires: La Marca.

Wallerstein, I. (1979). *El moderno sistema mundial. Tomo I*. Ciudad de México: Siglo XXI.

Wershler, D., Emerson, L. & Parikka, J. (2022). *The Lab Books: Situated Practices in Media Studies.* Minneapolis: University of Minnesota Press.

Winthrop-Young, G. & Wutz, M. (1999). Translators' Introduction: Friedrich Kittler and Media Discourse Analysis. In Kittler, F., *Gramophone, Film, Typewriter* (pp. xi- xxxviii). Stanford: Stanford University Press.

Winthrop-Young, G. (2006). Implosion and Intoxication Kittler, a German Classic, and Pink Floyd. *Theory, Culture & Society, 23*(7-8), pp. 75-91.

Wolfgang, E. (2018). El archivo como metáfora. Del espacio de archivo al tiempo de archivo. *Nimio*, 5, pp. 1-11. Recuperado de: http://sedici.unlp.edu.ar/handle/10915/71824.

Zielinski, S. (2011). *Arqueología de los medios. Hacia el tiempo profundo de la visión y la audición técnica*. Bogotá: Universidad de los Andes.

IDENTIFICATION OF THE AUTHORS

Carlos del Valle Rojas. PhD in Communication, University of Seville (Spain). Researcher, Rijksuniversiteit Groningen (The Netherlands). Full Professor A, Universidad de La Frontera (Chile). Visiting Professor, Sapienza-Università di Roma (Italy). Among his extensive production, it is worth mentioning the recent appearance of the books: *Contra-Agenda. La disputa por la agenda política y mediática* (2022, Ed. Tirant lo Blanch), *Ennemi. Production, médiations et mondialisation* (2022, Ed. L'Harmattan) and *La construcción mediática del enemigo. Cultura indígena y guerra informativa en Chile* (2021, Comunicación Sociales Ediciones y Publicaciones). His areas of interest are communication in intercultural contexts, discourse and power.

Mauro Salazar Jaque. PhD in Communication, Universidad de la Frontera-Universidad Austral (Chile). Sociologist, Universidad de Artes y Ciencias Sociales (Chile). Member, Anillo Project "Converging Horizons: Production, Mediation, Reception and Effects of Representations of Marginality" –SOC180045–, National Agency for Research and Development (Chile). He has specialized and published numerous works in the area of political communication, political sociology, cultural theory and subjectivation processes. Between 2002 and 2004 he was director of the *journal Actuel Marx. Interventions*.