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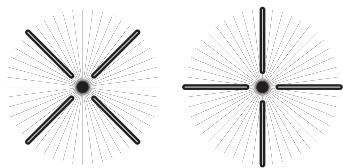
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**Full Papers (peer-reviewed)**

# The Algorithmic as Agonistic Agency: Approaches on Experimental Design, the Politics of Codes, and Post- Anthropocentric Paradoxes in (Media) Cultures.

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## Abstract

This paper presents a theoretical discussion, as well as an experimental design approach to the modes in which algorithmic media influences, in a confrontational manner, the configuration of contemporary cultures. Thus, the first section seeks to introduce key media archeological questions, by displaying some aspects of Wolfgang Ernst's and Friedrich Kittler's work. Then, the second section, is devoted to articulate possible connections between the first section and Bruno Latour's perspective on science and technology studies and their relation to art and design. The third section shows how experimental design approaches can constitute the creative argumentation for all the previously discussed issues, by presenting two case studies that have emerged specifically around the questions that sustain this article. Finally, the text closes with a brief discussion about the possibilities the paper's subject matter has to offer as an area for research-creation.

## Technical Media and the Agonistic Condition of Culture

The role of technical media within culture —please allow me to speak in general and abstract terms for now— has always been connected, in one way or another, to the structure and nature of culture itself. Nonetheless, nowadays it seems difficult to find a clear dividing line between the spheres of technical media on the one hand, and culture on the other, and thus really noticing what would be such structure and nature. In that sense, it has been the realm of media studies; and more particularly its branch connected to the method known as media archeology; the one in charge of inquiring about the evolution and development of the assemblages between media and culture along history, showing to us how the latter —cultures—, which originally were built around *languages for telling*, are now confronted to the emergence of logical machines, which at the end, have brought a predominance of *languages for counting* [1]. Thus, by witnessing such collision, we also witness the fundamental aspect of media cultures: their agonistic condition.

Undoubtedly, the symbolic nature of written languages has governed the growth and development of the many

cultures that populate this vast planet of ours. In our particular position —from the last southern tip of the Americas—, the perpetual influence of European colonization gave us, for example, the epistolary exchange between the Monarchy and local administrations, the Roman legal system, epic poems as *The Araucaniad*, encyclical letters, annals, encyclopedias, and of course —more connected to the local authenticity— the twentieth century South American poetry and novel. Nonetheless, all of these media, so to speak, are heavily structured by the symbolic code of language, and thus it is how the agency of telling has been the sovereign along the maturation of these modern cultures. In that sense, it wouldn't be nonsense to point out that since culture has been mobilized and developed through media, culture itself would be a media code. But let's reserve this last thought for later.

While the *languages of telling* are unquestionably a central object of modern cultures, it is also true that at the same time, we cannot avoid the fact that in many occasions telling also involves counting. The german media theorist, Wolfgang Ernst, reminds to us about the role of annals in medieval European cultures, which combined the task of narrating stories with the act of counting time, by telling and listing the events that took place in a specific period of time; commonly, a year. Hence, annals were indeed media for telling and counting things, and to a some extent, for counting time as well [2]. As Ernst puts it, many European languages reflected this hybrid possibility: “The conjunction between telling stories and counting time is more than just a word game: verbs like *conter*, *contar*, *recontare*, *erzählen*, and *to tell*, are testimonies to a way of perceiving realities that oscillates between narrative and statistics” [3]. This is particularly compelling for us since in Spanish, *contar* is used nowadays indistinctly for verbal qualitative expression, as well as for verbal quantitative enumeration. Contrary to cultures where this conceptual hybridity actually corresponds to an archaic use of the words in question, it is to be expected that in South America, where annals are still around [4], the double meaning of the verb *contar* remains in common use.

However, in spite of this hybrid meaning, the reader may agree with me on the following: in modern cultures—and I am referring the Latourian approach to modern here [5]—, every meaning was still processed by the symbolic code of *languages of telling*, that is to say: letters, words, sentences, punctuation, grammar, etc. Therefore, a collision, either important or negligible, between the logics of telling and counting still remained. A confrontation between the agencies of telling and counting, or “zählen versus erzählen” [6] as Ernst has put it. But, just as we all are aware of, that processing balance started to change when electronic machines first, and algorithmic machines later, became part of the code for processing the meaning of people’s ideas and actions. Then, cities and their infrastructure were one of the first evidences of this shift, where human expression and the narration of stories moved to a new code materialized by telegraph networks, radio waves and antennas, telephone lines, relays, and receivers, and of course, television broadcasting and the sound-image reproducer. Thus, by abandoning the book, so to speak, human knowledge and culture put an end to the monopoly of writing, while at the same time they gave the city a (new) media quality. In the same way, Friedrich Kittler tells us (ironically) in his essay titled *The City is a Medium* [7], how cities can be understood as media, explaining how technological infrastructure and networks grant cities the power to store, transmit, and process diverse kinds of information:

What to passers-by seems like growth run amok or entropy is technology—that is to say, information. Ever since it has become impossible to survey cities from a cathedral tower or a castle, and ever since walls and fortifications have ceased to contain them, cities have been traversed and connected by a network of innumerable networks, also (and specially) at their margins, points of tangency, and frayed edges. [8]

What is also interesting at this point, is that a *soft* processing system as the *language of telling*—that is to say, writing—led to a hard technical complex to mediate information, and through that, knowledge. Accordingly, it is possible to argue now that culture passed from being a soft system, to be mainly a material one. That is why, I believe, scholars as Kittler have affirmed that there is no software anymore, by considering that at the bottom, contemporary cultures rest over hardware [9]. And at the end, this is also part of the agonistic or rather confrontational condition I mentioned at the beginning of this essay, because the textual intelligences that gave birth to the old modern cultures, are now constantly confronted by the mathematical processing—that is to say, the *language of counting*—of hardware societies. In other words, “[h]uman beings, having created logical machines, have created a discontinuity with their own cultural regime” [10].

### An Object-Oriented Culture

In his book *Reassembling the Social: An Introduction to Actor-Network-Theory* [11], the French anthropologist

and philosopher, Bruno Latour, affirms that what has been called *the social* does not exist in the terms through which it has been described so far, but alternatively, that what does exist, are networks of constant associations between actors and the collectives they configure. More precisely, Latour says that those networks and collectives are formed by a very diverse nature of actors, which in no case are only human, but rather, human and non-human. This has been particularly interesting for us because invites to reconsider what society is, by understanding that it is not anymore an anthropocentric complex, or more accurately, that it never was; just as Latour argued in an earlier book titled *We Have Never Been Modern* [12], where he sets up the cornerstone of his critique on the epistemic asymmetries that has governed modern cultures. In sum, Latour’s thought points out that the networks of associations shaping society and culture are formed—besides humans—by the natural and artificial spheres, and that inside the latter, objects too must be consider as bearers of agency and because of that, also mediators in the ways we humans know the world.

Consequently, it is possible to sustain a media archeological analysis supported by this Latourian view on science and technology studies too, where objects gain a new quality, becoming a key actor of contemporary cultures. Actually, it is based on Latour’s concept of *object-oriented democracies*, that I have allowed myself to propose the idea of an object-oriented culture, as a way to initiate a dialogue with the aspects discussed in the previous section, where Ernst’s and Kittler’s thoughts have been determinant. Thus, when I say hardware societies, I am of course referring to this attention to objects as the bearers of agencies like the *language of counting*. However, the word bearer should not constitute here a way to confuse the role of objects with that of intermediaries, because under our gaze, and as it was said before, objects must be seen only through the symmetrical lens of post-anthropocentric cultures, for thus being able to recognize their condition as actors which mediate in a direct way on the public affairs [13]. This is so, because when objects become active and permanent actors of societies and cultures, they of course participate too of the political issues that concern to us all.

In an essay titled *From Real Politik to Dingpolitik - An Introduction to Making Things Public* [14], Latour argues in favor of reconsidering political and social structures by including objects and things in the center of any contemporary debate. According to his perspective, we must overcome the modern view which considered that every epistemic event was based on *matters of fact*, structuring thus human knowledge through an asymmetrical and anthropocentric judgement of phenomena. On the contrary, says Latour, contemporary times show that the events that are relevant to us all, are configure by a symmetrical participation of actors where the non-human kind plays an irrefutable role in the way our presence in this planet develops. In that sense, the French scholar points out that *Things* are the central element around which societies and cultures assemble, arguing upon the etymological root of the concept, related to the German word *Ding* whose meaning refers

to the *matters of concern* that shape our interests and the modes in which we gather around what is at issue. This discussion is important, because this *matters of concern*—that is to say, things— are configured in material presence as objects; or in more Kittlerian words, as hardware; sustaining what matters and thus gathering people publicly around them. Hence, the *polis* of this hardware society regains its status as the center of the political and ontological debates, specially if one considers that now the artificial sphere—these objects— has its own agenda, so to speak; that agency based on the techno-mathematical intelligence I have called so far the *language for counting* but from now on, I shall call the *algorithmic*.

Following the aforementioned reasoning, another crucial component of this discussion emerges in front of us; while Latour assures that humans and their interests gather around *matters of concern*, he also says that these reunions do not happen thanks to common and shared interests, but all the contrary, because of the concerns that confront and divide us. This is of course a socio-political argument but also an epistemic one, since it relates to the modes we know things, whose materialization, as I have mentioned already, are objects; and these objects—this hardware—are at the same time the media through which we humans know the culture that shapes our world. Thus, I wonder what if this societies of hardware have installed a dual agonistic condition in culture; first, the one suggested by Latour where things and objects gather us around them because of the divergent interests we have for them, while they still behave governed by agencies that are naturally human—that is to say, ruled by *languages for telling*, as it would be the case of a Republic's Constitution—; and secondly, the one belonging to post-anthropocentric times and somehow suggested by Wolfgang Ernst when he says that logical machines oppose humans own cultural regime [15]. In other words, the one where things and objects behave governed by their own agency—that is to say, by the *algorithmic*— and human differences are not processed naturally anymore, but by the new conglomerate of non-human actors that now process what is at issue under their own terms. Hence, two urban and contemporary events can help illustrating this last scenario. On the one hand, Kittler describing traffic light conditioned junctions, saying that through “the endless changes between green, yellow, and red — or 1, 3-state, and 0— all streams of urban traffic (from pedestrian to public transportation) arrive in a digital format that, moreover, a computer somewhere in the city's CPU clocks” [16]. And on the other hand, my own reference to the many traffic lights around the world that in the middle of some demonstration, have ended furiously damaged by human actors.

Paradoxically, just as we all are aware of, most of these objects—this hardware—, as well as the algorithms that make them to act, have been designed by humans. This has constituted enough evidence for many to insist on arguing in favor of the humanistic and anthropocentric gaze regarding these issues, but at the same time, and following an Ernstian thought about the discontinuities of human's cultural regime [17], it has been also our motivation to pursue a critical approach to

the modes these things are designed. Consequently, I think design must be re-situated now as a highly technical cultural practice with strong epistemic impact, whose value resides in its quality as mediator within the issues I have discussed so far in this essay. In that sense, Bruno Latour's article, *A Cautious Prometheus: A few steps toward a philosophy of design (with special attention to Peter Sloterdijk)* [18] offers a very interesting perspective on how every kind of designer should now reconsider her or his activity, as a constant and critical re-design of the *matters of concern* that affect to us all. In a similar path, the German historian of science and media technologies, Wolfgang Schäffner, has also argued that design's scope should be reevaluated in attention to the contemporary scientific revolution whose main catalyzer—either on the technical or media-epistemic aspects—is design [19]. All this is crucial; particularly after taking into account everything that has been discussed in these pages; because it pushes us, in the end, to understand now design as mode to re-configure science and then culture—or in other words, as a cautious and Promethean form of cultural critique.

### Approaches from an Experimental Design Perspective

Although the discussion about design's creative-epistemic possibilities has been around for at least eleven years now, there are not many initiatives explicitly dedicated to develop a systematic research around this matter. A few cases I am aware of, are the Royal College of Arts's *Design Interactions* program, which founded by Anthony Dunne, has taken since 2005 a creative and artistic exploration approach to the modes *matters of concern* are shaping contemporary cultures [20][21]. Similarly but more recently, the *Institute of Experimental Design and Media Cultures* at the Academy of Art and Design in Vienna, led by Claudia Mareis, describes itself as a practice-led research group inquiring on the intersections of design, media arts, and the humanities, aiming to develop an informed creative analysis on the *things* that configure media cultures [22]. Lastly, in a more epistemic approach, the *Image, Knowledge, Gestaltung - Interdisciplinary Laboratory* at Humboldt University in Berlin—where Wolfgang Schäffner serves as principal investigator and spokesman—, develops an academic research on the design processes of scientific knowledge [23]. However, and despite the apparent lack of formal and widespread attention to this issue, I think that the media arts communities around the world must be seen here as the critical assembly which for decades has developed research-creation on the ways *matters of concern* and its hardware, define what culture is in these post-anthropocentric times. Accordingly, media archeology scholars have explicitly looked to this field to find their creative research counterparts [24], while science and technology academics as Bruno Latour did similarly by founding the *Programme of Experimentation in Arts and Politics* [25], and collaborating with Peter Weibel and ZKM.

Then, it was reasonable for us to follow the same path, by setting up in early 2013 a research-creation group

named *Design and Agonism*, which; paying special attention to media studies, STS, and political sciences; allowed us to pursue a critical inquiry on the modes algorithmic media relates to designed things, and then, on how they together link to agonistic agencies. Thereby, we founded a group whose main project led us to ask first, if *the algorithmic* could influence *matters of concern* and their hardware beyond its own electro-mathematical materialization; and secondly, if that was the case, asking to which extent it would be possible to argue that *the algorithmic* is an agency in the epistemic sense. For doing so, we developed a long bibliographical discussion which to some extent I have presented in the two previous sections; and at the same time, we carried out a creative speculation which at this point has two case studies which have seen the light of prototyping. In the following paragraphs I will briefly present some considerations about them.

The first prototype is called tentatively *Radio-mnemonic Capsule*, and was installed for an entire day on a pedestrian public walk in Santiago, Chile. As its name suggests, it consists of a 2.5 meters high cylindrical capsule which can hold one person inside, who can use a periscopic device to watch the urban landscape in 360°, while he or she talks through a radio transmitter to broadcast his or her words to the near surrounding. Outside, six audio pedestals over rails receive and play the radio signal, while passers-by have the chance of hearing the narration and moving the pedestal closer to the capsule (Figures 1, 2 and 3). A relevant aspect here is that the whole situation is loaded with confrontational agencies in advance, since the pedestrian walk points directly to the presidential palace and it was a privileged witness, so to speak, of the coup d'état in 1973. Also, our plan considered to invite people who actually lived those events, to enter into the capsule. Thus, the purpose of this prototype is to see if *the language of narration* is somehow affected by the electro-algorithmic mediation (*zählen vs erzählen*), and if that technical mediation plays any kind of role in the agonistic environment that would be at issue.



Fig 1. *Radio-mnemonic Capsule* in Santiago, Chile, January 2016. Wood, fabric, mirror, radios and electronics. Image from the authors's personal archive.



Fig 2. Woman listening to audio pedestal. *Radio-mnemonic Capsule* in Santiago, Chile, January 2016. Wood, fabric, mirror, radios and electronics. Image from the authors's personal archive.



Fig 3. Woman uses optical mechanism at the interior of the capsule. *Radio-mnemonic Capsule* in Santiago, Chile, January 2016. Wood, fabric, mirror, radios and electronics. Image from the authors's personal archive.

The second prototype, named *Nature ex-novo*, consists of a so called book-bound apparatus that relates, on an agonistic manner, to the atlases from the Scientific Naturalism period, which had huge influence in the definition of the natural and political margins of South America's early republics. So, the prototype is a bound hard-case, that holds a set of paper field notes in the middle, as well as two compartments for storing and classifying seeds (Figure 4, 5 and 6). Both sections, while in part recall the cartesian nature of their original references, also seek to subvert that intelligence by adding elements that bring a more symmetrical relation between the natural and artificial spheres. Hence, for example, the field record cards have been redesigned to include more qualitative information, while the compartments incorporate a Voronoi diagram shaped division to hold the seeds just as they are. In sum, this prototype's goal is to ask to which extent the materialization of *matters of concern*—that is to say, objects—, plays an actual political and epistemic role in the configuration of culture.



Fig 4. *Nature ex-novo* prototype in use at the country side near Santiago, Chile. General view, January 2015. Acrylic, 3D printed PLA and paper. Image from Adolfo Alvarez Dumont's personal archive.



Fig 5. *Nature ex-novo* prototype in use at the country side near Santiago, Chile. Detail of seed container, January 2015. Acrylic, 3D printed PLA and paper. Image from Adolfo Alvarez Dumont's personal archive.



Fig 6. *Nature ex-novo* prototype in use at the country side near Santiago, Chile. Detail of field record cards, January 2015. Acrylic, 3D printed PLA and paper. Image from Adolfo Alvarez Dumont's personal archive.

### Possibilities

Both of these prototypes have stayed so far in a speculative realm, and any sort of conclusion should wait for further analyses and complementary conceptual and theoretical discussions; which, I hope, will be part of the creative and/or academic work carried out by members of the *Design and Agonism* group in the near future. However, at this point we have wanted to begin this dialogue, where research and creation simultaneously, have helped us to start a critical inquiry on the modes

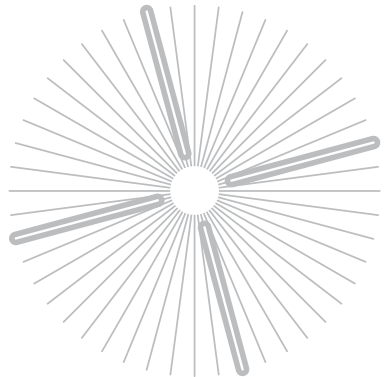
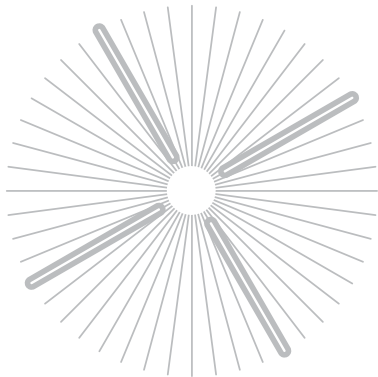
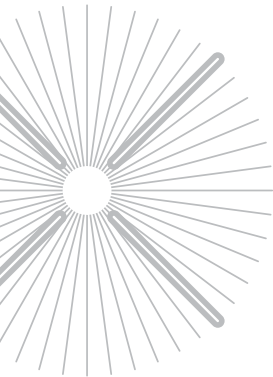
media and designed things participate in the configuration of post-anthropocentric cultures. In that sense, we are certain that research-creation understood as a method of cultural critique, can help designers, architects, artists, as well as other creative actors, to actively participate of some of the debates that I have wanted to present through these pages. Similarly, this method offers also the opportunity of interacting with the questions that the media archeological field, as well as the science and technology studies have brought into discussion during the last couple of decades. Moreover, I truly believe that research-creation processes as the one made by us, show that experimental design procedures have all the potential to become the material reconfiguration of the theories and principles set up by the aforementioned areas.

Furthermore, this paper does not end with conclusive evidence to prove that *the algorithmic* is in fact an agonistic agency, and of course, this has not been its purpose either. In the end, all the conceptual and theoretical discussion presented in the first part of this essay, allow at this point, only asking if the underlying questions are consistent enough and worth the effort being studied. Thus, in my opinion, the experimental design approach is then a way to physically confront the many modes of existence those questions can take, which of course, relate in a direct way to the impact they may have in the societies and cultures we are embedded to. Taking that into account, and just as it was mentioned above, *the algorithmic as agonistic agency* must be considered not only as valid, but also as an urgent research and creative subject matter.

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