

Adaptation, disruption, and regulation in media dispositifs

Adaptação, disrupção e regulação em dispositivos midiáticos

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ABSTRACT

In this article, we present propositions about the processes of uncertainty and indeterminacy in mediatization contexts. The objective of this reflection is to develop a field of hypotheses for the analysis of media processes, in their relations with social processes, focusing on media dispositifs. Three hypotheses are presented according to specific epistemological perspectives: that which we categorize as activated by the sign; the second, by the systems of intelligibility; the third, the technological systems, in particular the digital ones. These relations – between logic and processes – are, in the conclusions, disposed in three hexagons, in which the hypotheses, situated as competitors and relational, suggest new prospects about the uncertainty and indeterminacy in mediatization scenarios.

Keywords: Media dispositifs, uncertainty, systems of intelligibility, semiosis, technological systems

RESUMO

Neste artigo, apresentamos proposições sobre os processos de incerteza e indeterminação em contextos de midiatização. O objetivo dessa reflexão é desenvolver um campo de hipóteses para a análise dos processos midiáticos em suas relações com os processos sociais, tendo como foco os dispositivos midiáticos. São apresentadas três hipóteses conforme perspectivas epistemológicas específicas: a primeira, que categorizamos como acionada pelo signo; a segunda, pelos sistemas de inteligibilidade; a terceira, pelos sistemas tecnológicos, em especial os digitais. Essas relações – entre lógicas e processos – são, nas conclusões, postas em três hexágonos, nos quais as hipóteses, situadas como concorrentes e relacionais, sugerem novas prospecções sobre a incerteza e a indeterminação em cenários de midiatização.

Palavras-chave: Dispositivos midiáticos, incerteza, sistemas de inteligibilidade, semiose, sistemas tecnológicos

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MEDIA DISPOSITIFS: FROM MEDIA TO RESPONSIVE ATTEMPTS

WE UNDERSTAND MEDIATIZATION as set (bundle) of relations between (a) media powers, accesses, uses, and practices, (b) communicational-mediatic processes and (c) symbolic-social constructions, including the construction of values involved in any process of interaction and communication (Ferreira, 2006). There is no mediatization without considering condensation forms among these three spheres. Therefore, mediatization is not a form or process of universal communication. It is, always, heterogeneous. It is a historical process, which breaks out contemporarily. One of the levels of this historical genesis relates to the dispositifs. There is a history that passes from media – technique, technology, language, values, norms and discourses – to dispositifs. Another level relates to the constant transformation of the communication processes. The third level relates to the social relations derived from these transformations.

In this article, our specific objective is to understand the uncertainty and indeterminacy from the relative perspective of media and dispositifs. Communication sciences tend to locate the problem of determination and certainty level in the media processes (production, reception and circulation). The most obvious research lines in relation to that are media theories and critical theories that situate, each in its own way, the media as determinants. The uncertainty, in these theories, is probable, some sort of standard deviation of conduct and behavior expected given their propositions that relate media and social processes. The logic of probabilistic uncertainty is typical of the media society. According to it, it seems valid to make media logic subordinate to social fields logic, or, generalizing, to the immediate interactions inherent in social processes. The proposition is that in mediatization processes there is autonomization of circulation processes – by virtue of intramediatic and intermediatic circulation – which retroact on social processes (actors, cross-sectional fields and institutional fields), producing transformations in the sphere of culture, economy and politics. Another kind of indeterminacy and uncertainty resides there.

But understanding the uncertainty and indeterminacy in media processes from the perspective relative to media and dispositifs shifts the problem. This is what we propose in this article. Access, use, practices and ownership of the media, the existence of the media dispositifs, situate the problem of indeterminacy and uncertainty while tentative and historical response of regulation and adaptation. When there is failure in this historic endeavor, macro or micro socially, there is a symbolic disruption, which also makes social relations unstable.

The tension that is established between indeterminacy and uncertainty in the context of media processes and the attempts, not always victorious, of constitution of new dispositifs, would be conducive to new determinations, reducing the uncertainty. In other words, in this space of uncertainty and indeterminacy, the investigation is also directed to strategic attempts to re-establish the control and new references of and regulating and legitimating values, mobilizing for that new forms of interactions, discourses and technologies in media dispositifs, which generally results in disparity when the uses and appropriations are analyzed preemptively. This is the central question of this article.

This ontological process has reflexes and reflexivities in the sphere of epistemologies. Considering the uncertainty and indeterminacy, there are two contrasting epistemological propositions, not always explicit: one, according to which these are characteristics of a transitional period related to the mediatized society (therefore, an adaptive transitional period); another one, according to which the suspension of the stabilized and incorporated social practices, in the institutional and individual sphere, is typical of the mediatized society (tending to disruption, to indeterminacy, uncertainties and fragmentations). It is also common to observe that the two propositions are often situated in an ambiguous and indecipherable amalgam, in which uncertainty, indeterminacy, adaptation and disruption are concurrent processes. Reactivity is also mentioned.

These reflections are foundations of hypotheses in the form of models. Such models do not exhaust the empirical research. They are limited metaphors, also for their circular and potentially tautological relation with the empirical ones, even when we preserve them in the form of contrasting models, as presented in the conclusions. Only by examining cases, built as specific inference, it will be possible to go beyond the models used here and investigate the problems of uncertainty and indeterminacy further than the contrasting hypotheses suggested regarding the access, use, tentative appropriations and practices, in the form of media dispositifs.

EPISTEMOLOGICAL AND REFLECTIVE PATHS ON ADAPTATION, DISRUPTION AND REGULATION

The hypothesis of adaptation: systems of intelligibility and habitus¹

Our starting point for this question is Luhmann (2005). He suggests that the emergence of new production systems is related to adaptive social processes (Ibid.: 36) – the first hypothesis. The society, he says, adapts to the new “production systems” that emerge. However, as society consists of other systems,

1. This research topic, as indicated in the bibliography, was structured sparsely from the beginning of this century, in which, in various articles, I work with the genetic structuralist perspective, in which the concept of adaptation is central (Piaget, Bourdieu and Charaudeau). Here we synthesize this reference, directing it to the comprehension of mediatization processes.



including individual ones, it is concluded that the systems adapt in multiple references. As emphasized by Verón (2013: 296), when speaking about interpenetration:

La forma en que Luhmann replantea el problema es uno de los aspectos fundamentales de su trabajo sobre la teoría de los sistemas autorreferenciales. Desde su punto de vista, se trata de repensar las relaciones entre dos tipos de sistemas: los “sistemas sociales”, por un lado, y los “sistemas psíquicos” (es el concepto que Luhmann aplica a los seres humanos), por otro lado. Ambos tipos de sistemas son autorreferenciales y autoorganizantes. Interviene, aquí, la distinción fundante de la teoría de los sistemas: la diferenciación sistema/entorno (environment). Los sistemas sociales tienen como entorno los sistemas psíquicos, y los sistemas psíquicos tienen como entorno los sistemas sociales. La relación individuo/sociedad es reformulada como diferenciación recíproca sistema/entorno. Se trata de una relación intersistemas en que cada una opera como environment del otro a través de lo que Luhmann llama, transformando considerablemente un concepto de su maestro, Talcott Parsons, interpenetración.

If we understand mediatization as relations and interactions constituted in media processes between individuals, media and institutions (Ferreira, 2007; Verón, 1997) and that each of these spheres constitutes systems, there is, between mediatic and nonmediatic institutions and individuals, a multitude of relations, in which one would adapt to the others – in movements, as suggested by the theory of relativity. That is, the media, individuals and institutions as collective systems can be studied from the adaptive perspective, in which the game is observed from the perspective of relativity. We speak of relativity, as each of the different references – individuals, mediatic and nonmediatic institutions – can offer us plausible questions and propositions so we comprehend, in their articulations and relations, the adaptive processes in the ongoing mediatization (Ferreira, 2007), in which each sphere would adapt to others under observation. This is a relativistic focus for the adaptive processes. It is an inference based on the proposition of Luhmann.

But what is adaptation? One of the formulations with greater clarity is that of Jean Piaget. This author never studied mediatic communication. It refers to the individual systems-structures-schemes. We quote:

If we call accommodation the result of pressures exerted by the environment (transformation of b in b'), then we can say that adaptation is a balance between assimilation and accommodation. This definition also applies to intelligence it-

self. Intelligence is in fact assimilation as it incorporates all data from experience. Whether it is the thought that, thanks to wit, introduces the new to the already known, thus reducing the Universe to its own notions, whether it is sensory-motor intelligence that structures evenly the things perceived returning them to their schemes, in both cases the intellectual adaptation involves an element of assimilation, that is, of structuration by incorporation of the reality that is external to the due forms to the subject's activity. Whatever the differences of nature between organic life (which materially elaborates the forms, and assimilates to them the substances and the energies of the environment), the practical or sensory-motor intelligence (which organizes the acts and assimilates to the schematism of these motor behaviors the situations that the environment offers) and the reflective or Gnostic intelligence (which is content to think the forms or build them inwardly to assimilate to them the content of experience), either ones or the others adapt by assimilating the objects to the subject. We also must not doubt that the mental life is simultaneously an accommodation to the environment. Assimilation cannot be pure because, when incorporating the new elements into prior schemes, the intelligence immediately modifies the latter to adapt them to the new data. However, on the contrary, things are never known in themselves since this work of accommodation is only possible because of the reverse process of assimilation. We will see how the very notion of objects is far from being innate and requires a construction at the same time assimilating and accommodating. (Piaget, 1970: 29)

This formulation of Piaget would be more complete with the concept of abductive inference. However, this was not a valid concept within the framework of Saussure's semiotics with which Piaget worked. However, in another epistemological framework, abductive inference is central to thinking about adaptation.

By analogy, we infer that mediatic and nonmediatic institutions and individuals are in processes that are adaptive to the mediatic environments socially constituted in the interactions between them, triggered especially from their respective systems of intelligibility. This means: assimilation of experience into prior knowledge; accommodation to the pressures of the environment (which, in terms of circulation, is constituted in mediatic processes, in a diffuse semi-osis and, at the same time, regulated, about which we will speak in the next topics); and adaptive syntheses. In this perspective, the environment (Gomes, 2013) produced in the space of circulation, in which the media, institutions and individuals are required while systems of intelligibility (self-referential and hetero-referential) defines multiple relations, in which the constant process of adaptation of individuals and institutions to their new environments

A

Adaptation, disruption, and regulation in media dispositifs

can be observed. If these environments change, it is inferred that these systems of intelligibility should also change until new balances are reached, in processes with dialectic characteristics, such as resiliences, circularities and relativizations (Piaget, 1996).

This perspective is also strong in Bourdieu (1983), who, in his concept of *habitus*, emphasizes the adaptive processes, thereby leading to developments of his sociocognitivist perspective, referenced in Piaget (Lahire, 2002). Production and appreciation systems are central in the concept of *habitus* and of field. They are adaptive to objective conditions, to strategies, to contrasting practices, to prognoses, or non-adapted, even “outdated” in relation to the ongoing transformations. When not adaptive, they are cognitively and symbolically reactive.

However, in Bourdieu (1983), the adaptive and genetic perspective is in contrast with the accent it makes in reproduction (*habitus*). This will result, in the third stage of reflection on the media (Ferreira, 2005), in an approach in which the cultural and political systems would be subordinated to economic systems as a result of the cultural transformations triggered by mediatic systems. The key to that almost apocalyptic conclusion of Bourdieu (1997) when inferring the subsumption of politics to economy, by mediation of the mediatic culture, when writing about television and journalism, may be in its concept of agent. The purpose here is to investigate his hypothesis that the *habitus*, being social, immediately psychological.

Gaulejac (2010) and Lahire (2002) will seek, later, differentiations in order to revalue the question of the individual as a specific system of intelligibility (Ferreira; Folquening, 2012). Individuals released from the prior *habitus*, from reproduction, would found new processes of semiosis, in a process of struggle, opposition and agonistic with reproduction – expressed in non-adapted institutions, collectives, and individuals. In the processes of circulation, it is questioned, then, the place of actors in networks, but also about the semiotic territories emerging in environments constituted as media processes, that break with the comfort and power zones previously outlined in specific *habitus*.

This would mean valuating an individual’s potential of creating new systems of intelligibility that go beyond the *habitus*, freeing the individual from subjectivation conditions that underlie the concept of agent (in which the individual is *subject to* and *subject of*)? What would be the source of this potential system? How is this “link” – the individual – strengthened in the mediatization processes (in symmetry with the systems of intelligibility of the “media” and the institutional ones) and inserted considering the transformations of media processes? Anyway, there is a myriad of questions, whose answers are already situated in the literature, which should be systematized, in seeking hypothe-

ses for the questions posed in this research perspective. A proposition which is affirmed as productive path is the place of the mediatic narrative, form of ascending language, that reconstitutes places of reappropriation of the bodies, from the interactions and adaptations to mediatized environments. We speak here of cases constituted around specific researches, in progress, not yet reported (health, violence, racism, movies and games).

Individuals also adapt, says Piaget (1996), who investigated systematically the relations between adaptive and dialectical processes. If this occurs, the circle would have a closed door to the emergencies and to the non-dialectical ruptures. The adaptive systemic process would consolidate as the best reference for analysis and prognosis on the adaptability to environments emerging in mediatization processes. This is visible in distinct circuits: The social differentiation of genders, beyond the dual logic (man and woman), points to a new dialectic synthesis? The differentiation of food philosophies (vegans, ovo-lactovegetarians, vegetarians, meat eaters, animal well-being etc.) indicates a synthesis? Etc. We chose another analysis. The differentiation is manifestation of another process, the semiotic disruption. In this sense, as we argue below, there is rupture, and not dialectics of adaptive processes.

This formulation is central to understanding a set of questions directed to the regulatory processes derived from outdated and self-referential *habitus*. Here, the very concept of reactivity should be investigated in its epistemological constitution, especially in contexts of emerging environments, derivatives from processes of mediatized circulation, in which various social logics are placed in contact, competition and disputes, heated, for power, without necessarily being more structuring structures. That is, no consensus and, therefore, the power is undone, only remaining for power, violence, or new epistemes are built considering the frameworks of permanent differentiation outlined around the social objects of communication.

The “demon” of disruption: the semiotic perspective²

Then, where is the link of adaptation/reproduction undone?

In the sphere of semiosis, when this transcends the adaptive capacity of the species, also because adaptation is demarcated by distinction condensed into *habitus*. In this sense, in this section, based on Peirce, we suggest that semiosis is disruptive – the second hypothesis – and would exceed the adaptive intelligibility systems, producing leftovers that can be articulated with new production systems, as long as the individuals are able to rearticulate the explosion of signs that erupt, beyond the thresholds of the chains encoded by the previous sys-

2. The methodology we used was reading original texts available in *The Collected Papers of Charles Sanders Peirce* (1958), the translated texts of the Peircean Study Group (2013) and texts by commentators. The set of selected texts was read systematically and discussed in seminars with the scholarship students responsible for each of the bundles formed. In the grouping of materials, we abstracted the genetic process – that is, of transformations of Peirce’s thought about Hegel. However, we adopted the assumption that this process, in the intelligibility system proposed by Peirce, is of assimilation and adaptation, producing more intense differentiations as the work of Peirce advances. To operationalize the research, we used two authors as a reference of propositions in conflict: Marcondes (2004) and Silveira (2007). Reading and systematization of materials allowed brought us a set of propositions and results to follow. These propositions and results are adopted as a basis for the final inferences of this article. Our partial inferences, in this section, are focused on understanding the media dispositifs in the suggested matrix perspective, as relations among the processes of semiotization, materialization and subjectivation.



tems. That is, semiosis is potentially disruptive – and, therefore, provides the materials for new production systems.

This hypothesis was constructed from some clues indicated in debates on the area. In the systematic research, we identified an agonistic around two perspectives that allowed us an incisive approach to the question of the adaptive and disruptive processes. This agonistic (Marcondes Filho, 2004; Silveira, 2007; Nöth, 2013) includes a question that seemed vigorous to find keys for our question of a previous research (epistemological continuities and ruptures considering the emergence of digital networks). Philosophically, the debate was about the continuity and discontinuity between the thought of Peirce and the dialectic: those that claimed the affiliation between both and those that emphasized a differentiation. For those that emphasized the differentiation, the two logics of reflection (the triadic thinking and the dialectic) are differentiated. For those emphasizing the continuity, central is the teleological character (evolutionary love; the final interpretant) that both systems of intelligibility would share.

This tension occurred, in our perception, with the two references that are tensioned in our research: an adaptive approach of mediatization (a dialectic with a positive view), and another, triadic, which needed to be situated considering the problems of adaptation. During this preliminary research in relation to this question, we gradually consolidated a hypothesis: if the logic of Peirce was compatible with dialectic, the concept of sign proposed by him can be apprehensible and would trigger an adaptive system; or, alternatively, there is a disparity between adaptive systems (which would be social) and the logic of signs, in such a way that there is a disparity between adaptive knowledge and semiosis – and, with that, we approach the concept of disparity of Verón (2013) by a different route. When we defined this relation for this topic of research, we intuited that we had found the key to redefining the mediatic transformations beyond the adaptive systems. In this sense, the mediatization is symptom of indeterminacy and uncertainty whenever the semiosis exceeds the limits of the social intelligibility/*habitus*. These are the leftovers.

As research advanced, we consolidated a direction: the formulation of the sign in Peirce is not adaptive. Its logic conception is a rupture with the dialectic. It is not just the realism of Peirce, surpassing Hegel's idealism. It is true that Peirce integrates the idealistic problematic to the perspective of an empirical analytics, as well as traces a line of thought in social sciences, from Marx to Bourdieu.

But that would not solve our dilemma. That could keep it in the wake of the adaptive processes that consider the material elements (the materialist dialectic). More than that. Convergently with the conclusions of Silveira (2007),

based on a comprehensive literature research, we found that his method is a critique of the dialectic. We highlight the following propositions as central to the understanding that the sign is neither a system nor adaptive.

a. The disruptive

The critique³ of Hegel's syllogistic and to dialectic as syllogistic form is central to this conclusion (converging with Silveira, 2007). These criticisms are referenced in Pragmatism and Pragmaticism, The Logic of Mathematics and The Principles of Philosophy. One criticism is directed to the concept of resilience – Peirce argues against Hegel, against his formulation that the first, second and third are absolute, and, therefore, one is not the the synthesis of the other, but each is inscribed in matrix relations with the other. One being in relation with the other is different than saying that one determines or influences the other. To the extent that there is a succession of matrix (triadic) relations, which become more complex from the basic triads (icon, index and symbol) to differentiations of subsigns in large complex matrices (Walter-Bense, 2000: 56), semiosis is the space of disruption and uncertainty, exponentiated in particular in communication processes, when differentiated semiotic operations are mobilized by the interagents.

In this sense, in our understanding, the sign is not an adaptive/dialectic system. Each dimension (the first, second and third) is absolute. And, therefore, the disruptive is that which emerges from the relations. An emergence is not synthesis because there is a multiplicity of relations that emerge when interagents trigger unique operations. Semiosis is a producer of differentiation *ad infinitum*. But it is not restricted to that. Since the beginning of his reflections on Hegel, Peirce emphasizes what he calls incompetence of Hegel's mathematical and syllogistic thought:

Then Hegel had the misfortune to be unusually deficient in mathematics. He shows this in the very elementary character of his reasoning. Worse still, while the whole burden of his song is that philosophers have neglected to take Thirdness into account, which is true enough of the theological kind, with whom alone he was acquainted (for I do not call it acquaintance to look into a book without comprehending it), he unfortunately did not know, what it would have been of the utmost consequence for him to know, that the mathematical analysts had in great measure escaped this great fault, and that the thorough-going pursuit of the ideas and methods of the differential calculus would be sure to cure it altogether. Hegel's dialectical method is only a feeble and rudimentary application

3. These critics are mentioned on "Pragmatism and pragmaticism", "The logic of mathematics" and "Principles of philosophy and elements of logic" (Hartshorne; Weiss, 1958).

A

Adaptation, disruption, and regulation in media dispositifs

of the principles of the calculus to metaphysics. Finally Hegel's plan of evolving everything out of the abstractest conception by a dialectical procedure, though far from being so absurd as the experientialists think, but on the contrary representing one of the indispensable parts of the course of science, overlooks the weakness of individual man, who wants the strength to wield such a weapon as that. (Hartshorne; Weiss, 1958: CP 1.355).

b. Eruption of interposed materialities

One of the central points of the critique of Hegel is the complete subsumption of the real to the concept. Peirce emphasizes that there is a real world, with real actions and reactions. The Hegelian dialectic does not give space, he says, to the strength of secondariness. This is very pronounced in various texts. Hegel sees only the firstness and thirdness as operators. Silveira (2007) points out this criticism, citing several works (his comments about *The Fixation of Belief*, *Grounds of Validity* and *The Religious Aspects of Philosophy, A Guess at the Riddle*). In these works, respectively, Peirce affirms that Hegel's dialectic seeks to prove that the reason is sovereign in relation to the real – a formulation, says Peirce, that cannot be the basis for science; *that Hegel did not see any aspect of the real that escapes the concept; and so, convergently with that, that promotes a subsumption of the real to the concept.*

Our readings confirm this category in other fragments:

Nobody will suppose that I wish to claim any originality in reckoning the triad important in philosophy. Since Hegel, almost every fanciful thinker has done the same. Originality is the last of recommendations for fundamental conceptions. On the contrary, the fact that the minds of men have ever been inclined to threefold divisions is one of the considerations in favor of them. Other numbers have been objects of predilection to this philosopher and that, but three has been prominent at all times and with all schools. My whole method will be found to be in profound contrast with that of Hegel; I reject his philosophy *in toto*. Nevertheless, I have a certain sympathy with it, and fancy that if its author had only noticed a very few circumstances he would himself have been led to revolutionize his system. One of these is the double division or dichotomy of the second idea of the triad. He has usually overlooked external Secondness, altogether. In other words, he has committed the trifling oversight of forgetting that there is a real world with real actions and reactions. Rather a serious oversight that. (Hartshorne; Weiss, 1958: CP 1.355, CP 1.368).

Here, no doubt, the idea of resilience and adaptation related to idealism was overcome by the formulation of Marx, when proposing the dialectical materialism. And, in this sense, it converges with the materialistic epistemologies. But does it conserving, in an original manner, the problem of link in semiosis, as we will see below.

c. Eruption and limits of evolutionary love

Love as interpretant is another point of differentiation that covers the theme of the teleology and evolutionary perspective of knowledge, translated in the idea of Peirce that proposes a final interpretant that would unify and harmonize all the minds in accordance with an absolute concept. This vision, which undoubtedly is teleological, should be relativized. There is a visible differentiation in relation to Hegel's perspective, in this fragment, when Peirce says:

The anancasticist might here interpose, claiming that the mode of evolution for which he contends agrees with agapasm at the point at which tychasm departs from it. For it makes development go through certain phases, having its inevitable ebbs and flows, yet tending on the whole to a fore-ordained perfection. Bare existence by this its destiny betrays an intrinsic affinity for the good. Herein, it must be admitted, anancasm shows itself to be in a broad acception a species of agapasm. Some forms of it might easily be mistaken for the genuine agapasm. The Hegelian philosophy is such an anancasticism. With its revelatory religion, with its synechism (however imperfectly set forth), with its "reflection," the whole idea of the theory is superb, almost sublime. Yet, after all, living freedom is practically omitted from its method. The whole movement is that of a vast engine, impelled by a *vis a tergo*, with a blind and mysterious fate of arriving at a lofty goal. I mean that such an engine it *would* be, if it really worked; but in point of fact, it is a Keely motor [according to footnote]. Grant that it really acts as it professes to act, and there is nothing to do but accept the philosophy. But never was there seen such an example of a long chain of reasoning – shall I say with a flaw in every link? – no, with every link a handful of sand, squeezed into shape in a dream. Or say, it is a pasteboard model of a philosophy that in reality does not exist. If we use the one precious thing it contains, the idea of it, introducing the tychism which the arbitrariness of its every step suggests, and make that the support of a vital freedom which is the breath of the spirit of love, we may be able to produce that genuine agapasticism at which Hegel was aiming. (Hartshorne; Weiss, 1958: CP 6.287).

A

Adaptation, disruption, and regulation in media dispositifs

This formulation allows us to conclude that, in Peirce, there is no teleological conception (the tendency to a “final interpretant”, unifier of conceptions). There is, here, a subtle and profound scission, not only intellectually, but also existential. Even when we consider, as the translator says, that Peirce argues that love is the fundamental relationship, we will not have love harmony ensured here, because this principle is in matrix relations with the other two, in nature and society. That is, in terms of semiosis, there is not necessarily a fixed structuring symbolic belief, because the uncertain and real can erupt, as well as the third can emerge, operating on the first and the second.

The technique and the technology as regulators of semiosis

The third hypothesis is about the technological system as regulation. This hypothesis is based on the proposition that the inferential processes triggered by the technique and technology are deductive (derived from known codes) and inductive (probabilistic), but never abductive. Regulation is, therefore, government of vigilance and control, because it activates processes coordinated by prior codes.

This operating limit of the technique and technology does not undo its place in anthropological transformations. Referenced in Gehlen, Habermas (1987) formulates the hypothesis of technology as coverage of the functional cycle of work (strength, hands, arms, movements, etc.). Still in a mutating context, his formulation does not refer to new technologies founded by computer science, in which the systems of intelligibility themselves, their inferential operations and the competencies linked to the register of language codes are incorporated into the technological systems, acceleratedly, in the digital networks.

In this perspective, we understand that, from the cybernetic and artificial intelligence project to the specialist systems, passing by the current algorithms that regulate interactions, technological systems become a second body. Within the scope of the aforementioned problem, in a square that situates the tension between adaptive and disruptive processes, crossed by the logics of intelligibility systems and of semiosis, technology can be situated as a router, a medium, an extension (McLuhan, 1969), a prosthesis (Sodré, 2013), or a second body.

As citadel, digital technologies stand, nuclear, the semiotic disruptions, seeking to protect systems of individual and institutional intelligibility systems. In this place of medium, created by social systems of intelligibility in a utopian-cybernetic perspective (regulation of disruption), they remain in a double. On the one hand, they accelerate the proliferation of signs (in a process thought by critical theory, in various nuances also constituting new ob-

jects that trigger semioses, including their disruptions and invasions. On the other hand, they are built from complex systems of intelligibility – in which various and sophisticated contemporary logics and banks of planetary knowledge are articulated into powerful machines of inferences, impossible to individual thought, overcoming and integrating the limits of the previous machinery (paper, photography, printing, television, cinema and hearing) to the attempt of harmonization.

No doubt, digital technologies are regulators (because they are at the service of installed systems of intelligibility); but also disruptors (by the expansion of the semiosphere). We situate ourselves between these two seductive places to think the technological systems, in continuity with issues that accompany us: a) question the adaptive potential of technological systems (Ferreira, 1997); b) consider relative the hypothesis of their reactive propension, of systems ultimately closed, reproducers. Then, where to locate them?

Regarding possibility *a* (adaptation), the criticisms are known: the technological system is not abductive, since it is subordinate to intelligibility systems already installed in the form of logics and knowledge banks. It would not reach the aesthetic dimensions and social ethics required for adaptive processes. Regarding possibility *b* (regulation), there are studies that say so (Primo, 1998), although they also emphasize a concept to discuss (mutual interaction).

However, at the same time, the technological systems produce an anthropological mutation, in terms of senses, perceptions and cognition, as this proposition based on McLuhan synthesizes well:

McLuhan considers the constitution of dominant paradigms of Western sciences as the result of the transformations caused by the invention of alphabetic writing. By favoring the sense of sight, alphabetic writing would atrophy the sense of hearing and, thus, would replace the soundscape with the visual environment of the system. For its part, the sense of sight, in favoring the functioning of the left hemisphere of the brain, would favor the fragmented, quantitative perception of the phenomena, to the detriment of auditory perception that, in favoring the functioning of the right hemisphere of the brain, would be global, holistic and qualitative. By favoring the sense of sight, to the detriment of hearing, alphabetic writing would have favored in the West the visual environment and would have been responsible for the paradigms that have guided, in the West, the process of disciplinary fragmentation of the sciences. These are the paradigms at issue and, in the contemporary world, they have become obsolete with the invention of the so-called ICTs. Nowadays, the electronic media would form an auditory environment, also holistic and qualitative, that emphasizes the functioning of the



right hemisphere of the brain, instead of the visual environment, fragmentary and quantitative, that emphasizes the functioning of the left hemisphere. (Braga; Rodrigues, 2015: 9)

In this sense, we infer, intelligibility systems have an abductive potential that transforms throughout history, which is redirected, partly atrophied, but also maintained and innovated.

FINAL INFERENCES: CONTRASTING AND RELATIONAL HYPOTHESES ON UNCERTAINTY AND INDETERMINACY

The dyads above are abstractions that suggest three simple relations:

- a. the sign is d: $S \rightarrow D$
- b. systems of intelligibility are adaptive: $SI \rightarrow A$
- c. technological systems are regulatory: $TS \rightarrow R$

They are abstract because they do not integrate that which emerges from the interactions among these three dimensions. Here, it is necessary to differentiate: if each of the relations is an absolute, they, in interaction, produce new differentiations, irreducible to their absolutes. Thus, for example, the proposition that the intelligence is adaptive is an absolute, a universal; similarly, the claim that the sign is disruptive and that technology is reactive.

The starting point to escape these abstract absolutes is to explore what emerges from the interactions among sign, technological systems and systems of intelligibility. These interactions, condensed, are the relations that are processed in that which we conceive as media dispositifs. Media dispositifs (Ferreira, 2006) are not composed only of these *clean* dimensions. Heterogeneous, they consist of several other intersections activated in the relations among semiosis, systems of intelligibility and technological systems. These relations and intersections constitute a heterogeneous space.

In Figure 1, we present hypotheses considering the uncertainty and indeterminacy emerging in media processes. They are possible relations operated in media dispositifs, in references to the social processes (adaptation, disruption and regulation), in the form of the following hexagons⁴, according to the prospective hypothesis:

This perspective retrieves the enlightenment heritage, but projects the tensions with the environment that emerges between semiosis and regulatory processes triggered by technological systems. The three logics – of sign,

4. This hexagon is analogous to that of Blanché (2012). While Blanché was based on Aristotle, I am based on Peirce's triadic matrices. I came to this inference building the argument for a research problem in which one of the levels of reflection is about what is triggered by media dispositifs, presented above. When constructing the argument, we realized that we had a hexagon, with two triads at the tips, aligned by an internal square. This logic reading was built around simpler relations, in corresponding dyads (systems of intelligibility and social adaptation; semiosis and disruption; technological systems and reactivity).

of intelligibility and of information and communication technologies – can, therefore, be governed by the social connection. The anterior social codes, the posterior inferences, are central in a strong adaptive process that would neutralize the processes of regulation and disruption. Neither the replication of disruptive processes by technological systems, nor the subsumption of semiosis to regulation, would deconstruct the adaptation possible. The positive social connection – love, knowledge, recognition – would dominate the process, at the heart of the dispositif. Possible degenerations – the negative connection, hatred, violence, etc. – would only be short-term phenomena in the long walk of the species until the completion of the connection (Marx and Hegel) or the

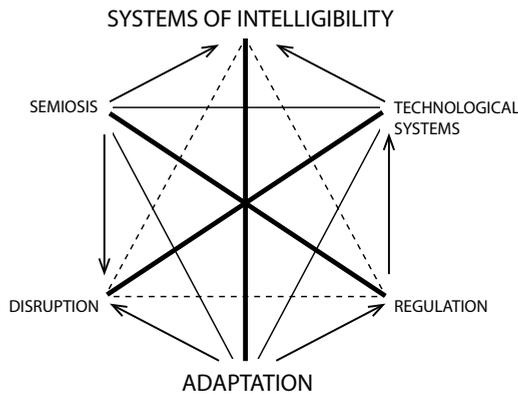


FIGURE 1 – Anthropocentric hypothesis - adaptive processes must overcome the specters of uncertainty, indeterminacy and regulation

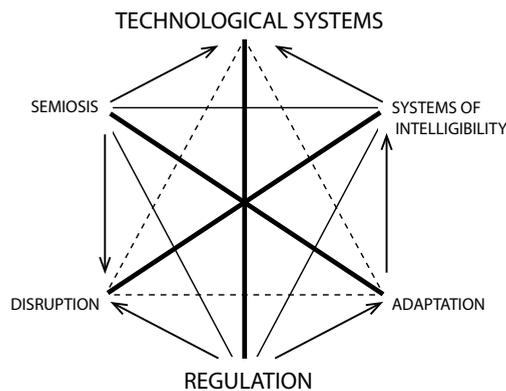


FIGURE 2 – Cybernetic hypothesis - the intelligent regulation processes (from the algorithms of specialized systems to artificial intelligence) are central to the regulation of the chaos, indeterminacy and uncertainty that emerge from semiosis

A

Adaptation, disruption, and regulation in media dispositifs

connection is strong enough to regenerate the interaction processes founded by differentiation and regulation.

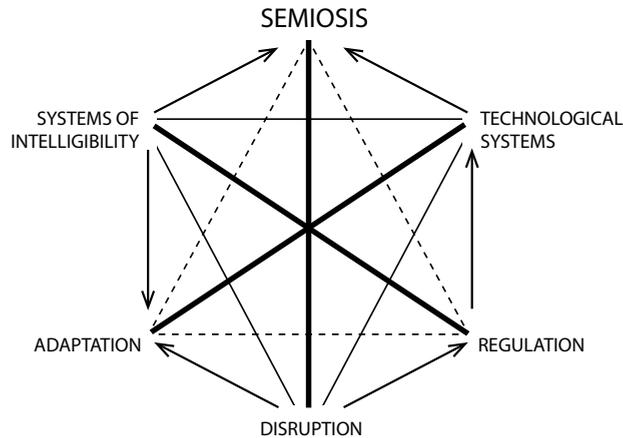


FIGURE 3 – Semiotic hypothesis - the semiosis emerging in media processes overlaps the transverse and institutionalized fields, resulting in an environment of uncertainty and indeterminacy, according to the logic of the sign

This hypothesis overcomes the idea of technique and technology as ideology (thesis that goes from Marx to Habermas). Incorporated into social life, technique and technology are practical, a knowledge-power, which is also established as discourse (Foucault, 1986; Poster, 1985). The belief in the machines of governability is parallel not only to the perception of disruption derived from semiosis; it is also disbelief in the ability of social relations established in systems of intelligibility of fulfilling their promises, thus producing a halo of utopia of technological systems.

The technique as utopia reaches computer science as its privileged space. Computer codes translate all codes and specialized systems seek the translation of knowledge banks. Semiosis, on one side, through codes, and systems of intelligibility, on the other side, are objects of tentative translations. Through inferential processes that are typical of artificial intelligences (connectionism, neural networks, complex logic, etc.), regulation is sought considering the limits of living intelligence and the chaos installed by semiotic disruption.

This third hypothesis, convergent with the postmodern hypotheses, does not deny – in the relational configuration that we propose – that adaptive processes and regulation processes continue to occur. However, it directs the focus to the centrality of the disruption processes, that constitutes an environment,

which is triggered by the circulation in media processes, of uncertainty and indeterminacy – which requires an innovating cognitive effort from the species, whether in terms of intelligibility systems in social relations or in terms of regulation through technique and technology.

In this perspective, neither the intelligence of the species nor the technical and technological regulations would have capacity to handle the disruption. The symptoms of this are known. From the tsunami (a disruption of the non-regulated nature) to the crisis of the Brazilian democracy. The manifestation of disruption in the sphere of media processes, however, is a phenomenon that matters especially in terms of communication. It manifests as lack of communication due to a differentiation and individualization made possible by the new media. There is contact, but what is revealed is the disparity, the decalage, resulting from the differentiations.

Research on concretizations is theoretical and empirical. In both directions, several questions can be posed, based on a system of diverse inferences. The central question is how the processes emerging in interactions with media and dispositifs are revealed in the media processes. In other reflections and investigations, empirical, we infer that the interactions between specific mediatic environments and dispositifs in terms of production, reception and circulation enable considering valid, in the current circumstances, the three contrasting hypotheses, presented above. Studying them in their specificity presents good inferences about ongoing propensities, derived from the media culture. Among them: a) so disruption manifest in media processes, it is required the presence of actors in network; b) historical dispositifs are disabled while determinants (end of cultural industry as linear determinant), in the new environments and circuits of mediatic circulation; c) it is observed the emergence of a semiosis that was repressed or denied. ■

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