

# From Media to (Algorithmic) Mediations: Mediation, Reception, and Consumption on Digital Platforms<sup>a</sup>

## *Dos Meios às Mediações (Algorítmicas): Mediação, Recepção e Consumo em Plataformas Digitais*

■ KÉRLEY WINQUES<sup>b</sup>

Faculdade Bom Jesus IELUSC. Joinville – SC, Brazil

RAQUEL RITTER LONGHI<sup>c</sup>

Universidade Federal de Santa Catarina, Programa de Pós-Graduação em Jornalismo.  
Florianópolis – SC, Brazil

### ABSTRACT

Algorithms have become social vectors and constituents of meanings as they apply tension and are tensioned by the social dynamics of the web. This article discusses online consumption and reception and presents the *Algorithmic Mediation System Map*, based on the propositions by Jesús Martín-Barbero, as an instrument to support reflections on platform studies. The map attempts to align cultural studies with contemporaneity, permeated by algorithmic flows, in which digital platforms gain importance as a category of analysis of institutional mediations in reception. We investigate how the contents are consumed in a daily life that is overcome by social practices originated from other mediations of the subject.

**Keywords:** Algorithms, mediation, reception, cultural studies

### RESUMO

Algoritmos tornaram-se vetores sociais e constituidores de sentidos, pois tensionam e são tensionados pelas dinâmicas sociais da web. O artigo discute consumo e recepção online, e apresenta o *Mapa do Sistema de Mediações Algorítmicas*, a partir das proposições de Jesús Martín-Barbero, como um instrumento de apoio à reflexão sobre pesquisas em plataformas. O mapa é uma tentativa de alinhar os estudos culturais à contemporaneidade, permeada por fluxos algorítmicos, em que as plataformas digitais ganham importância como categoria de análise das mediações institucionais na recepção. Investiga-se como os conteúdos são consumidos em um cotidiano atravessado pelas práticas sociais originadas de outras mediações do sujeito.

**Palavras-chave:** Algoritmos, mediação, recepção, estudos culturais

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<sup>b</sup> Professor of Journalism and of Publicity and Propaganda at Faculdade Bom Jesus IELUSC. PhD in Journalism from Universidade Federal de Santa Catarina (UFSC). Researcher at the Center for Hypermedia Studies and Production Applied to Journalism (NEPHI-Jor). Orcid: <https://orcid.org/0000-0001-7571-281X>. Email: [ker.winqes@gmail.com](mailto:ker.winqes@gmail.com)

<sup>c</sup> Professor at the Department of Journalism and at the Programa de Pós-Graduação em Comunicação da UFSC. PhD in Communication and Semiotics from Pontifícia Universidade Católica de São Paulo (PUC-SP). Researcher at NEPHI-Jor. Orcid: <https://orcid.org/0000-0001-7302-1994>. Email: [raqlonghi@gmail.com](mailto:raqlonghi@gmail.com)

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MATRIZES



ALGORITHM-BASED STRUCTURES HAVE become inseparable from the everyday practices of any connected individual. Search engines, social networks, chat applications, streaming services, recommendation systems, and virtual assistants are more and more at the center of economy, politics, and culture. Despite being private structures, digital platforms have become spaces in which important public debates occur and where the confrontation of views and the articulation of opinions is verified.

Going beyond the instrumental rationale, algorithms have become social vectors and constituents of meanings since they apply tension and are tensioned by the social dynamics established on the web. Couldry and Hepp (2020) pointed out that the essentially mediated nature of the social is also based on material objects – interconnections, platforms, infrastructures, etc. – “through which communication, as well as the production of meanings, takes place” (p. 14). However, one must not abandon the term “social” and analyze meanings and technologies separately, because the media infrastructure, which aids in the construction of the social aspect in the view of the researchers, becomes simultaneously more complex.

Digital technologies connected to the Internet have considerably increased the content flow and enabled a much wider range of individuals to create and disseminate information; for this reason, it is much more difficult to control the flow of symbolic content on the web. Hence, under the perspective of cultural studies, besides the plurality and hybridity of profiles present on the network, the uses, appropriations, and productions of meanings caused by this complex information – boosted by algorithms – depends on the family, historical, institutional, cultural, social, and political context in which the individual is inserted.

With a sociocultural approach, this article is constituted from two objectives: (1) to discuss the scenario of consumption, reception, and circulation on digital platforms, which we define as *algorithmic mediations*; (2) to introduce the *Algorithmic Mediations System Map* (Winques, 2020), from the propositions by Jesús Martín-Barbero, in an attempt to align cultural studies to the contemporary context permeated by algorithmic flows. The work is divided into three main parts: the first, the theoretical and conceptual discussion, reflecting on reception theories in a more culturalist field and on the society of the algorithm. In the second part, we define the algorithm and analyze how it impacts the forms in which information is consumed and distributed, especially within the scope of social networks. In the third and final part, we present the algorithmic mediations system map as an instrument to support the reflection on digital platform research.

## RECEPTION AND MULTIPLE CONVERGENCES

The analysis of reception may have a more inclusive perspective, sharing with cultural studies “the conception about the message of the media, considering it as cultural forms open to different decodings, and about the audience, defining it as composed of meaning production agents” (Jacks & Escosteguy, 2005, pp. 41-42). Therefore, the individuals are active, with the freedom to act in various manners with the communication media – from simple consumption and use to a more relevant social application.

From the viewpoint of Ronsini (2010), the emphasis of reception is present in the analysis of the constitution of the cultural by communicative mediations. They permeate the relationship of the receiver with the medium, which does not exist outside this connection: “social classes, gender, ethnicity, family, school, friend groups, individuals are being modeled by the media culture” (p. 11). The same author also emphasized *sociality*, relatively connected to social relations, the individual, and their various elements of identity based on their personal references such as ethnicity, generation, or gender. Also, in the assessment of Lopes (2014), the reception movements are an integral part of cultural practices and “articulate both subjective and objective processes, of both a micro nature (the immediate environment controlled by the subject) and a macro nature (the social structure that escapes this control)” (p. 67). For this reason, reception is multidimensional; people live their daily lives and “at the same time, sign up for structural and historical power relationships that extrapolate their everyday activities” (p. 67).

From Denis McQuail (1997, as cited in Jacks & Escosteguy, 2005), reception studies may be classified at the *structural*, *behavioral*, and *sociocultural* levels. At the first level is audience measurement research; at the second, the effects and uses of the media are assessed; the third is represented by research carried out by cultural studies and the reception analysis. The sociocultural approach is viewed by Escosteguy (2004) as that which involves a broader and more complex onlook of the media narrative reception process. In this case, “multiple social and cultural relationships are considered. More than the study of the reception phenomenon in itself, it intends to problematize and research its social and cultural insertion, be it from the theoretical or empirical viewpoint” (p. 135). This branch of studies views receivers as producers of meaning who negotiate, reinterpret, and re-elaborate the media messages according to individual characteristics, as well as by the action of social agents (Jacks, 2014). Certain mediations and cultural practices may also appear, such as the cultural identity and the everyday experiences.



Contemporary societies have as a characteristic the formation of multiple media and information technology audiences. Upon assuming such peculiarities, Orozco Gómez (2003) evaluated that the field of reception studies must question: “How are the individual and collective subjects being constituted as citizens of a country and the world when the majority of their constitution is mediated by their multiple links to the media and information technologies?”<sup>1</sup> (p. 11). This is a challenge to be faced since the spaces marked by the countries, regions, and the world are no longer products of direct experiences but rather the result of representations, mostly electronic, digital, and virtual, made from the ecosystem of communication media. From this perspective, the author argues that reception is a synonym of interaction, and interactions with mediators multiply and restructure, as far as he is concerned, into multiple convergencies.

In a scenario of manifestations and mediations through the networks, Orozco Gómez (2003) helped with the understanding that the activity of the public is not a mere reaction to stimuli – their actions obey, not always consciously, sociocultural patterns established, learned, and developed over the *particular* historicity. Moreover, the entire communication process is inevitably mediated by various sources, contexts, and situations. It is the *mediation game* that defines the interaction and molds its result. It is necessary to assume that direct and indirect interactions with the media exist. Hence, it is important to understand the diversity of scenarios that allow the understanding of the diversity of possible mediations in the reception processes. “It is pertinent to keep in mind that the interaction with a medium, among other things, is a catalyst of profound identities and individual and collective memories that precisely emerge and are triggered by media references”<sup>2</sup> (p. 9).

With the introduction of social media networks in the mid-2000s, Couldry and Hepp (2020) pointed out that the media became much more than specific centralized content channels: they comprise platforms that, for many individuals, are literally spaces where, through communication, they enact socially. To understand the place of reception within these contents, and agreeing with Fausto Neto (2010), it is necessary to think about the role of circulation. Before that, however, we must recall that the processes and articulations presents features in which the interfaces are formalized by offering and appropriating discourse strategies. For the author, the domain of circulation is not only a concept that refers to the notion of interval or lag, as was assumed in the first studies on reception or effects. It was within the scope of complex articulation that the author saw that circulation is among the properties of the proposed discourse and the strategies of appropriation by the individual. Also, the advance of the socio-technical transformations engendered “by the

<sup>1</sup> In the original: “Cómo se está constituyendo el sujeto individual y colectivo como ciudadano de un país y del mundo, cuando la mayor parte de su constitución está mediatizada por sus múltiples vínculos con medios y tecnologías de información?”

This and other translations by the authors.

<sup>2</sup> In the original: “es pertinente tener presente que la interacción con un medio además de otras cosas es un catalizador de identidades profundas y memorias individuales y colectivas que precisamente afloran detonadas por los referentes mediáticos”.

mediatization and its repercussions on social organization allows understanding a solution of part of its problem, from an invisible region, to transform into socio-technical-discursive devices (with visible marks)” (Fausto Neto, 2010, p. 63). Such devices will formulate the interaction processes, especially the place of the reception concept.

From the expansion of the communication channels on the internet, in an attempt to define the connected subject, various concepts emerged: *prosumer*<sup>3</sup> (Castells, 2003), *gatewatchers*<sup>4</sup> (Bruns, 2003), *interagent*<sup>5</sup> (Primo, 2007), *internaut*<sup>6</sup> (García Canclini, 2008), *reader-producer* (Brignol, 2010) etc. In general, all these terms point to the user/citizen as a participating agent in the production process of the most varied levels of the network construction of narratives and information. The receivers become cooperators of the processes that integrate the media production scene in the most varied formats and genres. In the scientific field, Stuart Hall inaugurated, from the perspective of cultural studies and still in the 1980s, the idea that the individual is active in the communication process. In the wake of Hall, Latin-American studies on reception have granted the receiver the position of the protagonist, stating their cooperation in the meaning formation processes. The dislocations of the media to the mediations, an approach elaborated by Jesús Martín-Barbero in 1987, in *De los Medios a las Mediaciones* and the cultural hybridization processes, a theme developed by Néstor García Canclini in 1990, in *Culturas Híbridas: Estratégias para Entrar e Sair da Modernidade*, represent two of such main reflection axes.

In this diversity of scenarios, digital platforms are added as a fundamental structure in the mediation game. This relationship is considered pertinent by Bucher (2020), a researcher who has stood out in the study of algorithms. When asked if the production of meanings relative to the algorithms is related to the media reception and consumption studies, the author pointed to the perspective of it being a work of relating meanings and interpretations. She introduced the idea of *algorithmic imaginaries* to account for this relationship between production and consumption, i.e., how people experiment and understand their interactions with algorithms in their everyday lives. In the perception of Buchner, such relationships are much more cyclical and multidimensional than the traditional audience studies thought.

## CONNECTED SUBJECT, CIRCULATION, AND ALGORITHM PULVERIZATION

Indeed, the adaptation of concepts from the communication theory to understand how algorithms operate – and are perceived – in communication

<sup>3</sup>This term refers to subjects who are receivers, creators, re-signifiers, and distributors of information in communication, all at the same time.

<sup>4</sup>This concept is about individuals involved in organizing and curating the variety of content available across a multitude of channels. The objective is not to control the “gates” of the channels, but to participate in a distributed and organized effort to observe what kind of information is going through these channels.

<sup>5</sup>This term encompasses the participation and exchange between technology/subject, between man/machine, and between subjects on the web.

<sup>6</sup>According to García Canclini (2008), being an internet user “increases, for millions of people, the possibility of being readers and spectators” (p. 54).

<sup>7</sup>This concept deals with individuals who appropriate the media based on their needs and interests, giving them new meaning in their daily practices.



processes on digital platforms seems to have a place of prominence in more recent discussions involving the relationships of individuals with information. Lomborg and Kapsch (2019) sought to adapt the concept of *decoding* by Stuart Hall as a device to probe how people know and understand algorithms. For the authors, this concept is useful since it highlights a fundamental characteristic of communication: the gaps that must be filled by the mobilization of our semiotic and sociocultural knowledge in interpretation processes, which takes place before any communication makes sense.

If we cannot open the black box itself, we can study the relationships that people experience with algorithms, and by extension how and to what extent these experienced relationships become meaningful and are interwoven with users' reflections of power, transparency, and justice in digital media. (Lomborg & Kapsch, 2019, p. 2)

The authors reinforced that, as part of the digital infrastructure of everyday life, algorithms also become productive and powerful through the meanings attributed to them in concrete scenarios. Therefore, in the context of the forms of interaction with the digital media, they identified “several accounts of users performing protective tactics and deliberate attempts to influence or circumvent algorithmic systems through interactions with them, underlining that while algorithms do things to people, people also do things to algorithms” (Lomborg & Kapsch, 2019, p. 11). The study showed that individuals become more aware of the existence of technical and invisible objects, such as algorithms and their consequences in the mediations and formation of meanings.

Social media have no specific border, i.e., a beginning, middle, and end. This is due to how they are operated by the individual, who maintain continuous, internal, and external relationships. Within the scope of digital platforms, the circulation limits may be within the *algorithms*. Fausto Neto (2019) assessed that the platforms impose their own rules and prescriptions, organize enunciations, and circulate the systematization of new messages in the form of statements. Hence, the place of reception is not only in the metrics, the comments, and the sharing that the contents receive. The place of reception is also in the digital footprints, which are established by the social and cultural space the individual occupies while building their online and offline dialogues, i.e., by the dimensions in everyday life and their interactions.

As technical instruments, algorithms build and implement power and knowledge regimes (Beer, 2009; Gillespie, 2018), and their use has normative and performative implications since individuals attribute meanings to the information they receive. In fact, when computational tools are used as a primary form of

expression, as Gillespie (2018) observes, human discourse and knowledge are subjected to the logics of procedures that support computation; logics that, in addition to the techniques, are demarcated by commercial interests (Couldry & Mejias, 2018; Srnicek, 2017; Zuboff, 2020), by political interests (O’Neil, 2016; Silveira, 2019), and also by human bias (Benjamin, 2019; Crawford, 2021; Noble, 2021; Silva, 2021). Hence, it is necessary to question not only algorithms as key elements of this information system configuration but also the cultural forms that emerge from their shadows. In the words of Gillespie (2018), there are “specific implications when we use algorithms to select what is most relevant from a corpus of data composed by footprints of our activities, preferences, and expressions” (p. 97).

To Uricchio (2017), the algorithm reached a point of inflection upon impacting and even redefining the subject-object relationships. In doing so, it raises some quite fundamental epistemological questions. Combined with data, in a scenario that adds to the emergence of big data, processing power, and high-speed networks, it may be defining an emerging epistemic era.

Like data, algorithms can be human- or machine-generated. And although an ancient idea, the algorithm has . . . reached a tipping point in terms of its cultural operations: it is now being deployed in ways that redefine long-held subject-object relationships and, in so doing, it poses some rather fundamental epistemological questions. (Uricchio, 2017, p. 125)

Considered as an agent that configures collective life in various forms, the algorithm is viewed by Kitchin (2016) as an instrument that guides and molds the way people, animals, and technical objects integrate and traverse various systems. Beer (2009) observed algorithms as powerful agents capable of molding cultural and social formations. Allying to these authors, in this horizon of sociological analysis of algorithms, Gillespie (2018) perceived the algorithm not merely as an abstraction; The author observed that the analyses must emphasize and reveal the human and institutional choices behind their elaborations. This argumentation leads to the center of the issue discussed in this article: the algorithms that compose the network must also be seen from the perspective of mediations, with a view that does not lose sight of the political, social, and economic power that reveals itself through the codes that conduct experiences and interactions.

Algorithms, especially machine learning ones<sup>8</sup>, make classifications using varied forms and sets of models: navigation history, geographical information, gender, age, behavior, political preferences, profession, performance, work, temporal information, etc. Other analyses count days of the week of access

<sup>8</sup>In *machine learning*, the functions are executed by the algorithm itself. In other words, there is human action in the elaboration of the codes; however, later, as new *inputs* are added, the machine starts acting as the interactions happen.



to the contents, intervals, permanence, engagement, assiduity, frequency, etc. – a signal system built based on the information stemming from the intersection of social, cultural, political, economic, and informative strategies – clear signs of surveillance, digital surveillance substantiated by “systematic, automated, and remote monitoring of actions and information on individuals in the cyberspace with the purpose of knowing and intervening in their possible conducts or choices” (Bruno, 2008, p. 11). The longer a user stays on a mobile application or online platform, the more data on their habits, tastes, and behaviors will be collected (Beer, 2009; Couldry & Mejias, 2018; O’Neil, 2016; Silveira, 2019, Srnicek, 2017).

That said, the final topic presents the *Algorithmic Mediations System Map* (Winques, 2020). It is a map that takes on a rereading of the night maps by Martín-Barbero and brings a connection with the contemporary scenario permeated by digital platforms, media diversity, and algorithms.

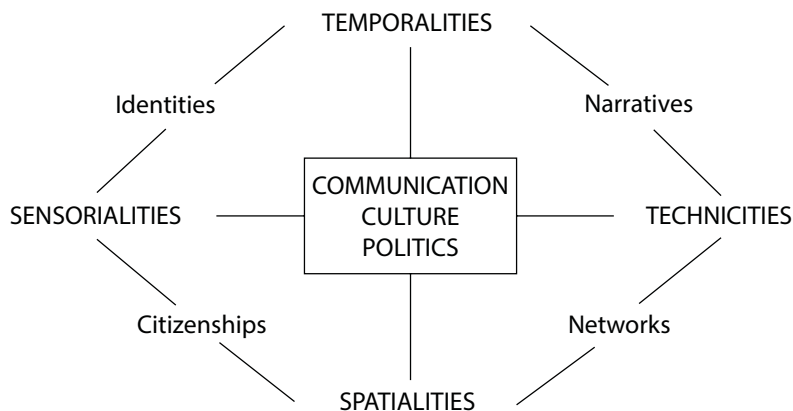
### ALGORITHMIC MEDIATIONS SYSTEM MAP

The mediations of Martín-Barbero are *where* it is possible to understand the interactions between the space of reception and that of production. According to Lopes (2018), “the Barberian cartography concerns a *strategic-rhizomatic method*, and the mediations must be seen as devices that crisscross in a constant motion of mutation, renovation, and updating” (p. 51). The reading of the mediations by Martín-Barbero takes place across four maps, presented in the different editions of the work *De los Medios a las Mediaciones*. The recovery is made by Lopes (2018), and the publications are marked by the years 1987, 1998, 2010, and 2017<sup>9</sup>. The mapping method shows an epistemology that uses footprints. A more comprehensive view of Martín-Barbero and the maps in their completeness may be seen in the analyses by Lopes (2018), Jacks and Escosteguy (2005), and Jacks et al. (2019).

In the contemporary scenario, digital media displace knowledge. Such devices are “modifying both the cognitive and the institutional statute of the conditions of knowledge, leading to a strong blurring of the borders between reason and imagination, knowledge and information, art and science, specialized and common knowledge” (Lopes, 2018, p. 58). This technological mutation started to configure the communication ecosystem, and this historicity helped elaborate the last map proposed by Martín-Barbero (Figure 1). In this map, interpreted by Rincón (2019) and Lopes (2018), two new axes appear – *technicities* and *sensorialities* – in addition to three new sub-mediations – *narratives*, *networks*, and *citizenships*.

<sup>9</sup>The 2017 map is not part of an introduction of a new edition of the author’s work but was rather presented in an interview of Martín Barbero with Omar Rincón on May 22, 2017 (Rincón, 2017).



**Figure 1***Fourth Methodological Map of Mediations (2017)*

Note. From "A Teoria Barberiana da Comunicação", by M. I. V. Lopes, 2018, *MATRIZes*, 12(1), p. 58. (<https://doi.org/10.11606/issn.1982-8160.v8i1p65-80>).

The *technicities* imply a reconfiguration of sensoriality and sociality. Lopes (2018) observed that Martín-Barbero proposed contemplating the *sensitivity* theory in dialogue with Jacques Rancière and the *sharing of the sensitive*. This occurs in two ways: first, the author refuses to reduce the aesthetics to a merely speculative reflection; conversely, points to the necessity to broaden it to a reflection linked to the various sensitivity regimes that coexist in society; second, cartography exposes that the arrangement of the positions and competencies of individuals has as a pillar the decentralized view of the researcher, who observes the margins and the valorization of the communication flow and the cultural exchange.

Rincón (2019) observed that one of the keys is reading the current sensory as being inhabited by the instability and chaos within the individual, politics, and society. This is due to the existence of various crises, such as the environmental and political crises, and, at the same time, a certain technological optimism is witnessed. In turn, the mediation of sociality “reveals outlines that will demarcate the different experiences with the sensitive, or with the ‘taking part in the sharing’ mentioned by Rancière. Therefore, the cartography may be an instrument to promote new parameters for representing the sharing of the sensitive” (Lopes, 2018, p. 60).

The *narratives* are conceptually conjugated by the amalgamation of ritual. While everyday life stories are molded by rituals, the narratives produce stories that remain in the collective memory, according to Rincón (2019). In the case



of *networks*, it is how the natural world and the ecosystem may be read. For the author, the network is the contemporary language, and the flows are the depth.

Rincón (2019) observed that *citizenships*, which refer to the citizens, are more perennial. They inhabit the cities, the rights, and the ways to gain power in everyday life. In turn, the *identities* are the forms that social performances take on. There are also the figures and the characters that concern the ephemeral, the fragmentary, but with the power of performance and enunciation. Lastly, relative to the space and time axes, it is possible to inhabit the city time and the virtual time in contemporaneity. In the view of the author, the relationship is space-time; the spaces inhabit the times.

In the view of Martín-Barbero (2011), the knowledge of *identity crisis* in contemporary society is structurally connected with the market society, which guides the logic and dynamic of the production and circulation of knowledge. This issue intensifies if we observe, for example, the scenario of platform capitalism (Couldry & Mejias, 2018; Srnicek, 2017). In contrast, the new communication and information technologies triggers the need to investigate the meaning of the *cultural mutation* that is introduced in all fields of society. From the perspective of Martín-Barbero (2011), when the technological mediation of communication ceases to be instrumental and becomes structural, the very place of culture within society changes. Therefore, *technicity*, a term coined by anthropologist André Leroi-Gourhan in the 20th century, refers nowadays to the technology that is not only in the devices but in the new ways of perception and language, in new sensitivities and writings.

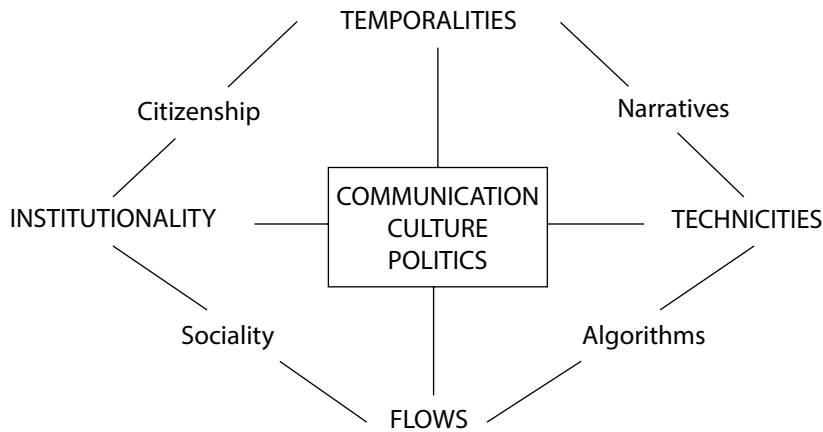
For the author, the matter of the technique is increasingly crucial insofar as technicism threatens the cultural diversity of the techniques, becoming a universal connector of the world; a global technicism that concerns not only the world of objects but also of the individuals and their social bonds. Consequently, society is not only in the face of economic avatars but also other premises of culture and politics. Although technology has always been assessed as a mere instrument, Martín-Barbero (2011) noted the need to view it as a reason in the sense proposed by Martin Heidegger, in a constitutive dimension of sociocultural changes, which paradoxically reveals the reverse process undergone by politics: the “loss of symbolic density”, which is the loss of the capacity to summon and keep subjects united. Therefore, in the view of the author, the current technological stage is disrupts the images of the world and the coordinates of the sensitive experience.

Hence, in light of the mediation maps by Martín-Barbero and the authors mentioned before, the *Algorithmic Mediations System Map* is proposed (Figure 2), with the following as basic mediations: *institutionality* and *technicity* on the

horizontal axis; and *temporalities* and *flows* on the vertical axis. As sub-mediation axes, the following appear: *narratives*, *algorithms*, *sociality*, and *citizenship*.

**Figure 2**

*Algorithmic Mediations System Map*



*Note.* From *Mediações Algorítmicas e Espiral do Silêncio: As Dimensões Estruturantes Igreja e Sindicato na Recepção de Conteúdos Noticiosos em Plataformas Digitais*, por K. Winques, 2020, p. 160.

Regarding the horizontal axis of institutionality, it is necessary to recognize the institutionalization of the media formations in contemporary society. Jacks (1999) observed that the mediations are carried out by the institutions the individual belongs to or has some type of contact with, such as: political party, neighborhood, religion, company, school etc. Additionally, the author, just as Orozco Gómez (2005), considers television as an institution that, together with those mentioned above, mediates the relationship of the individual who produces and reproduces senses and meanings from the television discourse.

For this reason, the application of the institutional dimension covers the belief that institutions such as churches, schools, families, parties, and unions are important in the formation of the mediations; however, the various media, especially the digital platforms, need to be considered as mediating instances of the ways of seeing, thinking, and acting. They need to be characterized as such because they have become an indispensable part of the everyday lives of individuals. Their communicative genres, narratives, codes, and symbols go through digitalization; however, they are not just algorithms and exchanges void of meaning but are institutionalized forms of social interaction. In opting for the institutional perspective, one agrees with Hjarvard (2015) and Couldry and Hepp (2020) that it is important to consider the various media – especially



the new ones. In a more sociological view, Hjarvard (2015) pondered that an institution is a field of the social life or an identifiable domain governed by a set of formal and informal rules, and that it also “presents a particular structure, performs given social functions, and allocates resources for social action in varied ways” (p. 56).

Compared to mass media, the new formats of media, propagation, and interaction, such as the Internet and mobile devices, have a different insertion in everyday practices. This is due to the integration of a variety of private, semi-private, and public institutional contexts. In the conception of Hjarvard (2015), in the institutionalization process of the social interaction patterns, media may serve a variety of uses, but it is the media affordances, i.e., their communicative, aesthetic, and social possibilities, that determine which social interaction patterns will be dominant. Concerning the private forms of interaction, however, the central point is that the influence of the used media “stems more from the media affordances and less from a *modus operandi* of the institution of the semi-independent media” (p. 57). Speaking of institutionalization involves allocating resources, both in terms of economic investments and the social learning of how to use the media. The author mentioned the example of Facebook, which was initially molded by particular developers and media systems but that, after reaching a dominant position, began to structure the interaction of the individuals in a manner that is difficult to circumvent – especially since there are algorithms that help the circulation and contribute to a logic based on platform capitalism and data colonialism (Couldry & Mejias, 2018; Srnicek, 2017).

In the assessment of García Canclini (2020), companies such as Google, Apple, Facebook, and Amazon are not only the largest technology business complexes, but they also reconfigure the meanings of coexistence and interactions. For this reason, it was chosen to keep sociality and citizenship connected to the institutional dimension since the activity of institutions promotes the formation of everyday relationships and social bonds and the ways in which the citizen develop their political participation and identity.

Sociality is part of the construction and deconstruction of society. Cogo and Brignol (2011) understood the networks as spaces of social interaction “of flexible, dynamic and constantly moving exchanges that do not cease to accommodate power relationships expressed in the disputes, hierarchies, and asymmetries that constitute the sphere of communication and culture” (p. 82). The networks manifest a way to form bonds and be together and, jointly, may implicate manners of social participation and integration. It is also possible to think of *scheduled sociability*, conceptualized by Bucher (2012), which considers that platforms

and their algorithmic dynamics have an important role in the dimensions that aid the construction of common space. The view woven by the author allows us to consider sociality as a continuous process of assembly and reconfigurations that involves human and non-human actors.

Citizenship emerges as a dimension that is problematized especially by the interrelationships it establishes, involving institutions and cultural identity. The interrelationships between technicism and the constitution of new citizenships in the cultural field must be viewed from a perspective that considers the plurality of communication scenarios. Bonin and Morigi (2019) observed the relevance in considering the new forms of monitoring, surveillance, and control introduced by technological conglomerates. Other aspects concern the use of algorithms that significantly limit the possibilities of developing extended network interactions, as well as the phenomenon of disseminating false content, which expresses the deliberate use of misinformation as a power maneuver for controlling citizens.

The formulation of technicity suits the most recent view by Martín-Barbero (2011), who assessed that there is a new type of technique, the peculiarity of which is in its association with a new cognitive economy governed by the displacement of the number, which, as a sign of domain over nature, gradually becomes the universal mediator of knowledge. Through this angle, the author observed that computer networks transformed the relationship with time and space by mobilizing knowledge figures that escape the dualistic reason: “working interactively with sounds, images, and written texts, the hypertext hybridizes the symbolic density with the numerical abstraction and causes the two parts of the brain (so far ‘opposite’) to be rediscovered”<sup>10</sup> (p. 113). According to the author, the computer is clearly not a traditional machine for producing symbolic objects but a device that bears a new type of technicity constituted by the processing of information, the symbolic production, and the relationships between the order of the discursive (logic) and the visible (form). Despite the change in view, Martín-Barbero did not assume the priority of the media, only recognized that communication “densifies” with the new dimensions of technicity, that the communicative is becoming stronger, and that the new media are part of the symbolic experiences – which involves considering the various multi-mediation interfaces.

These symbolic experiences are also formulated by the narratives and the algorithms. For Silva and Baseio (2019), “the narrative mediation suggests analyzing communicative processes under the perspective of the practices, dealing with fragments, rituals, and repetitions reproduced in everyday time and space”<sup>11</sup> (p. 180). Encompassed by digital technologies, social complexity provides

<sup>10</sup>In the original: “al trabajar interactivamente con sonidos, imágenes y textos escritos, el hipertexto hibrida la densidad simbólica con la abstracción numérica, y hace que se reencuentren las dos (hasta ahora ‘opuestas’) partes del cerebro”.

<sup>11</sup>In the original: “La mediación narrativa sugiere analizar los procesos comunicativos en la óptica de las prácticas, ocupándose de los fragmentos, de los ritos y de las repeticiones reproducidas en el tiempo y espacio cotidianos”.



new means to create, recreate, read, and reread narratives. Hence, it is necessary to consider the experience of the individual who, in terms of their expectations, creates new narration possibilities. Photos, videos, texts, and audio compose everyday narratives. Cogo and Brignol (2011) observed that the hybridization of different discursive forms brings consequences to reception. The same occurs with hypertext, composed of a non-sequential structure, which “also causes one to think of the content and messages built through heterogeneous flows, in a context of interrelated processes” (p. 85).

If the model of social networking, searching, relationship, purchasing, mobility, and other platforms involves significant changes to the institutional relationships and emerging cultural practices, algorithms may be considered agents that intensely and quickly mediate the transformation of society. As organization, modulation, and performativity devices, algorithms leave the numerical object field to appropriate the cultural references of the users. In the regularities of accessing, clicking, commenting, and sharing, the apparently technical objects find references of the individuals that will help conduct the experience that develops through interactivity and hypertext, which, consequently, help the encounter with the narratives present on the network. This is how algorithms refer to technicity since they are not restricted to the discursive grammars formulated by enunciation practices but serve to understand the discursive dexterity and its performative operators.

The everyday rites are no longer restricted to the act of turning the TV on or reading the newspaper; they are marked by various technological spaces. The rituality includes acts such as opening Instagram, checking WhatsApp messages, turning on the radio, or watching a movie on Netflix. As pointed out by Fausto Neto (2010), “programming” no longer exists; individuals themselves are the operators/programmers. For this reason, it is not possible to find the exact dimension of technicity and its connections with the narratives, the sociality, the citizenship, and the algorithms; it is viable, however, to think of the productions, reproductions, and re-elaborations of meanings that may be contemplated and understood through methodologies connected to the *listening* process of the subjects (Bonin, 2013) – such as interviews, focus groups, ethnography etc., or, even, through social network analysis techniques (Sloan & Quan-Haase, 2016), which especially aim at mapping the footprints left on the network. The emerging field of social network analysis is dedicated to investigating scenarios in which the networks, especially social media ones, start to be recognized as the epicenter of interpersonal relations. This includes the consumption of information, the monitoring of collectivities and individualities, the analysis of feelings, and the strengthening of specific agendas, among others.

Finally, the vertical axis is marked by temporalities and flows. Martín-Barbero (2017) observed that the *new age of the sensitive* involves overcoming the unbroken linear sequence of the time of information and potentializes new temporalities that break old borders of knowledge and belonging. Hence, the new device and dialogue scenarios allows for the discussions about the time migrants: individuals who are located in the present from multiple and even distant temporalities, configuring a new kind of global community without maps. Upon tackling the new era of the sensitive, the author argued that it is less about devices and more about capturing how, by articulating technique and culture, individuals are faced with new forms of perceiving, feeling, and being in the medium. These are more precarious temporalities, while also being more flexible. This is because they are at the basis of the experience of the fragmentation culture that expresses itself through the growing identification with fragmented stories in videos, audios, texts, photos etc. There are environments of more ephemeral temporalities and spatialities.

The temporalities are directly connected with the flows, which are the decentralized spaces and those of multiple spatialities. Martín-Barbero (2018) proposed that the multiple spatialities are the following spaces: (1) the *inhabited* space, of territory, proximity, and belonging; (2) the *produced* space, which weaves electronic networks; (3) the *imagined* space, of the nation and its identity; (4) the *practiced* space, which involves the subjectivity that emerges from the new relationship with the city and the forms of its appropriation. This relationship allows the discussion on the communication technologies and the spatialities enabled by them, generating new socialities and citizenships in a world of spatial fragmentation and isolation of individuals. To adopt the term flows means to think about the position of geography that recognizes spatiality, which is also virtual, as a place of contradictions and disputes.

From the flows, temporalities, technicities, algorithms, narratives, and institutions, the cognitive and situational mediations, as proposed by Orozco Gómez (2005), may be observed or triggered. The first occurs through scripts that the author treats as mental scripts that indicate the framing and cultural relevance of given themes, situations, and forms of perception placed in negotiation in the communication. Therefore, cognitive mediation is a set of factors that influence the perception, appropriation, and processing of elements and events that are directly related to the acquisition of knowledge – which may take place both through the processing of the logic of the information and the systems of beliefs and values (rational or irrational) of the individual. Consequently, a script results from the interaction of the subject with others and with their medium. For this reason, this perception may also be assessed through the formation of schemes in



the environment of digital platforms that occur due to more significant attention or sensitivity for certain themes and disregard for others.

In turn, situational mediations involve a specific relationship with the media, connected to the type of space in which this encounter occurs and to the form by which they dispute the attention of their users – who may be alone or in groups. In this angle, the *appropriation communities* may also be observed, through which the message travels within the same public until it receives a final interpretation – yet not definitive. Hence, the subject “takes the message to the different communities they belong to, in which it gains or loses meaning, generating the production of new meanings or the reproduction of proposed meanings” (Jacks, 1999, p. 58). The appropriation communities may also vary according to the individual; within the same audience, specific appropriations may occur. “Belonging to various appropriation communities causes the receiver to have various *reference communities*, the relevance in the reception process of which will be determined by the empirical situation of the object of analysis” (Jacks, 1999, p. 58). Upon visualizing an information set, a person will have the possibility of confronting the material with their own personality and other reference communities; for such reasons, their identity is continuously built by appropriation communities.

*Sociocultural mediators*, as described by Martín-Barbero (2015), are “... nstitutional and traditional figures – the school, the family, the church, the neighborhood” (p. 20) – and “the new actors and emerging social movements that, similar to ecological or human rights organizations and ethnic or gender movements, introduce new meanings of social and new social uses of media” (p. 20). In view of this, algorithms are used as cultural and infrastructural mediators that need to be dealt with politically, technically, and expressively. Furthermore, we believe that recognizing algorithmic mediations is a part of the contemporary complexity that involves the processes and mediums of communication. The mediations and the map described above are connected to the assumption that the reception does not occur only while accessing content on the web – using social media platforms such as Facebook, Instagram, TikTok and Twitter, or using search engines such as Google – it starts before and ends after. The production of meanings takes place through the combination of various mediations that intervene in the reception process. According to Jacks (1999) and Lopes (2018), the use of the night maps does not require an explicit application of all analytical categories. However, these maps are fundamental for the design of the investigation, the object of study, and the entire analytical process of conjuncture in which the study under development is inserted. Lastly, the *Algorithmic Mediations*



*System Map* is a map model that gathers the theoretical conceptions of the cultural studies, reception theories, platform studies, and critical studies on algorithms. Upon rereading the night maps by Martín-Barbero, this is an attempt to align the cultural studies to the contemporary context permeated by algorithmic flows and multiple temporalities.

## FINAL CONSIDERATIONS

Regarding reception research focused on the internet in Brazil, from the analysis of dissertations and theses defended from 2010 to 2015, Pieniz et al. (2017) identified an exponential increase in the number of studies – a comparison made with the findings by Pieniz and Wottrich (2014) in the first decade of the 2000s<sup>12</sup>. In their most recent work, the authors presented 235 studies, of which 11 address only the Internet, 41 invested in media convergence, 52 observed network conversations, and 131 focused on the uses and competencies of the platforms – with a predominance of Facebook, Twitter, and YouTube. Regarding themes, there was an emphasis on politics, culture, religion, identity, and fashion. The concepts with the highest incidence were cyberculture, cyberspace, digital media, and the definition of interaction. The primary criticism is that all works are more focused on the descriptivism of the manifestations of the subjects: “new studies may perform a more in-depth analysis of the phenomena and the communication process itself” (Pieniz et al., 2017, p. 33).

Given the exposed, algorithms must also be observed from the perspective of mediations, not losing sight of the political and economic power revealed through the codes that conduct experiences and interactions, signs, and symbols. Christin (2020), Lomborg and Kapsch (2019), and Winques (2020) faced this problem and progressed in the perspective of recognition of algorithms as symbolic objects of negotiations, representations, contradictions, and production of meanings.

Christin (2020) analyzed the ways journalists handle data to the public. Based on four years of fieldwork in newsrooms in the United States and France, the author discovered crucial and paradoxical differences in how American and French journalists understand the analysis of the public and how this affects the news articles produced. Contrary to the belief that algorithms are homogenizing forces, the researcher showed that computational technologies may have diverging ramifications and that subjects may develop disputable appropriations. In their exploratory study of how people decode algorithms from different forms of engagement, Lomborg and Kapsch (2019) attested the ways through which individuals tacitly reinforce or subvert the algorithmic logics through their

<sup>12</sup>Pieniz and Wottrich (2014) analyzed that reception research from the 2000s manifested changes “at times with works regarding a traditional media scenario with well-determined borders between emitters and receivers, other times with works with a media scenario in reconfiguration, with analyses of empirical spaces of the internet” (p. 74). Hence, they noticed that, in this process of the entry of reception in internet studies, there were 31 works involving the online medium from 2000 to 2009.



communicative agency. Lastly, through a sociocultural matrix reception study with evangelical believers and unionized professors, Winques (2020) sought to understand the power relationships from the productions of meanings of the subjects, taking into account the algorithmic mediations as part of this power structure. In this sense, from the *Algorithmic Mediations System Map*, the author explored the social processes that involve algorithms and subjects and investigated the implications of this relationship in the reception and circulation of journalistic information on digital platforms.

A common perspective among the mentioned studies is the *listening* of the individuals, which takes place through methods such as ethnography and interviews. These are methodologies that help the process of *hearing* what the users say and think. Therefore, they offer important clues as to how subjects relate among themselves and to information on digital platforms. That said, it is proposed that, upon using the *Algorithmic Mediations System Map*, research aiming to understand the mediations, the consumption, or the reception in the space of digital platforms must take into account the technical, circulation, and reception/consumption aspects in the environment mediated by algorithms. Under this perspective, digital platforms gain importance as a category of analysis of the institutional mediations in the reception process – it is about investigating how content is consumed in the everyday life traversed by social practices originated in other mediations of the individual that aid in the formation of opinions, actions, and memories. ■

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