

An overview about cartography in Brazil: a research based on master theses and doctoral dissertations of the Communication between 2010 and 2017

DOI: <https://doi.org/10.1590/1809-5844202124>

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Abstract

This article is aimed to clarify fundamental aspects and present the results of a research that objectives to investigate the procedures for using Cartography as a methodological approach for the field study of Communication in Brazil. Therefore, we initially present a map of the method and examine the state of the art from the theses and dissertations defended between 2010 and 2017 is examined. It is possible to observe the adoption of the term as a synonym for other methodological procedures, along with the superficial use of the available epistemic-methodological framework. It was possible to identify five cartographic perspectives gaining prominence due the epistemological foundation employed, as it follows: Deleuze and Guattari, Walter Benjamin, Cartography of Controversies (based on Actor-Network Theory), Martín-Barbero and Lucia Leões's poetics cartography.

Keywords: Research Methodology. Cartography. State of Art.

Introduction: maps of cartography

Even in a modest way, inspired post-structuralist cartographic perspectives have been adopted by different areas of Human Sciences in Brazil in the last decade, including in the field of Communication. Its unusual uses - since they are anchored in a non-essentialist

approach - still cause debates and strangeness about the procedures used and their scientific legitimacy. Even more, a reason to problematize it.

The bottom line is to reinforce the premise that to think about cartography, it is necessary to update the perspective about scientific knowledge and method, as will be addressed below. It is also important to affirm that many authors dedicated to the study of Science have already been requalifying these principles and, therefore, not an exclusive point from the cartographic point of view.

The term cartography¹ has been reframed from the construction of conceptual knowledge configured by post-structuralist thinking, as a result of the crisis of modern science² and as a point of criticism of its paradigms. Cartographic thinking seeks to deterritorialize and deconstruct ways of thinking and put into practice (modern) science and research. Understand science in this manner is not to “dogmatically base it on any of the absolute or a priori principles that the philosophy of science has provided us [...]. On the contrary, it is a matter of understanding it as a social practice of knowledge, a task that is carried out in dialogue with the world [...]”(SANTOS, 1989, p. 13).

The concern with the conditions of production of knowledge is one of the founding principles of cartography: how to prevent the creation of a problem leading to its *a priori* resolution; how to create knowledge without restricting what is not yet known? One of the proposed solutions is the inversion of the etymology of the term “method”, from *metá-hodos* to *hódos-metá*, according to Passos, Kastrup, and Escóssia (2009, p. 10-11):

The methodology, when imposed as a watchword, is defined by rules previously established. Hence the traditional sense of methodology is imprinted in the very etymology of the word: *metá-hódos*. With this direction, research is defined as a path (*hódos*) predetermined by the goals given at the beginning. In turn, the cartography proposes a methodological reversal: transforming *metá-hodos* into *hódos-metá*.

More powerful than knowing in advance where our problematization can reach - through the traditional proposal of the method for predefining the path - it is to be guided by what the development of the research suggests, step by step. This methodological reversal affirms cartography as an attitude to be assumed.

In one of the most radical criticisms of modern knowledge - made from the inside of a “hard science”, with practical results -, Feyerabend (1977) is concerned exactly with the

1 Literally, the most immediate meaning of the term cartography is associated with geography and act of designing maps. Its etymology brings the meaning of “written letter” and, therefore, it is related to maps that aim to identify surfaces, shapes, curves, volumes. However, this expression has been appropriated by other areas of knowledge, such as sociology, philosophy, psychology, education and its uses have been adapted to the reflections brought by scholars and intellectuals establishing more direct relations with method and methodologies.

2 For Santos (1989), there are currently two different crisis in science: the growth that relates to discipline and dissatisfaction with methods and/or concepts; and the crisis of degeneration - corresponding to science and paradigms.

strict follow-up of a method that conducts research, after all, history shows that there are non-accidental violations of scientific principles that lead to progress; in this sense, he sees these transgressions as necessary for scientific advancement. Likewise, when understanding phenomena from a multifaceted and unpredictable complexity, Morin (2011) considers that knowledge comes from the random - which cannot be predicted.

The starting point of cartography, therefore, is displacement, requiring invention and experimentation³ without following models, but a constant reflection on the methodological process, operating in the dissolution of established points of view. The rigor required in research is not neglected: the method is traced in the research experience, while the path is being delineated in the encounter with the problem and the research object, based on a constant reflection on the processes, or as stated by Barros and Barros (2013, p. 384) “to constantly allow research itself to be questioned”.

Therefore, there is no claim to the truth as final knowledge - this is the problem of induction for Popper (2013) -, the inferences arising from particular cases cannot be rules for universal statements. By indicating other ways of doing research, which requires updating the system of the researcher himself, cartography undertakes changes in paradigms - which, incidentally, are not far from prevailing currents of thoughts in the communication field.

To have a cartographic attitude, Passos, Kastrup and Escóssia (2010, p. 201) defend a refinement of perception that is not established on accumulated knowledge or memory, but the “cultivation of concentrated and open attention to the experience of problematization”. In this flow, a researcher modified after the relation to his original state would appear, aware that he is producing reality, driven by an ethical and political commitment.

The scientific attitude, then, takes place both in data *harvest*, as in the presentation, and in the cognitive organization: we are always in the middle of a problem, the elements that compose it already exist when we perceive it when we denounce it when we circulate it. Therefore, we always start in the middle. For not conceiving linearity, a cause-consequence, there is no other beginning than the means: from there the researcher-cartographer starts to get lost in the fragments since collecting is his task. This collection of apparently disparate and irregular fragments is made possible by rejecting a goal and repetition as a condition for the perception of phenomena.

“Ideas relate to things like the constellations with the stars,” said Walter Benjamin in the *Introductory Questions of Critique of Knowledge*, in his thesis *Origin of German Baroque drama* (OTTE; VOLPE, 2002). Constellations are not natural formations, but cultural images, which vary according to times and civilizations. That is why the researcher’s constellation view is *one possibility*: it is not the necessary relationship, the explanation of cause and effect between the elements, but a possibility of understanding a phenomenon when relating

³ It is a practice that favors experimentation - a distinct process of experience, the traditional image of scientific practice that would allow isolating phenomena and, mainly, reproducing reactions in an isolated environment as a form of falsifiability.

elements that compose it. “Never fair ideas, just an idea”, as Godard said (DELEUZE; GUATTARI, 2011, p. 48).

Assembling the map of understanding a phenomenon, therefore, is always a provisional view, after all, the production of knowledge and the production of reality, in this way, are inseparable. We are involved in the production of knowledge and this questions the so-called neutrality desired for scientific objectivity, for the separation between theory and practice, subject and object, and even knowledge and politics.

Due to the awareness of the researcher’s view as constitutive of what he observes, cartography does not propose *to collect* data but *to produce* it (KASTRUP, 2007). This means that the empirical data are not, in fact, *data*, but are preserved as possibilities - a potency that is the researcher’s responsibility to update: based on the strength of the generated encounter. A less strategic and more tactical attitude, to find what possibly was not known, but “was already there”, in potency.

This openness to the unthought is a fundamental part of the harvest that favors a non-teleological selection as put by Benjamin (1987) and also in the rhizomatic form of Deleuze and Guattari (1995a, 1995b, 1996, 1997a, 1997b). This is how the investigation includes not only regularities and repetitions, but it is possible to aggregate minority findings, singularities, deviations, minimum occurrences, irregularities, inflections, and, above all, the identification of the lines of force that constitute among all the findings.

Benjamin privileges comings and goings, moving away, contemplating, and seeing intertextual connections. When forming the constellations, the star observer perceives which elements stand out and what connections could be established between them. The flaneur, the well-known allegorical character of Benjamin who wanders a little uncompromised through the metropolis - describing what he sees, but mainly fascinating, letting himself be touched and being taken to unplanned paths, as Silveira (2002) - brings one of the principles of the researcher- cartographer.

The investigator, in this Benjamin approach, is an observer, but he is also a collector-collector: crooked, irregular, who collects things as they appear to him without apparently having a purpose - the exclusion of teleology, from the goal. What draws attention is kept without a previous meaning. Thus, the researcher, being lost, is spilled in the face of numerous things and possibilities that pose the dilemma of the importance of each one of them. Letting oneself be affected by the object, not by the recurrence or abundance of a certain logic, but by the degree of interest it arouses, according to Costa (2014, p. 73): “the condition to select what will be part of your research is the strength of generated encounter ”.

Deleuze and Guattari (1995a, 1996, 1997a) built a metalanguage that was appropriate by other authors and allows to conceive a reorganizing thought of scientific practice, as well as the reorientation of concepts, a way of understanding science, scientific processes, and even life. Amongst the most relevant concepts are rhizome, plateaus, territorialization, deterritorialization, lines of segmentary, lines of flight, multiplicity, singularities, heterogeneity, becoming. For them, cartography constitutes one of the principles of the

rhizome⁴ that is updated on a map. For the authors, such a map has the potential to be produced based on the rhizome principles and, thus, allows the points of intensity of the segmentation lines to be shown, as well as the escape lines and, mainly, the connections generated between them. “Such lines are articulating a weave in its flow speed, causing assemblages of different orders, generating a diversity of flows and, finally, composing moving maps” (ROSÁRIO, 2016, p. 188).

Actor-Network Theory (TAR) developed by Latour (2012) also lends itself to thinking about aspects of cartography from different types of controversies in different fields of knowledge. One of the basic principles of TAR is the equal importance of human and non-human actors in social processes, nonetheless, this type of cartography is a way of exemplifying the application of the theory in social research. Therefore, Latour (2012) understands that cartography has as its territory the social world, and the plan of an ant is the most appropriate to aim at the research universe because it allows the gathering of many collectives and networks as possible. This process allows the constitution of a ‘travel guide’ that makes it possible to monitor the reorganization of the actors and grants the construction of unequal, disparate landscapes through ‘drift’.

After this initial panorama, will be presented the data gathered from research on the uses of cartography in the field of Communication in Brazil, in theses and dissertations, over eight years. In the third section, the landscape built for this method based on the data collected is explored, questioning modes of use and investigating its potential, as well as pointing out five perspectives identified - differences; controversies; Benjaminians; poetic; Barberian - explaining the first two more closely. Finally, the final considerations defend cartography as a powerful alternative to existing theoretical and methodological points of view.

A glimpse of the landscape

It is relevant that the field of Communication has devoted attention to studying not only communicative phenomena but also how research is developed at the theoretical and empirical level, an indication of maturity in the area. In 2011, Aguiar⁵ investigated the state of art of cartography. Understanding the relevance of the continuity in this type of research was decided to complement and update information on methodological practices in communication. In addition to being a way of dialoguing with the field itself, it is central in

4 In Deleuze and Guattari (1995a) the rhizome has six principles: connection, heterogeneity, multiplicity, a-significant rupture, decalcomania and cartography.

5 Lisiane Aguiar defended her dissertation at the beginning of 2011 in the postgraduate program in Communication Sciences (Unisinos) (<http://www.repositorio.jesuita.org.br/handle/UNISINOS/2997>). She conducted a research on the research on the cartography uses of Deleuze and Guattari in theses and dissertations. One of the conclusions that we consider important was that part of the analyzed theses and dissertations brought the construction of an abstract theorism, making the methodological question still very incipient.

keeping up the record of the trajectories that accompany these changes in the development of science in Brazil.

Hence, we proposed an investigation that aims to map and problematize the uses of cartography in communication, in Brazil, and reflect on its potential. For this purpose, the bibliographic production of communication researchers who use cartography is explored, seeking to identify trends and perspectives on how it is grounded and developed. Initially, productions of theses and dissertations of Brazilian graduate students, from 2010 to 2017⁶, were analyzed.

A literature review was the first stage of the process (FLICK, 2009) since it allows a glimpse of the object's potentialities and an overview of theoretical and methodological uses. Thus, these data worked as an information system (GALINDO CÁCERES, 2001), capable of showing circumstances, perspectives and assisting in delimiting fundamental aspects of the investigation. The type of research undertaken, therefore, constitutes the so-called state-of-the-art and research-of-research. The latter, according to Bonin (2008), constitutes a way of research that allows contact with certain productions that will allow new investigations and advances from it.

In the first instance, the quantitative results of the investigation based on specific information taken from the theses and dissertations will be presented, as well as considerations about the data raised from a qualitative perspective.

For that, the theses and dissertations of the graduate programs in Communication in Brazil were surveyed, researching the Capes theses database (updated from 2013) and the database provided by the Culture and Media Reception Research Center of Federal University of Rio Grande do Sul (UFRGS), which supplied information from 2010⁷. In both databases, the word "Cartography⁸" was searched in titles, abstracts, and keywords, which resulted in 139 theses and dissertations⁹ in the area of communication¹⁰.

6 This period was defined according to the accessibility of theses and dissertations. CAPES theses database has been updated since 2013 and, with existing complementary research (Available at: <https://cedap.ufrgs.br/jspui/handle/2050011959/1091>) we were able to extend the initial period to 2010.

The unfolding of the research will reach other strata, extending the academic productions recorded in books and scientific articles in the area. Thus, even though, in general, the results brought to this text are partial, with the material analyzed it was already possible to outline ways of using cartography in this segment, which may or may not result in the development of the other stages of the research.

7 Available at: <https://cedap.ufrgs.br/jspui/handle/2050011959/1091>. Accessed on: Feb. 2, 2019.

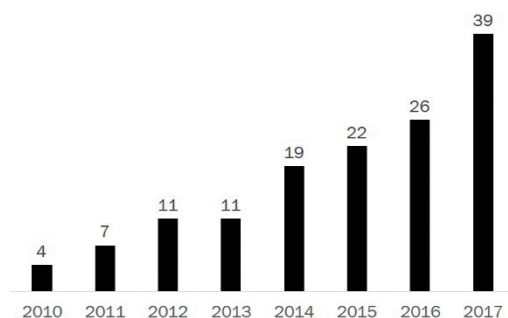
8 In addition to related words, such as cartographic, cartographer etc.

9 We take as a basis the list of graduate programs listed on the Compós page. We emphasize, however, that of the total of current programs, not all had theses and / or dissertations defended and made available on the websites of the programs or Capes. The list of programs is available at: <http://www.compos.org.br/programas.php>. Accessed on: Feb. 2, 2019.

10 Graduate programs listed on the National Association of Graduate Programs in Communication (Compós) webpage. However, we emphasize that of the total of current programs, not all had theses and / or dissertations defended are made available on the websites of the programs or Capes. The list of programs are available at: <http://www.compos.org.br/programas.php>. Accessed on: Feb. 2, 2019.

As we can see in the graph below (Graph 1), there is a growing interest in the period studied for using a cartographic approach, since they were present in four studies in 2010 and 39 in 2017.

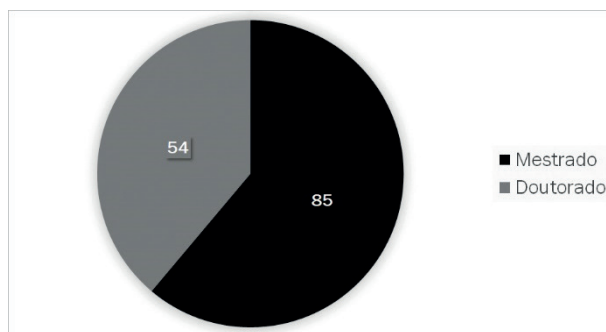
Graph 1 – Total of coursework with a cartographic approach per year



Source: the authors.

Among the 139 found, 85 are dissertations and 54 are theses, as shown in Graph 2, below.

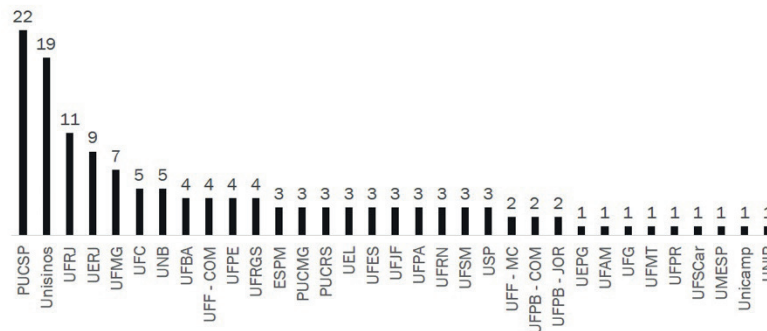
Graph 2 – Cartographic approach by type of work



Source: the authors.

Analyzing the data referring to the production, we see, for example, that 33 different programs (Graph 3) produced research with some cartographic approach. The programs are distributed in all regions of Brazil (Southeast - 15 programs, South - 7, Northeast - 6, Midwest - 3, North - 2), with a greater concentration in the Southeast, where there is a greater number of PPGs.

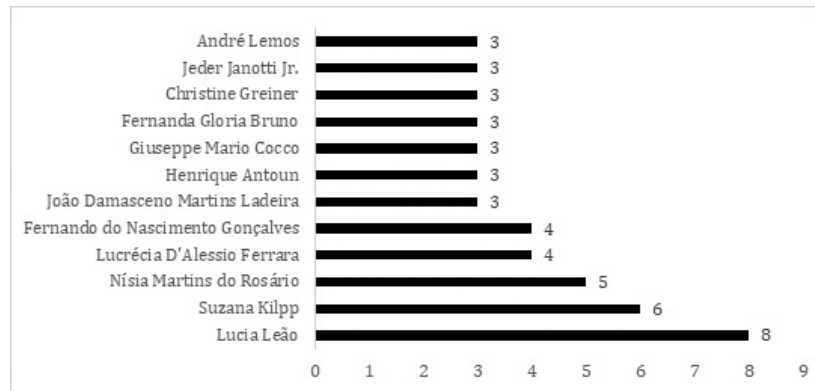
Graph 3 – Cartographic approach by university



Source: the authors

Accessing the data on guidance, we see that only 12 professors advised more than two investigations, adding up to 48 theses and/or dissertations (Graph 4), which is equivalent to 34.53% of the total production identified. This already points briefly to the data seen below, more qualitative, about how students made use of cartographic references. In the graph below some indications of the affinity with specific theoretical and methodological references are presented, in addition to objects of study, mostly from the identification of the advisors.

Graph 4 – Cartographic approach by advisor



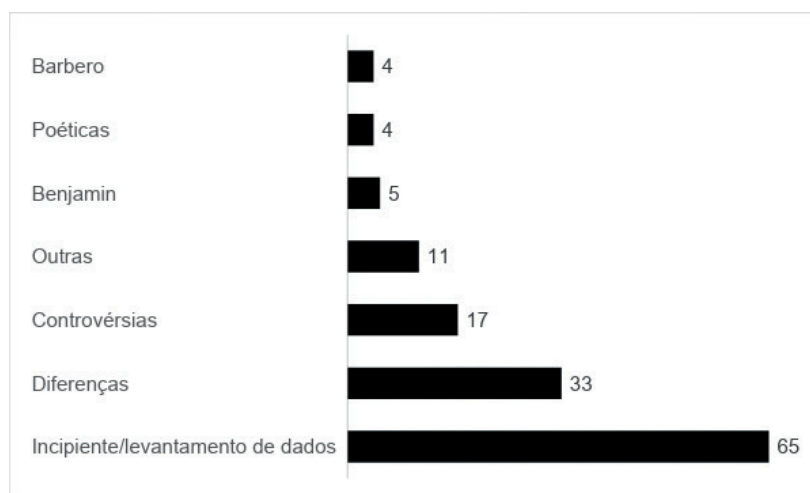
Source: the authors.

In addition to these researchers cited in graph 4, 10 graduate professors advised two graduate students' research and 71 supervised only one. Altogether, 91 professors advised research using cartography, indicating the diversity of professors and universities.

Among all the works analyzed in the research, some presented cartography more clearly linked to a specific theoretical-methodological framework (Graph 5), as indicated

by Cartography of Differences, which has its use inspired by Deleuze and Guattari, or by theorists of Actor-Network Theory known as Cartography of Controversies. Likewise, the constellations theorized by Benjamin, the poetic cartography, developed by Lúcia Leão, and the “cartographer” posture influenced by the work of Martín-Barbero. Besides, other contributions, more dispersed, appeared guided by methodologies inspired by Geography, Cartographic Engineering, or specific combinations between the methodologies previously presented.

Graph 5 – Cartographic approach by the theoretical approach



Source: the authors.

Draws attention, however, the amount - 65 papers, which is equivalent to 46.76% of the total - of theses and dissertations that used the word ‘cartography’ as a synonym for several types of “data gathering” made during the research, but without a methodological basis to justify its use. Among these, there are also the ones that stated that they would make use of some kind of cartography, however in their development they did not bring any reference or procedure that could be associated with any cartographic methodology, or else was did it in a very incipient way.

This demonstrates that, even with growing interest, it is still necessary to work better conceptually so that cartography, as a methodology or method, guides the research when adopted.

Some theses or dissertations may not have been included in this *corpus* because they do not present keywords related to cartography in the metadata (abstract, title, or keywords). This awakens a reflection not only in the sense of pointing out limits for the research presented in this paper but in highlighting the importance of preparing abstracts and titles that account for all aspects considered fundamental in the process of research. When brought in clearly, they help other researchers and interested people to not only find the text but to have a clearer dimension of the development of the investigation.

Landscape considerations

As presented, just near half of the studies promise or give indications that cartography is part of the research in a methodological approach focused on the empirical procedure, however not addressed in the report theoretically or methodologically. In many cases, the term appears as a synonym for mapping, data collection, or exploratory research. Only configuring itself as another name for existing procedures that make its use superficial. In this sense, it is important to reiterate that the updated cartography formulations for social and human sciences in the last decades are conceived from an epistemological approach that can be called post-structuralist. Therefore, it is not enough a cartographic methodology, the understanding of science, of a method, of doing research also need to move in that direction.

The picture captured by our investigation of insufficient use of cartography can inspire at least four hypotheses that are not mutually exclusive and that are not necessarily restricted to this method: a) disregard for the theories that drive the methodology (BRAGA, 2011); b) indiscriminate and superficial use of the term as part of a fad; c) ignorance of the theoretical and epistemological foundations of this concept; d) incomprehension of the proposals developed scientifically despite the immersion in them. In any of these strata, there is a need for deepening and scientific questioning of the method.

Even when the research is committed to the foundation, there are cases of scarce treatment of theory and application to the empirical data, which makes the methodology precarious. Some researchers, however, endeavor to propose a methodological path that display reflection on the process carried out, as well as presenting their process in the search for the clues shown by the territory. All of them seek, in a way, to build their methodology, propose renewed routes to the field, configure singular insights and some unexpected results, always in juxtaposition with the indications of the authors used.

In the way of theoretical foundation, our data revealed a diversity of authors who sustained, or at least supported, the theoretical and methodological perspective of cartography. As explained in Graph 5, from the analysis of the works and the articulations between them, it was possible to identify five more organized cartographic approaches: differences; controversies; Benjaminians; poetic; Barberian.

Although there are different approaches to cartography, we do not find exclusive trustworthiness for the authors of each line, some transit through the theoretical insights of various theses and dissertations. For example, Foucault (1993, 1996, 2006) can be an inspiring author of cartographic thinking from different perspectives, considering his studies on ethics and politics, power of life, critical-creative knowledge, the field of forces, will to the truth, and willingness to know, among others.

Martín-Barbero (2004), a communication theorist who has been thinking the longest about cartography, and even wrote the book *Cartographer's Craft*, is called at all times in the investigations analyzed. The author reports his research and inspires many cartographers

in communication, operates on cognitive maps, proposing *night maps* that would be able to “inquire about domination, production, and work, although from the other side: that of breaches, that of pleasure. A map (...) to change the place from which the questions are formulated to assume the margins, not as a theme, but as an enzyme” (MARTÍN-BARBERO, 2004, p. 18). Thus, he rejects synthetic maps and proposes an archipelago type map (bringing together multiple islands).

Benjamin (1987) is also invited to contribute with theses and dissertations focused on approaches that are not his specialty, but the metalanguage developed is utilized in the terms: flaneur, constellations, maps, collector, memory, archives. The author left many cartographic clues in his works, turning to the reflection of the methodological stance, the construction of his method, reporting his immersions in the field. The objects of study chosen by the German philosopher are also inspiring since he preferred brothels, squares, and cemeteries, hence, gave relevance to marginal landscapes. His critical considerations of positivism and historicism, as well as his openness to a fragmentary, heterogeneous, essayistic view and the valorization of “ruins”, fit into a broader movement of criticism of modernity undergoing by human and social sciences.

Likewise, Deleuze and Guattari developed their metalanguage that has already been mentioned. Especially in the five volumes of *A Thousand Plateaus* (1995a, 1995b, 1996, 1997a, 1997b), but also in other works - they are the inspirers of the cartography of differences. The appropriation of his works led other authors to develop a cartographic thinking that rethinks the concept of method, among others. In Brazil many researchers stand out, however, we first point out the psychoanalyst, professor, and researcher Rolnik (2006), who even wrote alongside Guattari *Micropolitics: a cartography of desire* (1996)¹¹. The author is present in most of the analyzed works that use the Differences aspect.

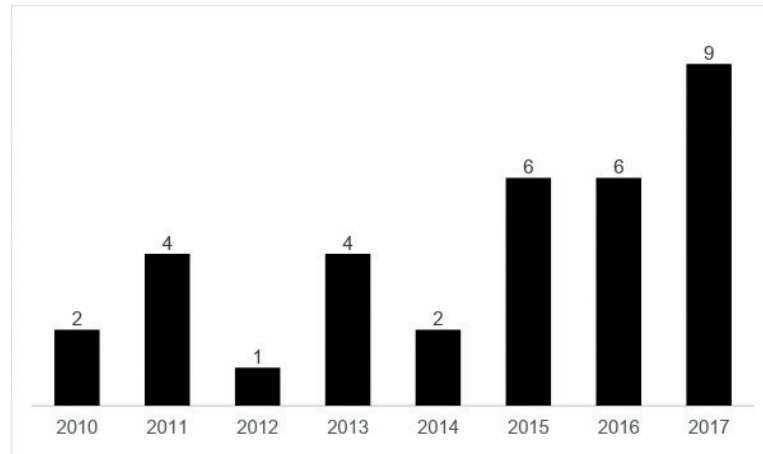
As there is a lot of data collected, it will not be possible to share them all here. So, we decided to go deeper into just the most used cartographic perspectives: Differences and Actor-Network Theory.

Through the search (Graph 6, below), theses and dissertations that have been working with the cartography of Differences since 2010 were found. The chronology points to a certain fluctuation in their annual number. However, in general, it is possible to see a line of growth that records two investigations in 2010 and nine in 2017. A total of 33 theses and dissertations¹² were found with this focus, 14 master’s and 19 doctoral, distributed in programs in the area communications from 12 different universities.

11 In 1982, Suely Rolnik accompanied Guattari’s visit to Brazil. Together they write: *Micropolitics. Cartographies of desire*. From then on, the author becomes a reference on cartography, mainly in the area of psychology and education. Rolnik starts working on cartography as a method.

12 Full references are available at: <http://corporalidades.com.br/site/2019/02/20/2054/>. Accessed on: May 26, 2020.

Graph 6 – Cartography of Differences per year



Source: the authors.

The Post-Graduate Program that presents more usage of this methodology is from Unisinos, bringing together eight works (four for masters and four for doctorates) under the guidance of six different professors. Thereafter, UFMG and UFRJ, both with four papers in the period, and both with a thesis and three dissertations; in the first university, there are three advisors and two in the second. At UERJ we found a thesis and two dissertations and, as a result, six universities presented two papers each (UFF, PUCSP, UFRGS, UFSM, PUCMinas, PUCRS) and, finally, two with only one work (UNB, UEL). The investigation also raised the sub-areas of approach to cartography in the area of communication, but they will not be presented here due to so many pluralities of themes.

The methodological impasse shown in general in the researches studied was also present in the use of the cartography of Differences. Previously we observed that cartography stimulates to find its own methodological path, and what determines the method effectively is the investigation process itself, the path. This is a movement of great effort, especially for researchers at the beginning of their careers who are being evaluated directly for their work (graduate students). Yet, the paradigm of the method that is constituted by the organization of a certain way of acting for the scientist through models that set aside everything that is not in the order of scientifically validated still the current thinking of the field.

In the qualitative analysis, it was possible to notice that a part of the researchers dedicated themselves to finding a unique path, appropriate to their object of investigation, without necessarily abandoning usual procedures and proved to be adequate. In the same way, it was also possible to realize that this is a task that requires creativity, inventiveness, as defended by Rolnik (2006), Kastrup (2008), and others. In the theses and/or dissertations we find proposals for testimonies, activist knowledge of the researcher, visual maps, descriptive maps, series, the configuration of plateaus, presentation of rhizomes, among others. It is necessary to remember that, along with these new approaches, there were also traditional

procedures in Social Sciences, such as interviews, life stories, discourse analysis, image analysis, participant observation, focus group.

Finally, it is important to report the modes of construction of the theoretical basis for the cartography of Differences. Undoubtedly, different ways of conceptual-theoretical treatment were identified. The first finding highlights one group diving deeper than another, including inserting a chapter or part of an initial chapter to support its method and methodological path. This means also including the bibliographic research of cartography in this scope. These theses and dissertations do not make a closed defense but lead to thinking about cartography as a method. Another group, however, seemed to understand cartography as a methodological procedure and incorporated it only in the empirical chapter.

The most cited authors were Deleuze and Guattari, and in some theses and dissertations they were mentioned only to name the type of cartography and, in others, they operated effectively in the theoretical framework. Based on the two philosophers, a large majority of the researchers were based on the group coming from Psychology and that was dedicated primarily to the development of this approach in Brazil. Representatives are Rolnik, Kastrup, Escóssia, Barros, and Passos¹³. Some intellectuals, however, not directly identified with the cartography of the differences were brought in to complement the theoretical configuration, such as Martín-Barbero, Foucault, Benjamin, Latour - which also operate on perspectives of maps and cartographies - and, still, Marcondes Filho, France, Rossiter, Harley.

Bruno Latour's Actor-Network Theory (ANT), in recent years, has been widely used for the study of conflicts and divergences in digital environments. "For ANT, environments, where there is controversy, are ideal for analyzing the formation of social structures: they show actors, relationships and agencies that would otherwise have gone unnoticed" (PEREIRA; BOECHAT, 2014, p. 558). The approach is attentive to what escapes broad structuralist sociology; instead of observing the social macro processes, focuses on mediators to discover their flow characteristics, provisional, in relation, as explained by Lemos (2012, p. 36): "before your actors assume stable positions, resolve their polemics and end in 'snapshots'".

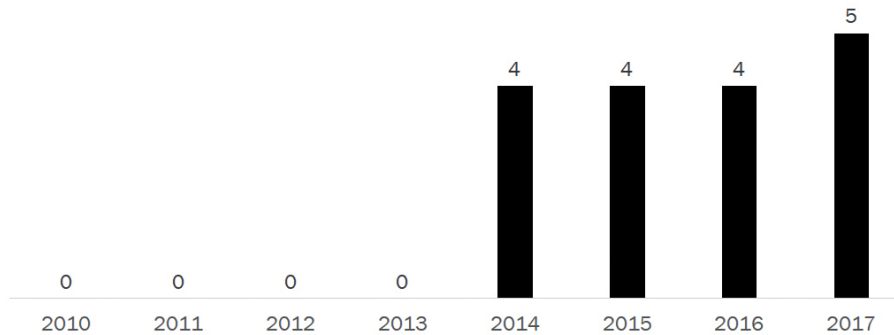
Stabilization is the tendency of associations between the actors - "human" and "non-human" - of the network and the result of the social flow, after the controversies - it is at this moment that the ANT focuses, to perceive as moral positions, conflicting interpretations or misunderstandings present themselves and referrals can generate before the creation of a "black box". As traces are left in social media from live interaction, it is possible to map the controversies in motion and perceive the formation of the networks that make up the social - considered from the perspective of a flat ontology, which does not differentiate humans from non-human: there is symmetry, an equivalence, between these agents.

Thus, a set of research procedures are added in this methodology, such as the analysis of discourse, content, social networks, and group observations, to map, explore and visualize controversies that take into account the agency of human and non-human actors. As can

13 We will not cite in this article the references of all the works used by these authors because they are several, including some written in co-authorship and, we understand that they are not fundamental for the understanding of our investigation.

be seen in the graph below (Graph 7), in the studies of Communication the interest in this cartographic approach is recent, appearing in the defenses since 2014, but growing, adding up to 17 works¹⁴.

Graph 7 – Controversy Cartography approach, by year



Source: the authors.

Between the strata, nine dissertations and eight theses. Only UFRJ, UFPE, and USP have more than one research defended: four, two, and two, respectively. The other universities that used this methodological contribution were UFMG, PUCSP, UFES, ESPM, UEL, UFG, UFPB (Media and Culture Media and Journalism), and UFBA with one work in each.

One of the points in common between the investigations where this methodological reference was applied is the absence of a pre-established model to map the controversies in the network. Multiple researchers made use of digital tools for the data gathering and analysis, especially those with a large volume of information. At this stage, some software and scripts appear with some recurrence, such as Ford Parse, Netvizz, Issue Crawler, Octoparse, QDA Miner, and Hype. Gephi was the most popular software to draw and visualize networks. Other tools with specific search functions are also cited, such as Google Trends, to view more discussed topics on the internet, and Google News Scraper, to search for news. These tools helped in the search for digital traces of controversies and connections between the networks mapped by the researchers.

As a proposal that has recently started to be used in Communication, with relatively little literature on the subject, a repetition of the references that support the methodological chapters dealing with this type of cartography occur. In addition to Latour himself, mainly the work *Reassembling the Social: An introduction to the Actor-Network Theory*, Venturini (2010, 2012) and Lemos (2013, 2016) are the most cited authors. Even though there are repetitions of the speeches of these authors between the researches, it is common to see different stages of this cartography being named differently, albeit with similar meanings.

¹⁴ Full references are available at: <http://corporalidades.com.br/site/2019/02/20/2054/>. Accessed on: Feb. 2, 2019.

Final considerations

In general, our research detected several ways of approaching cartographic thinking in communication, revealing that this method is not based on a theoretical perspective only and, mainly, that it is still in the process of composition, and above all, of experimentation. Master's and doctoral students have launched and ventured into this methodological dimension, most likely in search of other ways of thinking and doing investigative work that suits their reasoning and the way they construct study objects.

Possibly because it was inserted in the field of communication in Brazil not long ago, the uses and appropriations of cartographies are more directed to affirm a powerful alternative to existing theoretical and methodological points of view, which would allow tracing other investigative paths. This relative 'novelty', however, does not relieve problematization, contextualization, and experimentation, neither release from reflection and debate processes.

Understanding that this thinking is not just part of a fad, the relevance of a theoretical-empirical study is shown. From this angle, the multiplication of investigations in this area will allow the method to outline its principles, at the same time that it will make it possible to bring together more consensus on the process. Nevertheless, it is necessary to consider the extent to which the field of communication is interested in paying attention to the rationale, explanation, and debate about the methods and methodologies applied in the area.

Deleuze and Guattari recall that we are used to lines of articulation or segmentation, strata, and territorialities that lead to the configuration of thinking and the analysis through hegemonic models. In the perspective built by cartography, a detachment is necessary, also considering the escape lines, the residues, the movements of deterritorialization, and de-stratification.

It is in this context of knowledge construction and investigation that theses and dissertations in the field of communication that choose cartography as a method are trying to move, although in an incipient way, without total firmness and with restricted confidence in most cases. Nonetheless, we understand this is the scenario faced by explorers, and, therefore, the analyzed works bring the seed of methodological courage (as probably many other researches developed in the field).

References

BARROS, L. M. R. de; BARROS, M. E. B. de. O problema da análise em pesquisa cartográfica. **Fractal Revista de Psicologia**. v. 25, n. 2, p. 373-390, may/aug. 2013.

BENJAMIN, W. **Obras Escolhidas**, v. II, Rua de mão única, trad. de R.R. Torres F. e J.C.M. Barbosa, São Paulo: Brasiliense, 1987.

BENJAMIN, W. **Magia e técnica, arte e política: ensaios sobre literatura e história da cultura**. 8a. ed. revista. São Paulo: Brasiliense, 2012a.

BENJAMIN, W. **Sobre arte, técnica, linguagem e política**. Lisboa: Relógio D'Água Editores, 2012b.

- BONIN, J. A. Explorações sobre práticas metodológicas na pesquisa em comunicação. **Revista FAMECOS**, n. 37, Porto Alegre, dec. 2008.
- BRAGA, J. L. A prática da pesquisa em Comunicação: abordagem metodológica como tomada de decisões. **E-compós**. Brasília: Compós, v. 14, n. 1, 2011.
- CORPUS CARTOGRAFIA DAS CONTROVÉRSIAS. **Corporalidades**. Available at: <http://corporalidades.com.br/site/2019/02/20/2054/>. Accessed on: Feb. 20, 2019.
- COSTA, L. B. da. Cartografia: uma outra forma de pesquisar. **Revista Digital do LAV**. Santa Maria, v. 7, n. 2, p. 66-77, may/aug. 2014. Available at: https://periodicos.ufsm.br/revislav/article/view/15111/pdf_1. Accessed on: Jun. 18, 2019.
- DEBORD, G. Questões preliminares à construção de uma situação. In: JACQUES, P. B. (Org.). **Apologia da Deriva**: escritos situacionistas sobre a cidade. Rio de Janeiro: Casa da Palavra, 2003.
- DELEUZE, G.; GUATTARI, F. **Mil platôs**. Capitalismo e esquizofrenia. v. 1. São Paulo: Ed. 34, 1995a.
- DELEUZE, G.; GUATTARI, F. **Mil platôs**. Capitalismo e esquizofrenia. v. 2. São Paulo: Ed. 34, 1995b.
- DELEUZE, G.; GUATTARI, F. **Mil platôs**. Capitalismo e esquizofrenia. v. 3. São Paulo: Ed. 34, 1996.
- DELEUZE, G.; GUATTARI, F. **Mil platôs**. Capitalismo e esquizofrenia. v. 4. São Paulo: Ed. 34, 1997a.
- DELEUZE, G.; GUATTARI, F. **Mil platôs**. Capitalismo e esquizofrenia. v. 5. São Paulo: Ed. 34, 1997b.
- DELEUZE, G.; GUATTARI, F. **Mil platôs**: capitalismo e esquizofrenia. v. 1, 2a. ed. São Paulo: Ed. 34, 2011.
- FERREIRA, N. As pesquisas denominadas “Estado da Arte”. **Educação e Sociedade**, year 23, n. 79, aug. 2002.
- FEYERABEND, P. **Contra o método**: esboço de uma teoria anárquica da teoria do conhecimento. Rio de Janeiro: F. Alves, 1977.
- FLICK, U. **Introdução à pesquisa qualitativa**. Porto Alegre: Artmed, 2009.
- FOUCAULT, M. **A hermenêutica do sujeito**. São Paulo: Martins Fontes, 2006.
- FOUCAULT, M. **A ordem do discurso**. 5a. ed. São Paulo: Loyola, 1996.
- FOUCAULT, M. **Microfísica do poder**. 11a. ed. Rio de Janeiro: Graal, 1993.
- GALINDO CÁCERES, J. Contextos ecológicos y sistemas de información y comunicación. Configuraciones, trayectorias, matrices situacionales y contextos de posibilidad en lo social. El caso de las redes de investigación. **Revista Interamericana de Bibliotecología**, Medellín, v. 24, n. 2, p. 56-91, 2001.
- GUATTARI, F.; ROLNIK, S. **Micropolíticas - cartografia do desejo**. Petrópolis: Vozes, 1996.
- GUMBRECHT, H. U. **Produção de presença**: o que o sentido não consegue transmitir. Rio de Janeiro: Contraponto, 2010.
- KASTRUP, V. O funcionamento da atenção no trabalho do cartógrafo. **Psicologia & Sociedade**. Associação Brasileira de Psicologia Social Minas Gerais, v. 19, n. 1, p. 15-22, jan./apr. 2007. Available at: <http://www.redalyc.org/articulo.oa?id=309326394003>. Accessed on: Jun. 18, 2019.
- KASTRUP, V. O método da cartografia e os quatro níveis da pesquisa-intervenção. In: CASTRO, L. R.; BESSET, V. L. (Orgs.). **Pesquisa intervenção na infância e juventude**. Rio de Janeiro: Nau, 2008. v. 1, p. 465-489.
- KASTRUP, V.; PASSOS, E. Cartografar é traçar um plano comum. **Fractal Revista de Psicologia**, v. 25, n. 2, p. 236-280, may/aug. 2013.
- LATOURET, B. **Reagregando o social**. Salvador: EDUFBA, 2012.

- LEMOS, A. **A comunicação das coisas**: teoria ator-rede e cibercultura. São Paulo: Annablume, v. 310, 2013.
- LEMOS, A. A comunicação das coisas: internet das coisas e teoria ator-rede – etiquetas de radiofrequência em uniformes escolares na Bahia. *In: SimSocial*, Salvador, Bahia, oct. 2012. **Proceedings....**
- LEMOS, A. (Org.). **Teoria ator-rede e estudos de comunicação**. Salvador: EDUFBA, 2016
- MARTÍN-BARBERO, J. **Ofício de cartógrafo**: travessias latinoamericanas da comunicação na cultura. São Paulo: Loyola, 2004.
- MORIN, E. **Introdução ao pensamento complexo**. 4a. ed. Porto Alegre: Sulina, 2011.
- OTTE, G.; VOLPE, M. L. Um olhar constelar sobre o pensamento de Walter Benjamin. **Fragmentos**. Florianópolis, n. 18, p. 35-47, jan./jun. 2000. Available at: <https://periodicos.ufsc.br/index.php/fragmentos/article/download/6415/5984>. Accessed on: Jun. 16, 2019.
- PASSOS, E.; KASTRUP, V.; ESCÓSSIA, L. Apresentação. *In: Pistas do método da cartografia*: pesquisa-intervenção e produção de subjetividade. Porto Alegre: Sulina, 2009.
- PASSOS, E.; KASTRUP, V.; ESCÓSSIA, L. **Pistas do método cartográfico**: pesquisa-intervenção e produção de subjetividade. Porto Alegre: Sulina, 2009.
- PEREIRA, D. C.; BOECHAT, M. P. Apenas siga as mediações: desafios da Cartografia de Controvérsias entre a Teoria Ator-Rede e as mídias digitais. **Contemporânea - Revista de Comunicação e Cultura**, v. 12, n. 3, p. 556-575, 2015.
- POPPER, K. **A lógica da pesquisa científica**. 2a. ed. São Paulo: Cultrix, 2013.
- ROLNIK, S. **Cartografia Sentimental da América**: produção do desejo na era da cultura industrial. 250f. Thesis. (PhD in Social Psychology). Pontifícia Universidade Católica de São Paulo. Graduate Program in Social Psychology, 1987.
- ROLNIK, S. **Cartografia sentimental**. Transformações contemporâneas do desejo. Porto Alegre: Sulina; Editora da UFRGS, 2006.
- ROSÁRIO, N. M. Cartografia na comunicação: questões de método e desafios metodológicos. *In: PEIXOTO, C.; LOPES, M. I. V. Pesquisa em comunicação*: metodologias e práticas acadêmicas. Porto Alegre: EDIPUCRS, 2016. p. 175-194.
- ROSÁRIO, N. M. Mitos e cartografias: novos olhares metodológicos na comunicação. *In: MALDONADO, A. E.; BONIN, J.; ROSÁRIO, N. M. (Orgs.). Perspectivas metodológicas em Comunicação*: desafios na prática investigativa. João Pessoa: Editora UFPB, 2008.
- ROSÁRIO, N. M.; AGUIAR, L. M. A cartografia como um processo teórico-metodológico multifacetado para estudos da cibercultura. *In: VI SIMPÓSIO NACIONAL DA ASSOCIAÇÃO BRASILEIRA DE PESQUISADORES EM CIBERCULTURA (ABCiber)*, Novo Hamburgo: Universidade Feevale, 2012. **Proceedings....**
- SANTOS, B. S. **Introdução a uma ciência pós-moderna**. Rio de Janeiro: Graal. 1989.
- SILVEIRA, F. L. da. O olhar etnográfico de Walter Benjamin. *In: XXV CONGRESSO BRASILEIRO DE CIÊNCIAS DA COMUNICAÇÃO – Salvador -BA – 1 a 5 de setembro de 2002. Proceedings....* Available at: <http://www.portcom.intercom.org.br/pdfs/131467036819540624755434523387115016002.pdf>. Accessed on: Jun. 16, 2019.
- VENTURINI, T. Diving in magma: how to explore controversies with actor-network theory. **Public understanding of science**, v. 19, n. 3, p. 258-273, 2010.

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Received on: 07.01.2020

Accepted on: 06.02.2021

