

Technopolitical cartographies: a proposal for collaborative mapping through participatory action research

Cartografías tecnopolíticas: propuesta para el mapeo colaborativo desde la investigación-acción participativa

Cartografías tecnopolíticas: uma proposta de mapeamento colaborativo a partir de pesquisa de ação participativa

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ABSTRACT | Digital cartographies have become popular in the field of digital activism. For technopolitical communities, mapping constitutes an innovation in the repertoires of confrontation; they allow to visualize communities and reinforce their collective identity, establish networks and links between them, and make visible the issues they intend to denounce. However, cartographic practices are also a research tool to investigate these communities. Collaborative mapping can geolocate and make projects and their possible synergies visible or generate data for comparative research and even the design of public policies. These practices are beneficial for studies on activist political communities through activist research and other engaged perspectives such as participatory action research. This methodology also has limitations, given the hybrid nature of technopolitical communities and their diffuse territorial margins, the difficulty of combining the anonymity required by activists with the visibility of their networks and practices, as well as issues linked to the classic epistemological debates around the duality between the object and the subject of participatory research. In this text, we address these debates and present the phases and techniques for applying the collaborative mapping to the study of digital activism and for the return of results to the participating communities.

KEYWORDS: cartography; activist research; critical paradigm; technopolitics; digital activism.

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RESUMEN | *Las cartografías digitales se han hecho populares en el ámbito del activismo digital. Para las comunidades tecnopolíticas, el mapeo constituye una innovación en los repertorios de confrontación, permite visualizar las comunidades y reforzar su identidad colectiva, establecer redes y vínculos entre ellas, o visibilizar las problemáticas que se pretende denunciar. No obstante, las prácticas cartográficas son también una herramienta para la investigación de dichas comunidades. Para la investigación activista y otras perspectivas comprometidas, como la investigación-acción participativa, particularmente útiles para los estudios sobre comunidades de activismo político, las cartografías realizadas de manera colaborativa tienen el potencial de geolocalizar y visibilizar los proyectos y sus posibles sinergias o generar datos para la investigación comparada e incluso el diseño de políticas públicas. Esta metodología también tiene limitaciones, dado el carácter híbrido de las comunidades tecnopolíticas y sus difusos márgenes territoriales, la dificultad de conjugar el anonimato requerido por los activistas con la visibilización de sus redes y prácticas, o cuestiones asociadas a los clásicos debates epistemológicos en torno a la dualidad entre el objeto y el sujeto de la investigación participativa. En este texto abordamos dichos debates y presentamos las fases y técnicas para la aplicación de las cartografías colaborativas al estudio del activismo digital y para la devolución de resultados a las comunidades participantes.*

PALABRAS CLAVE: *cartografía; investigación activista; paradigma crítico; tecnopolítica; activismo digital.*

RESUMO | *As cartografias digitais se tornaram populares no campo do ativismo digital. Para as comunidades tecnopolíticas, o mapeamento constitui uma inovação nos repertórios de enfrentamento, permitindo-lhes visualizar as comunidades e reforçar sua identidade coletiva, estabelecer redes e vínculos entre elas ou tornar visíveis as questões que desejam denunciar. Mas as práticas cartográficas também são uma ferramenta para a pesquisa dessas comunidades. Para a pesquisa ativista e outras perspectivas engajadas, tais como a pesquisa-ação participativa, particularmente útil para estudos sobre comunidades ativistas políticas, o mapeamento colaborativo tem o potencial de geolocalizar e tornar visíveis os projetos e suas possíveis sinergias ou gerar dados para a pesquisa comparativa e até mesmo o desenho de políticas públicas. Esta metodologia também tem limitações, dada a natureza híbrida das comunidades tecnopolíticas e suas margens territoriais difusas, a dificuldade de combinar o anonimato exigido pelos ativistas com a visibilidade de suas redes e práticas, ou questões associadas aos clássicos debates epistemológicos em torno da dualidade entre o objeto e o tema da pesquisa participativa. Neste texto abordamos estes debates e apresentamos fases e técnicas para a aplicação do mapeamento colaborativo ao estudo do ativismo digital e para o retorno dos resultados às comunidades participantes.*

PALAVRAS-CHAVE: *cartografia; pesquisa ativista; paradigma crítico; tecnopolítica; ativismo digital.*

INTRODUCTION

The map defines, synthesizes and graphically locates information within a specific area and on a specific topic (Freitas, 2015). However, as Risler and Ares (2013) emphasize, it “is not just information”. The authors highlight the character of “mapping as practice”, which as a “critical tool involves a collective task of reconstructing the fabric of each situation, of revealing (rather than totalizing) the complexity of territories” (Risler & Ares, 2013, p. 58).

With the expansion of information technologies, “new digital cartographies” are emerging in which maps are conceptualized as “visual representations of complicated databases transformed into geographically distributed, clickable, and even customizable knowledge” (Usher, 2020, p. 250). In this sense, since the digital activism of critical social movements, the practice of mapping has become popular and represents an innovation in the repertoire of technopolitical confrontation.

Technopolitical practices, distinct from cyberactivism, have emerged with the widespread adoption of digital activism among everyday individuals, diverging from the earlier cyberactivist landscape dominated by hackers and experts. These practices are characterized by the simultaneous utilization of both commercial and autonomous technologies, departing from the previous emphasis on coherence between means and ends. They also embrace hybridization between the physical and virtual realms, engage with media ecology across various media forms—not solely digital—and address technology as a political concern beyond its mere instrumental function (Candón-Mena & Montero, 2021; Treré, 2019). Critical cartographies reflect, for example, this hybridization between physical and virtual space, the combination of digital and traditional media such as posters or graffiti in mapped urban space, or the indiscriminate use of autonomous or alternative tools and commercial platforms such as Open Street Map and Google Maps.

On the one hand, the maps make it possible to visualize activist communities, establish networks and connections between them, and visualize specific issues to be denounced. On the other hand, they are a tool for investigating these communities and their practices. With these goals in mind, the cartographic process involves several stages, such as the “collection, recording, analysis, and synthesis of information with the aim of describing the resources, networks, connections, and cultural patterns of a community or group” (Stewart, 2010, p. 8).

The aim of this article is to describe the methodology of collaborative mapping, which is used not only as a repertoire for activist action, but also as a methodological tool for the study of communities of political activism.

By using the term technopolitical cartographies, we seek to identify this dual nature of maps that can be constituted both as artifacts underpinning technological imaginaries and as practical tools for transformative political action. To develop this concept, we first provide an overview of the concept of the map and its associated epistemologies, as well as the use of the concept in research. We then propose a collaborative methodology that deploys it, before explaining its analytical implications in the final section.

LITERATURE REVIEW

The map and the critical paradigm in social sciences

Cartography as a tool for visualizing territory is always linked to a particular point of view, which depends on the conception of space in social theory itself. In this sense, the conception of space in the social sciences has varied from the neo-positivist visions of an isotropic space of the Vienna Circle to the 1970s notions of perceived space influenced by subjectivism, behavioral psychology and symbolic interactionism. Attention was then turned to lived space and the social production of space, a humanist vision fed by phenomenology and existentialism and reflected in the Anglo-Saxon notion of space as place.

However, the direct relationship between urban space and collective action comes from the French school of urban sociology, influenced by the events of May 1968 and led by Alain Touraine, with disciples such as Lefebvre, Crozier, Cardoso, Baudrillard and Castells. Space is thus understood as a social space that is not only lived, but also socially produced. Therefore, “the best way to understand cities and citizens is to analyze the relationships between people and urbanization. And it is in the social movements in cities that these relationships become most evident” (Díaz-Parra & Roca, 2021, p. 91).

The author who best represents this new vision of space and its relationship to collective action is Lefebvre, who deals with concepts such as the social production of space (1974) or the right to the city (1969), looking at the power of the representation of space as manifested in cartographies. Lefebvre distinguishes between spatial practices as the way in which space is perceived in everyday life, the representations of space identified with what is conceived through technical and institutional knowledge, and the spaces of representation identified with what is lived and infused with meanings created and historically altered by their inhabitants.

These spaces of representation challenge the hegemonic representations of dominant power. In this regard, participatory cartographies are an example of

alternative visions of space and tools for its transformation by urban social movements. When mapping is carried out in a collaborative way, it proposes the participation of the community itself, which is the object of research. This community, usually alien to the corporate and institutional context in which the research is organized and developed, then becomes a subject of the research, with the ability to take control of the information that defines it (Crampton & Krygier, 2006; Freitas, 2015; Stewart, 2010). In this way, the map enables the creation of a collective narrative about the territory that strengthens the connection between the communities and the territory (Osorio Campillo & Rojas Sánchez, 2011; Salerno et al., 2020).

With the expansion of Internet use, new tools for collective mapping have become widespread (Arcila Garrido & López Sánchez, 2011; Subires Mancera, 2012). Freely accessible platforms such as Open Street Maps help to create maps with general and location-based data. They use technologies such as GPS or aerial photography, ensuring their accuracy and are updated in an interactive and participatory way (Poole, 2003). They also have features that make them interactive, such as zoom, information selection, scrolling or the ability to embed them in web pages (Mooney & Juhász, 2020). In addition, there is a consistent reduction in the economic costs associated with these methods, without the need for specialized programming skills (Perkins et al., 2009; Kraak, 2011).

Thanks to these tools, communities can collectively map their space, describe it, share information and, in short, make their community visible through a map, as a gesture of appropriation of the information circulating on the web (Carrasco-Arroyo, 2013; Subires Mancera, 2012), with the possibility of defining themselves, georeferencing, describing their resources and sharing their demands (Caquard, 2013; Crampton & Krygier, 2006; Subires Mancera, 2012). In short, the digital map, created using digital cartographic techniques and interactive tools, helps to optimally visualize the initiatives and actions of technopolitical communities and to amplify their impact, as it allows, among other things, to geographically locate projects, make them visible and known, promote synergies between initiatives, and generate useful data for comparative research and even for public policy design.

These features go beyond epistemological debates in the social sciences. The nature of collaborative mapping is related to the concepts of the critical paradigm in social research, which focuses on the development of community and local contexts and defends the need to shift the centrality of research to the latter (Melero Aguilar, 2012). In this regard, as per Park (1992), mapping fulfills these aims by enabling community involvement in representing their surroundings. This involvement not only enhances understanding of their reality but also prompts scrutiny of their circumstances, thereby fostering the pursuit of strategies to enhance them.

The critical currents of the 1970s challenged the claim of classical social sciences to neutrality (Fluehr-Lobban, 2013). In anthropology, various currents embraced the social and scientific legitimacy of positioning themselves in favor of the communities they studied (Tax, 1958), gaining important influence on the academy today (Foley, 1999). Activist research and engaged perspectives such as participatory action research (Greenwood et al., 1993) have been particularly consolidated in studies of political activist communities (Roca et al., 2019). Such research, conducted by authors who are both academics and activists, does not forget the ethical implications and imperatives of participant observation (American Anthropological Association, 2009). In this sense, on the basis of recognizing the subjectivity of the participant observer, the demand for a critical review of the researchers' ideas is maintained, avoiding falling into a benevolent view that leads to an overvaluation of the relevance or achievements of the communities studied. The same idea of knowledge generation by non-academic subjects is essential to the critical paradigm in the social sciences. Communities, when they are part of the mapping process, produce knowledge from practice that challenges the themes and objects of the hegemonic academic agenda (Arza et al., 2017). In this context, the critical paradigm consciously seeks to move away from the reifying tendency (Ortí Mata & Díaz Velázquez, 2012) of other paradigms. This is one of the main characteristics of collaborative mapping, where communities are represented through these visualizations.

At the same time, this appropriation of information by non-academic subjects is directly linked to the practices of technopolitical communities (Candón-Mena & Montero, 2021). Through advanced big data techniques, the culture of free software and open knowledge, and taking advantage of new technological developments related to Web 2.0, technopolitical communities rely on free, open source and participatory (social network) mapping techniques. Returning the data they generate to communities is therefore not only a methodological proposal, but also a form of political action. Data activism is aware of the new dimension that information management has reached in the digital environment and acts against it with reactive strategies of resistance to the collection of massive data and proactively, seeking forms of cultural production through the generation of information (Milan & Van der Velden, 2016).

In both political and methodological practice, collaborative cartographies thus propose new ways of managing and producing information, given the "implementation of biopolitical mechanisms aimed at organizing, dominating and disciplining those who inhabit a territory" (Risler & Ares, 2013, p. 7). This implies not only innovative ways of using data by communities, but also new ways of exploring social reality.

Indeed, mapping has been seen as a non-quantitative and contextualized form of data use (Bowe et al., 2020) that can drive other discourses through the visualization of data. This issue is crucial because, as Boyd and Crawford (2012) warn, the exclusive use of internet data mining techniques and their quantitative treatment jeopardizes the diversity of research and limits the possibilities that the internet offers for social research. Thus, through its collaborative nature, mapping enables proactive work with information on the Internet while generating a data source that is connected to the social practice of the communities that are part of the research.

Previous cartographic experiences

In the social sciences, cartographies have been more commonly used in the disciplines of geography and urban planning to map the resources of ecosystems or the cities of particular areas. Occasionally, however, their use has not focused on exact geographical boundaries, demonstrating their versatile nature for describing different dimensions of reality, including those of the cultural domain (Acselrad & Núñez Viégas, 2022).

These uses of the map have led to a proliferation of research that also applies it in the communication discipline with different objectives. In some cases, researchers have even used this concept to conduct meta-research on the state of the art in the discipline, particularly by extracting information from databases and institutional repositories. The results have located the institutions where this work is carried out (Gómez-Escalonilla & Caffarel-Serra, 2022), established the relationships of influence between researchers (Trillo-Domínguez & De-Moya-Anegón, 2022) or outlined the preferred thematic lines over time (Montero-Díaz et al., 2018).

Another set of mappings has focused on the visualization of communication in social networks using computational data mining and analysis techniques. These works have looked at the use of geotags to examine the geographical location of users (Compton et al., 2015; Leetaru et al., 2013) or have described messages and connections between profiles (Bonilla & Rosa, 2015; Doğu, 2020). Moreover, they resemble earlier work in their emphatically quantitative view of the use of mappings, whose utility focuses more on the visualization capacity of the data and less on methodological processes for articulating the representation of these realities from practice.

Mappings have also served to outline the ecosystem of media. Visualizations have been used to explore the nature of journalism by identifying its platform, its scope or editorial language (Negreira-Rey et al., 2020) and its journalistic practices (Humprecht & Esser, 2018). Other research has also focused on examining the

culture of media professionals (Hanitzsch et al., 2011) and even their conditioning factors in reporting (Lohner, 2016).

This type of analysis has been extended to non-hegemonic forms of communication such as the third sector, where other variables are added to those already mentioned, such as the mission, values or the type of collective in which they are constituted (Barranquero & Montero, 2015). Other research focusing specifically on the Internet has studied the use of blogs by citizens to analyze the characteristics of their content (Etling et al., 2010) or the use of social networks in contemporary organized movements, such as the women's movement (Pedraza Bucio & Rodríguez Cano, 2019). Both these and previous studies generally rely on documentary and content analysis of the media and, occasionally, interviews with their contributors. Other mappings have visualized social network interactions in moments of mobilization such as 15M (Borge-Holthoefer et al., 2011) or analyzed several examples of the movement's use of activist cartographies (Nofre, 2013).

These methodological proposals generally lack feedback mechanisms that affect, if not the self-representation, then the representation of communities within their own visions. This is important not only to connect research data to social reality (Martí et al., 2002), but also because collaborative mapping is related to the logic of communities seeking more horizontal and democratic forms of communication and appropriation of information (Milan & Van der Velden, 2016). Based on this participatory orientation and in the context of technological innovations, approaches to mapping are discussed under other terms such as algorithmic governance, data justice or surveillance capitalism (Pase et al., 2021).

In this sense, the map aims to seek forms of collaborative exchange in the elaboration of counter-hegemonic representations that also come from the scientific field (Risler & Ares, 2013). In the next lines, we try to adapt the application of collaborative mapping to the specific case of technopolitically oriented communities in the Spanish case. The proposal has been previously tested in the case of free culture communities in the Spanish state (Calvo, 2020) and has led to different results about the hybridization, imaginaries and repertoires of these communities (Calvo & Domínguez, 2019).

METHODOLOGICAL PROPOSAL

Phases of the cartographic work

Technopolitical communities exhibit a diversity of practices, values and approaches to technology (Candón-Mena & Montero, 2021). The same is true for

technopolitical cartographies. Systematization efforts through mapping serve to structure their character and locate communities in a specific time and space, as an exercise in documenting political activism in a territory during a specific period of time. It is also complemented by other methods that facilitate the description of the reality faced by communities and their perceptions, such as participant observation (Osorio Campillo & Rojas Sánchez, 2011).

In any case, collaborative mapping is not merely a mechanism for extracting and visualizing data. Rather, it is a process that enables the horizontal generation of knowledge with the explicit aim of being useful for the communities involved. In this sense, mapping is “a practice that aims to map spaces, social relations, actors and other significant actions and events”, but it is also “a process that recognizes not only the existing material aspects, but can also project the feelings, desires and needs of the people who inhabit a community” (Salerno et al., 2020, p. 7).

Therefore, in this methodological proposal, we propose a mapping procedure that takes into account the hybrid nature –physical and virtual– of the mapped communities and incorporates them into the research process. That is, we understand the field of work in a broad and holistic way by including all areas of social life, online and offline.

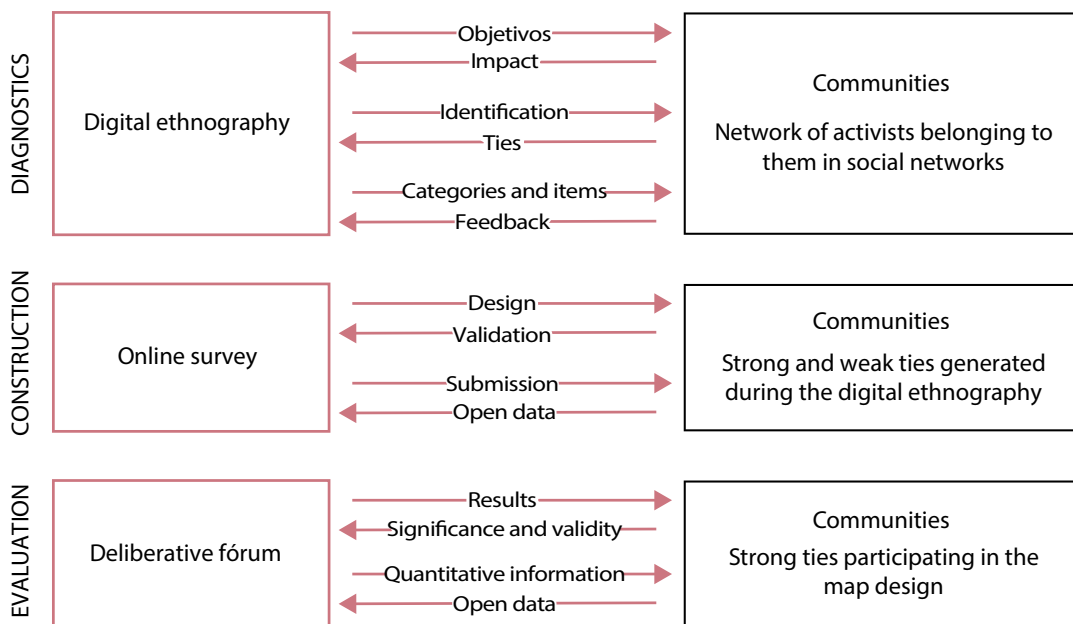


Figure 1. Phases of collaborative mapping

Source: Own elaboration.

In addition, the researcher essentially assumes the role of facilitator throughout the process, as he/she is familiar with the digital tools used for development – especially the map – and creates spaces for dialog and knowledge production among the communities involved. With such predictions and based on the literature on critical methodologies (Delgado & Gutiérrez, 1994; Durston & Miranda, 2002; Ortí Mata & Díaz Velázquez, 2012; Sandoval Casilimas, 1996), we propose three phases for the implementation of mapping (figure 1): diagnosis, construction, and evaluation.

First, the diagnosis phase consists of the selection of the specific categories of the communities to be studied and the composition of the elements included in each of these categories. The selection of these categories must meet two specific criteria: their ability to achieve the research objectives and the way in which the new knowledge they generate has a positive impact on the community (Stewart, 2010). This period also serves to explain the nature of the research to communities and provide them with the information they need to understand it (Kalume et al., 2008).

In this case, since we are dealing with communities with internet-related practices, the mapping process begins by conducting a digital ethnography that provides immersive knowledge, documenting their culture and identifying the key themes of their experiences in the online environment (Hine, 2017). In this sense, digital ethnography offers two parallel tasks. Firstly, the identification of key communities based on the categories previously identified in the academic literature, and secondly, the observation of their activities in the spaces where they are present.

Social networks are a useful scenario for ethnographic work in this context for several reasons (Murthy, 2008). Among other things, they allow the identification of links between different communities, contain documentary and audiovisual material, facilitate non-intrusive observation and offer the possibility of interacting with the communities of interest. For the same reason, it is essential to have key participants while building a network of weaker connections with the remaining members (Postill & Pink, 2012). These conversations allow relevant information to be gained for the design of the map and new connections to be made with other communities likely to participate in the study.

All communities collaborate in gathering information that will enable the design of the map. At this stage, it is also necessary to create feedback mechanisms. Key participants should be made aware of the specific items so that they can raise doubts and identify incomplete categories and possible biases in the design of the map (Kalume et al., 2008). The specific categories and items should therefore be agreed with the study communities based on their main participants.

Secondly, in the design phase, we suggest that these categories and specific items be entered into mapping software so that the different communities can add to the information by selecting the items that best represent them. In this phase, it is important to consider the visualization of the information (Perkins et al., 2009), but at the same time to build a database that is open and can be added to permanently without the intervention of the researcher (Risler & Ares, 2013).

As we have already outlined, the use of GPS and graphics software for mapping has facilitated these tasks (Muñoz, 2007; Poole, 2003). These tools have the advantage of being well-known in the Internet communities that are part of the study. Ushahidi, for example, enables the interactive visualization of data through geographic representations. It was developed as free software for collaborative mapping in disaster areas and has recently been used in academia and journalism (Sandoval-Martín & Espiritusanto, 2016; Vilar Sastre, 2016). It offers the possibility to create a questionnaire whose answers can be selected as public or private to protect the privacy of communities in case some information is only to be used anonymously and for research without appearing in the map visualization. The platform also offers the possibility to publicly download the data included in the map visualization.

The choice of free software tools is essential to connect to the values of the commons with which technopolitical communities identify, for whom the use of open and collaborative technologies is part of their own collective identity (Fuster, 2012), and to adapt fieldwork to their own logic. Moreover, the nature of this type of tool is closely linked to the collaborative spirit of this methodology due to the collective and open design of this type of code.

In this phase, the contacts generated in the previous phase are also asked to answer the questionnaire and forward it to other related communities, so that new communities become aware of the mapping work and the sample is successively expanded, a strategy of an ethnographic nature that has been called snowball sampling (Cea D'Ancona, 1996; Howard, 2002). The design of the map thus implies the collection of data on the communities under study. The question therefore arises as to when this data collection can be considered complete. The answer depends on other questions (Stewart, 2010) that should be answered together with the communities: Does the map accurately represent reality? Is their vision incomplete? Have the communities been integrated into the map and have they expressed themselves in it? To clarify these questions, it is necessary to contact some of the communities included in the map in time for them to review the visualization.

Finally, the previous task represents the last phase of the mapping process, which consists of evaluating the information collected from the communities

in order to present the results, highlight their possible limitations and reflect on the conclusions drawn from the data obtained (Kalume et al., 2008). In this article, we propose to work with the main participants and other members of the communities to conduct active interviews (Holstein & Gubrium, 2016), as they do not contain closed questions in order not to impose academic logic in the search for an explanation for the quantitative data uncovered. The mapping with its data is revealed in order to understand what communities think about it and how they interpret it.

The main objective is to create a deliberative forum (Cuesta et al., 2008) where communities observe the quantitative data and have spontaneous dialogs about the representation of their communities on the map. This allows communities to explore, diagnose and seek strategies to improve their reality (Park, 1992). Similarly, supplementing quantitative data with qualitative research techniques allows cartography to be enriched (Salerno et al., 2020), giving it new dimensions and meanings.

Limitations of the method

In general, the concept of mapping is viewed with suspicion by the most critical circles, even in the field of social research, who interpret it as a universal tool that contains implicit power relations in its construction (Pase et al., 2021). In this paper, we relate the limitations of mapping to the type of communities mapped and to the characteristics of the method used.

As they are primarily participants who carry out their practices in the context of innovations emerging on the Internet, their territorial boundaries are diluted. Even though they often have a hybrid character, in other cases their spatial situation is complex to visualize in a cartography, as they transgress and question the boundaries of geographically defined territories (Cabello & Teruel, 2006). This fact entails another, broader limitation that presents the map as a reduction of the complexity of reality (Acselrad & Núñez Viégas, 2022), due to the simplification that these visualizations of the character of communities entail, which contradicts the effort of this method to highlight the diversity of the social world.

Another weakness of digital ethnography is related to the subjects found on the Internet (Murthy, 2008; Shelton, 2017). Although in the specific case of technopolitical communities this problem seems to be minimized by their technological capabilities, the presence of one community or another depends, among other things, on the environment in which the ethnography was conducted. In a chaotic network (Postill & Pink, 2012) composed of different platforms that constitute walled gardens (Padilla, 2012), it is possible that not all communities are located in the same spaces. The decision to conduct the ethnography in a

corporate social network (Twitter, Facebook) or in a free and federated network (Mastodon, Diaspora) changes the mapping, as the users that make up each network also change.

Moreover, the communities' interest in participating in the research should be considered a limitation if it means questioning their anonymity. Part of the technopolitical communities operate according to the logic of non-recognition of their identities, so that the map makes invisible a part of reality that chooses not to be represented or visualized in a work with these characteristics. Mapping thus represents an effort to strike a balance between the search for knowledge that has a positive impact and the endangerment of the communities consulted. Otherwise, "the question arises as to how we can map the collective power of labor while maintaining and problematizing our own regime of visibility" (Risler & Ares, 2013, p. 58).

In addition to these specific questions, there are others that are more general in nature. As a research method, collaborative mapping is not free from limitations that largely coincide with those of other qualitative approaches: the difficulty of formalizing the design, the complexity for the systematic reproduction of the results obtained, and the delimitation of the sample to specific realities (Ortí Mata & Díaz Velázquez, 2012). While the debate on qualitative approaches in social science research extends beyond the scope of this methodological proposal, it is valuable to heed Ander-Egg's (2003) perspective. He suggests that collaboration with civil society serves as a criterion for assessing the validity and utility of research. This is particularly relevant when the goal of sociological endeavors is to effect societal transformation through practical design addressing the studied issues and phenomena.

In this regard, work with mapping from academia also generates certain debates about its participatory nature. As Acselrad and Núñez Viégas (2022) argue, underlying the academic sphere is the idea that participation does not mean that the mapped communities lead the process, that they do not necessarily propose the activity, nor do they control the way it is produced, disseminated and visualized. The more autonomy the community has in producing the map, the greater the appropriation of the map and the greater the risk that the results of the map will diverge from their interests and models.

These limitations show us that mapping raises ethical and esthetic issues in terms of what it shows and hides (Kent, 2020). To address them, one needs to consider mapping as a simplification of reality while looking for appropriate strategies to increase contact with communities and get them to participate in the creation of a design that is consistent with their own logics and with data on the impacts for them.

CONCLUSIONS

The collaborative mapping method combines activist practices with academic research, in line with perspectives such as participatory action research or activist research. Methodologically, it combines quantitative and qualitative approaches as well as different techniques such as questionnaires, participant observation, digital ethnography, active interviews or deliberative forums, in addition to visualization and georeferencing processes to disseminate the results.

In this text, we have described three phases of the collaborative mapping process applied to the study of digital activist communities. We use the term technopolitical mapping to indicate the centrality in this proposal of, on the one hand, the development of collaborative tools on the Internet for collaborative action and, on the other hand, the political condition of participatory orientations in the social sciences aimed at a horizontal transformation of the social world.

However, according to Acelrad and Núñez Viégas (2022), collaborative mapping has become “the subject of a broad discussion both in academia and in the activism of the communities involved, as it includes a great diversity of perspectives”, so that “any attempt to find a common sense of these experiences, them into a single parameter runs the risk of simplifying the debate and reducing the potential” or “falling into the danger of ‘manualizing’ and thus crystallizing procedures that in most cases are meant to be diverse and free” (Acelrad & Núñez Viégas, 2022, p. 198). We thus start from the recognition of this diversity of perspectives and share the need to promote the potential of this methodology to cultivate the sociological imagination (Mills, 1959), rather than encapsulating it by avoiding the rigidity of research procedures, methods and techniques. Nonetheless, the three-phase model presented here is intended to serve as a guide or inspiration for the application of this methodology, which can be revised depending on the specific context in which it is to be used.

We also emphasize the relevance of the collaborative mapping method for the study of technopolitical communities. On the one hand, the potential of participatory research methods to penetrate these communities and capture their meanings and practices has been pointed out, which is not possible for external researchers given the reluctance to share information with other actors in political activist communities. On the other hand, by visualizing and mapping the data, the research product is particularly useful and understandable to the communities involved and allows for a real knowledge feedback loop.

NOTES

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