Articles

Observatories as sociotechnical networks: associative dynamics for acting in the analysis of health policies and systems

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Observatorios como redes sociotécnicas: la dinámica de la asociación para la actuación en el análisis de políticas y sistemas de salud (resumo: p. 16)

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The use of observatories to follow and monitor health systems and policies is steadily growing. We aimed to describe and review, using Actor-Network Theory (ANT), the connections and controversies that arise from observatories as socio-technical networks, in the context of health systems and policies analysis. Using a qualitative approach we present a study of multiple cases and graphic representations of cartography diagrams. The use of ANT and its Mapping of Controversies may help to understand in a broad and diverse way, how these complex networks are formed in the political scenarios. We conclude reflecting about the methodological option of rethinking the social aspects, reconsidering networks and personal connections in the health policy context, affected by technology changes in the way they are used to mediate communications and for information sharing.

Keywords: Health policies. Health systems. Health observatories. Actor-network theory. Mapping of controversies.

Introduction

The field of research in Health Policies is an area of knowledge production that has as its object the social response to health issues and needs, by using different theoretical references, analysis approaches and models for follow-up and evaluation[1].

The study of health policies encompasses understanding social responses as political actions that generate the elaboration and execution of proposals that become health promotion actions, risk prevention, harm reduction and patient care. It also includes actors, i.e. subjects (individual and collective) involved in the process of formulating and implementing policies, as well as policy instruments such as institutional documents that give expression to political decisions, e.g. laws, rules, decrees, ordinances, plans, programs, projects, executive orders, etc[2].

In the last decades there has been a growing use of the tools called observatories, as instruments or technologies used to carry out studies, follow up and monitoring of health systems and policies. The impact of technologies in the communication, dissemination of ideas, information and sharing processes, as well as the new shapes of relationship in contemporary society, enabled an understanding of the emergence of observatories in the area of health, as a phenomenon of the network society.

Castells[3] proposes that the logic of the network forges the social structure, and it determines the informational paradigm as the guideline for the connection to the global networks of wealth, power and culture, thus defining the dominant social processes.

Latour[4] understands that the network concept seeks to assimilate a pulsating element that is formed and deformed by the dynamics of relationships. It is not what it connects; instead it is what association generates. This author is one of the founders of the Actor Network Theory (ANT), a sociological approach whose key tenet is that social aspects emerge from associations. In order to get to know the social and based on ANT, we seek to analyze how associations occur among actants (whatever produces an action), both human and non-human, and their locations[5].

The starting point for the present investigation is the set of relationships established in the context of health policies, and specifically those within the observatories. It is based on the assumption that the health systems analysis process is characterized as a hybrid, since it is configured based on the association of humans and non-humans.

In this context, the analysis of health systems is a hybrid process that involves institutions, organizations, managers, professionals, researchers and citizens, as well as normative instruments, technologies, evidence-based health information, among others. Those elements, according to Lemos[6] must be revealed in controversies. Controversies are understood as occasions of dispute, negotiation, debates and conflicts in which the actors disagree with each other and agree regarding their disagreement[7].

This hybrid character makes it possible to understand that the reality for the performance of observatories, in the analysis of health policies and systems, is constituted based on the practices and interactions of the different actors, constituting what Latour[4] calls the socio-technical network. Health observatories, which are also hybrids, are configured in socio-technical networks, to the extent that they articulate institutions,

researchers, managers, health professionals, citizens, media, social networks, health information and indicators, systems, tools, publications, multimedia, news, among other actors and policy instruments.

Despite the recent use of the Actor-Network Theory (ANT) as a theoretical framework in the context of health, and even more specifically applied to the topic of health policies and systems, especially in the Portuguese language, there is an emergence of studies that opt for this approach[8,9].

This study aims to describe and analyze the associations and controversies that are present in the health observatories as sociotechnical networks, within the context of policies and analysis of health systems.

Material and methods

The present research is based on three different experiences of health observatories focused on the topic of health policies and systems analysis: one observatory from Portugal, one from Italy and one from Brazil: the Portuguese Observatory on Health Policies and Systems (OPSS), the *Osservatorio Nazionale sulla Salute nelle Regioni Italiane* (National Observatory of Health in Italian Regions - ONSRI) and the Observatory of Health Policy Analysis (OAPS), respectively.

The methodological pathway for bulding this research started from the elaboration of a Theoretical Framework of Reference (TFR) based on the Actor-Network Theory (ANT), having as a next step an empirical moment, using a qualitative approach based on a multiple case study, with techniques of document analysis and interviews.

The sociological approach to ANT has as its key tenet the conception of social as emerging from associations. Following this theory, in order to know the social, it is necessary to analyze how associations and their locations occur[5], as well as acknowledging that use, production and dissemination of scientific knowledge are social processes. From this perspective, science and technology do not evolve from a vacuum; on the contrary, they actively participate in the social world, they are shaped by it, and in turn they also shape it[10].

Under the ANT point of view, the present reference framework made it possible to think of the plurality shaping health observatories through the mediations and symbiosis of humans and non-humans that are part of the same sociotechnical network, i.e. a set of actors that relate, having technology as an active participant in their interactions[4]. Therefore it is necessary to consider the relevance of technical objects in the construction of social relations within the scope of these observatories, by examining the trove of normative instruments, reports, handbooks, programs, plans, studies, research, systems, software and websites, among others objects or technologies that permeate the reality of public policies and health systems in each country.

The analysis and interpretation of the empirical material was based in the application of Mapping Controversies, a method specific to ANT, to reveal the network of actors established in each observatory. Venturini[7] explains that when using this methodology, researchers are questioned for what they see in the controversy and the description of what is being seen or not seen regarding the explanation of what

they are studying. Those are, therefore, moments that enable to observe the formation of the social, where there is no stabilization or, using ANT's concept, "black boxes".

Based on the theoretical-methodological framework, the object under study was explored, using qualitative research techniques and the instruments of documentary analysis, including the electronic pages made available by the network, as well as interviews with key informants. Therefore, the empirical moment of the research was built upon two sources of evidence:

1. Documentary analysis of the content of the websites of the three selected observatories, institutional documents, publications and promotional materials;

2. Semi-structured interviews with key informants. There were seven interlocutors, who directly participated in the process of building up and/or managing these observatories, three from Portugal, two from Italy and two from Brazil. For the purpose of organization and preservation of anonymity, they were encoded using names of gems.

It should be noted that in view of the multiplicity of actors that compose each network, it was necessary to identify possible spokespersons. This task is in line with ANT principles, as identifying those who "speak on behalf of the network" is a necessary movement for the researcher-cartographer[11].

It is worth mentioning that Mapping of Controversies favors the combination of different methods and techniques for data production. It should also be noted that the study selected three observatories that are different in several aspects, with the intention of finding more controversies. In spite of this diversity, an exploratory-descriptive research was chosen instead of using comparative methods. Thus, according to ANT, it is through controversies that social aggregates are formed, as they are controversial situations in which the players search for stabilization.

Results and discussion

The Portuguese Observatory of Health Policies and Systems (OPSS) focusses on the topic of health policy, management and systems. It assumes as its purpose providing a periodic, independent and accurate analysis of the evolution of the Portuguese health system and its determinant factors, directed to those capable of influencing health in Portugal. Under this perspective, it is proposed to facilitate the proposals of health policies. It consists of a network of researchers and academic institutions dedicated to the study of health systems, comprised presently by five institutions[(c)].

However, right from at the start of this analysis, a relevant controversy emerged about the OPSS being the reference of a health observatory in Portugal, coming from the interviews with its founders. One of the interviewees stated that there is no Portuguese observatory and that the OPSS is only the gathering of researchers to issue an annual report. This interviewee affirms that what really exists is a group of researchers who are interlocutors between Portugal and the European Observatory of Health Systems, in this case, referring to another group formed in an academic institution that is not among those that are part of the OPSS.

This complex network of relationships allowed us to observe that the actor-network OPSS has not become a "black box", as it is not so consolidated as to become unquestionable. It is, therefore, a contradiction also demonstrated through institutional documents, publications, website, journalistic articles, among other evidences that refer to OPSS, including its own name. The main product of OPSS is the annual elaboration of a synthesis document of the evolution of the Portuguese health system - the Spring Report. In all the documents analyzed, the OPSS states that it does not take a position on the political health agendas. It places itself in the position of independent analysis and proposes to gather evidence in order to objectively assess processes, results and actions carried out in the health system.

In this sense, some interviews highlighted the option towards independence as the main reason for seeking sustainability through supporting resources from the institutions that are part of the OPSS.

> Only in this way we may perform independent analysis. If we are financed by an entity, the public understanding will always be what we are being paid by that entity. So we don't want that. This independent analysis developed over the years has created an image of credibility that makes students, professionals and the media, systematically, at the beginning of each year, ask which will the Spring Report launching. (Emerald)

> As the Observatory wanted to keep itself independent, it was not convenient to receive funding from the State, as the state would then analyze the Reports. (Sapphire)

Among the findings regarding the importance and contribution of the observatory to the health system, it can be highlighted the continuous work of monitoring the system, allowing the general public to know the actions that have been taken and those that are to be done on an annual basis; also what needs to be improved and what has progressed, the reality of policies, warning regarding inequalities and inequities. The annual social expectation referred to the release of the Spring Report was also considered as a sign of credibility. One interviewee also mentioned the feeling of pride of social recognition for the work developed and reported the moment when the Troika[d] arrived in Portugal, with observers and external funders who were in the country and they called the OPSS to participate in the discussions as a reference in health.

[d] Troika: the triumvirate composed by the European Commission, ECB (European Central Bank) and IMF (International Monetary Fund)

> When the Troika arrived in Portugal, they called us to a meeting and we went. It is interesting that those three gentlemen who were there had, next to them, all the Spring Reports that we had done. (Esmeralda)

Just like the Portuguese observatory, the National Observatory of Health in Italian Regions (ONSRI) has in its history the antecedents of the emergence of health observatories in Europe, the movement of the European Union organization and the creation of the European Observatory on Health Systems. It was created

based upon an initiative of the Institute of Public Health / Hygiene Section of the Catholic University of the Sacred Heart (Universita Cattolica del Sacro Cuore) and is oriented towards the topic of health policy, management and systems. It assumes the perspective of contributing to policy makers, politicians and health technicians through the production of studies, with scientific rigor, being politically objective and neutral.

According to institutional documents and interviews, the ONSRI emerged with the objective of monitoring health conditions and quality of care in Italian regions, following the reforms of the Public Health Service that introduced the autonomy of the regions for the organization of health care and fiscal federalism. Following these reports, the reforms aimed at efficiency and rationalization of expenditures, applying the constitutional principle of subsidiarity and attributed financial responsibility to the regions. It is worth mentioning the singularity of the objective of its creation, referring to the interest in researching the health system situation as a result of the movement of health reforms carried out in Italy in the 1990s:

> The 1990s reforms (the first in 1993 and the second in 1999) progressively promoted the regionalization of the Italian National Health System, introducing autonomy to the regions in terms of planning and organizing public health services. It has become a system of 20 regional health services with different capacity to respond in terms of offer and accessibility of health services. (Amber)

The main product is "Rapporto Osservasalute - Stato di salute e qualitá dell'assistenza nelle Regioni Italiane" (Observa Saúde Report - Health status and quality of health care in Italian regions). Also available on the website, this annual document adopts a comparative methodological analysis and use internationally validated indicators, including some European Union public health indicators present in the European Union Public Health Information Network (EUPHIN) project.

It should be noted that two interviewees attribute the importance of ONSRI to the fact that it promotes the concept of value in health as one of the cornerstones of a modern health system, to be pursued with appropriate intervention strategies based on rigor and scientific evidence.

> The papers published over the years are relevant in the scientific field in order to support institutions in the sector, for the development of actions aimed at improving the health conditions of the population and monitoring the adequacy, equity of the system and health care provided in the territory. (Amber)

The Brazilian Observatory of Political Analysis in Health (OAPS), was born from a proposal by teachers and researchers from the Institute of Collective Health of the Federal University of Bahia (ISC-UFBA), in partnership with other research, teaching and research centers and country technical cooperation. It is focused on the topic of health policy, management and systems.

Its mission is to provide a space for reflection and critical analysis of health policies in Brazil, articulating a network of researchers involved in the production of knowledge in the area of Health Policy, Planning, Management and Evaluation (PPGS). It is organized around a set of principles: a) commitment to defending health as a right of people and upholding citizenship in the relationship of individuals with the State; b) commitment to the construction and strengthening of universal health systems of public nature based on solidarity, equity, universality and integrality of health care; c) production of critical thinking about reality, based on scientific and ethically responsible bases; d) autonomy of thought in relation to the interests of groups or institutions[12].

Based on its research axes, OAPS isued annual reports, available for download and based on the monitoring of each of the policies that are followed up, as well as books, e-books, thematic numbers of scientific journals, articles published in journals, master's dissertations, doctoral theses, a series of 4 documentary videos, among others. In addition, its website gathers on a weekly basis the news and texts on relevant topics of the conjuncture related to the implementation and results of health policies in Brazil.

The interviews provided evidence of an interesting controversy that has permeated OAPS since its inception: the process of producing knowledge in the academic sphere. This production is usually a long duration process, since the research practice is generally slow. The process of data production, analysis, interpretation, article writing, until the process may be publishable, may take more than a year, considering the approval in magazines, peer-review, among other steps.

The network that energized OAPS from the beginning goes in an opposite direction: searching for a rapid dissemination of the knowledge, in an attempt to reduce the time between the process of producing academic knowledge, dissemination and use, making it accessible to the community in general and not just the academic environment.

> At the time of production, researchers look at their questions, develop projects, and produce data. If they do not spread knowledge and this knowledge does not find materiality in practices, whether it be political or institutional, it is shelved in drawers, in libraries; and the contemporary world, characterized by the speed with which information and communication is spread through new technologies for information and communication. So we needed to take it a step further in relation to the traditional model of scientific production. (Diamond)

The evidence pointed to a consensus regarding the relevance of the contribution of OAPS to the Unified Health System (SUS), such as: the importance of critical analysis and proposals for health policies; knowledge production through information, studies and discussions on health issues in Brazil (Zika, Chikungunya, Dengue, Yellow Fever epidemics, proposals for Primary Care); promoting political debate through a non-neutral position in defense of SUS; it has become a critical space for dissemination, proposals and alternatives for health policies; the ability to spread quality knowledge with scientific rigor.

> I can see the immense importance of OAPS in defending universal, comprehensive and equitable health systems. (Amethyst)

I have discussed with my students the special issue of Revista Ciência e Saúde Coletiva that takes stock of the 30 years of SUS. OAPS is part of this, it is a gain, an achievement in the field of Public Health of the health movements... This gigantic effort that has been made in this country in the last 40 years, since the creation of CEBES, and especially in the last 30 years to build the Unified Health System, which is intended to be universal, integral, equitable, decentralized, participatory; and which has achieved impressive successes in the control of communicable diseases, in the expansion of health and environmental surveillance, making advances in psychiatric reform, in combating hunger, in reducing child mortality, improved the health of women and workers. All of this is placed in this journal issue that was organized and published by OAPS. (Diamond)

The results obtained allowed the description and discussion of the associations that compose the three socio-technical networks investigated, that is, the mapping of the associations between the actors. According to Ferreira[13], it is needed to describe the various translations produced by actors, showing articulations and disagreements from the observation and delineation of the relationships that are established and that generate the composition of the socio-technical networks.

It is also important to note that in each of the investigated observatories, the relationships established between the actors involved, the forms of negotiation, the characteristics, the conditions of space and time and, importantly, the potential of the agencing for health policies. These political spaces are, by nature, hybrid and useful for situations of disputes, debates, conflicts and controversies.

In general terms it can be said that the associations that are shaped within each one of them result in specificities that will distinguish their actions. The mapping description was guided by the logic of the contents proposed in the semi-structured script used in the interviews, namely: history, organization, management of the observatory, context and participation in the political health process. Thus, the information learned from the documentary analysis could permeate the narrative, contrasting or confirming the interviewees' statements in order to support the tracking of associations and the identification of controversies.

It should be noted that as all elements that participate in the network have an effect on it, the websites and institutional documents investigated are considered important agents since they are part of the network when acting on it.

It is also worth mentioning that, in addition to mixing observation techniques, ANT supports a differentiated look at the research data, considering them as something alive and dynamic. This theory helped to map the dynamics of associations, controversies and translations that are in action, not therefore been a static cartography, but the network "as it is done"[11]. It is consequently important to note that they are the ways to follow the actants, visualize mediation flows, agency actions and design the distribution of the actions that constitute the Mapping of Controversies[14].

Mapping of Controversies: the mapping of socio-technical networks

It was possible to distinguish the actants, the roles they play in each network, the interests and forms of articulation based on the description of the associations, translations, controversies, events, information on history, organization, management of the observatory, context and participation in the political health process; in short, the tracks that supported the mapping of the three socio-technical networks under review.

It should be noted that the multiplicity of actors that make up each of the heterogeneous networks investigated is inherent to the political nature that permeates these three health observatories investigated, from the perspective of their action related to policies and systems analysis. This plurality endorses hybrid spaces for the emergence of controversies, disagreements, debates, conflicts, situations of disputes and relations with power.

Therefore, the diversity of actors confirms the complexity of any analysis based on ANT. Although for the purposes of interpretation and systematization of results, the actors have been grouped in sets such as researchers, managers, Universities, among others, it is essential to grasp the assumptions of ANT. It is also needed to remember that in addition to each observatory constituting an actor-network, other actors that make up the same network have the same nature. In this perspective, one should pay attention to the possible limits of the reading that personifies, almost making some actants as "entities", by grouping them as the "managing entity", the "researcher entity", or even the "observatory entity".

It is suggested therefore to remain anchored in the ANT and to look at these groupings while keeping the awareness that they are formed by several individuals who are also actors, therefore, they have "agency" and to reach a common goal they were mobilized and mobilized other actors as well, conforming thus, each "actor-network" observatory.

Having said that, we propose graphic representations of these networks in order to present diagrams mapping out the actants as syntheses of the present study from the perspective of mapping of controversies. The option for exploratory-descriptive research is ratified, instead of using methods of a comparative nature. However, the study searched for a common thread in the dynamics of associations that would mobilize them around a controversial situation common to all three.

According to its objectives, the observatories of Portugal and Italy are placed in the place of observation. Both communicate about the purpose of diagnosing health systems, examining, conducting independent studies, research and analysis, also declaring the intention to contribute to health management and policies through the development of scientifically rigorous, objective and "neutral" instruments. The Brazilian observatory on the other hand, places itself in an active position of participation in the political context of health based on the research axes, extrapolating the scope of the research, through the promotion of critical debate and the dissemination of plural points of view regarding health policies. It is also noteworthy that it declares itself "not neutral" in the face of the stated values and proposes to provide a space for reflection and critical analysis of the country's health policies.

It is also important to note that the first two observatories were born with a clear research objective. OAPS on the other hand, was based on the intention to set up a network, to compose associations for research. In this sense, it should be added that from the ANT point of view, as a social aggregate and central object of this research, the role of each observatory is not yet stabilized or closed in a black box. The role, i.e. the way the observatory works in relation to health policies, therefore, constituted the controversy chosen for the elaboration of the figures presented below.

It is also worth pointing out the graphic conventions used in figures 1, 2 and 3: the lines represent associations; circles represent actants; the use of a dashed line contour for intermediaries and the use of two continuous contour lines for mediators.
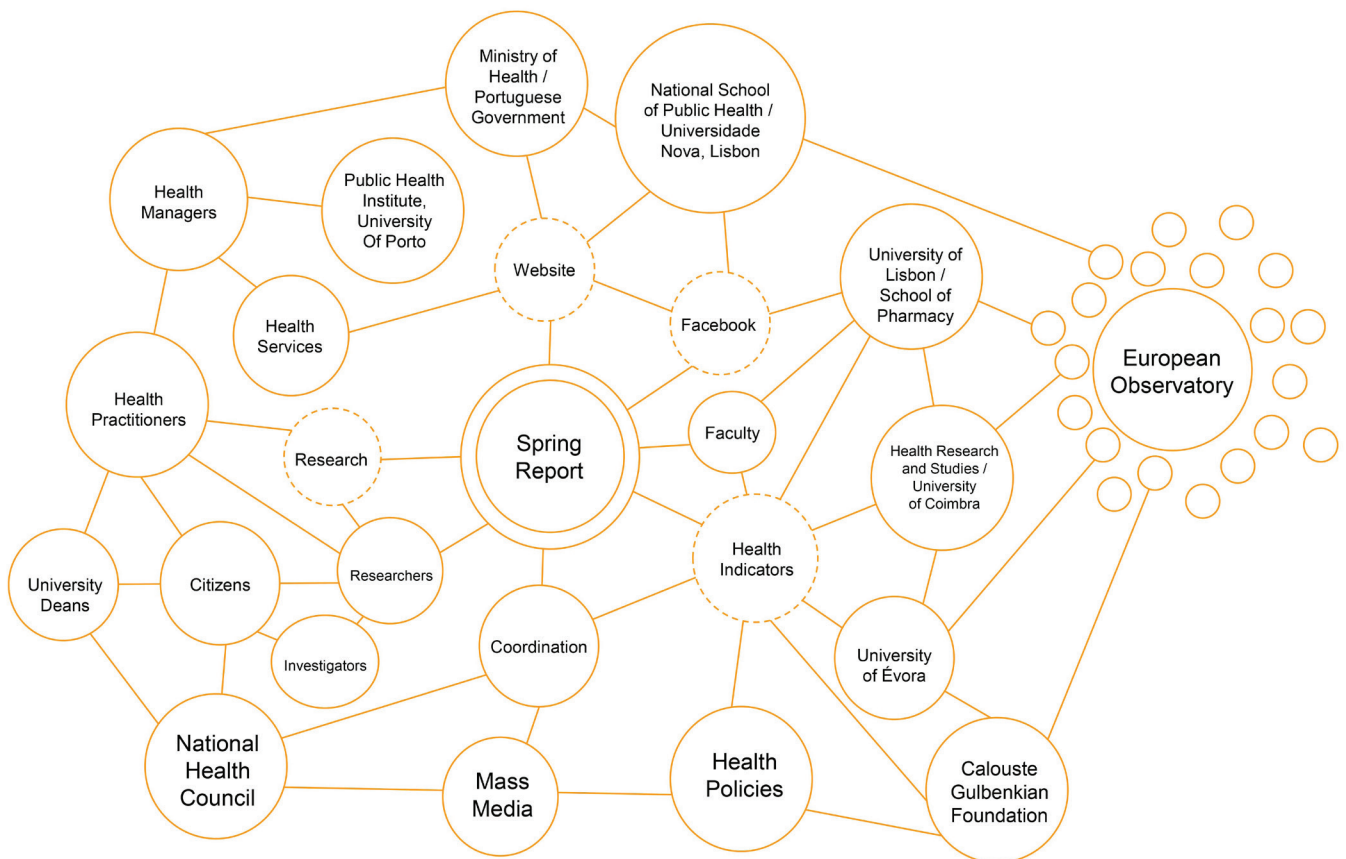
Figure 1. Cartography of Actants – OPSS
Source: Authors, 2019.

The Spring Report is presented as a great mediator of the network, related with the importance of its role as the main product of OPSS. It is this report that highlights the result of the collective effort of several actors to present the analysis on the health system and policies in Portugal, portraying the effects that it produces on the network by mobilizing government actors, society and the media, demonstrating power relationships. The actants: website, facebook, research, health indicators, are not changing but just reproducing the meanings in the network, therefore, they are portrayed as intermediaries[15].
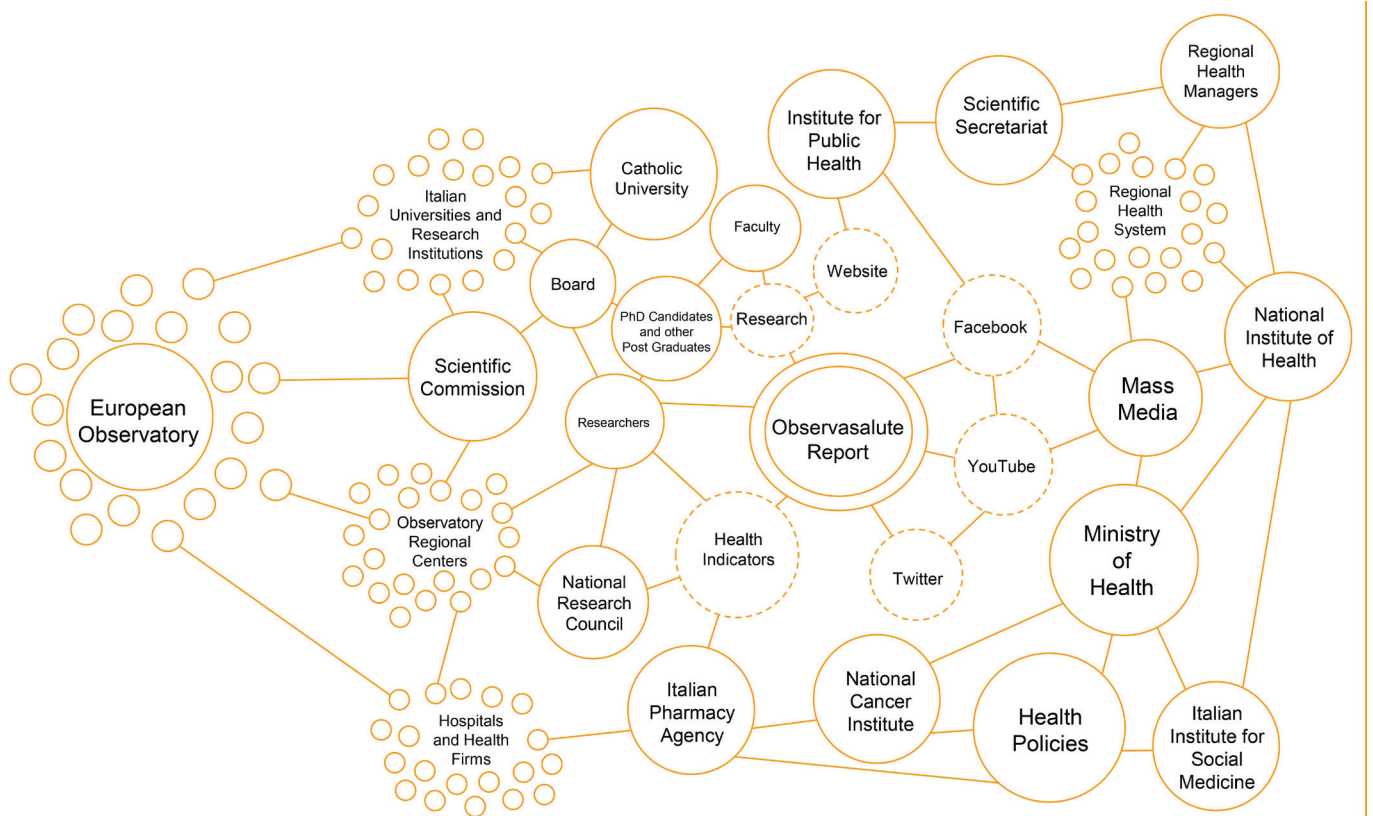

Figure 2. Cartography of Actants - ONSRI
Source: Authors, 2019.

Likewise, the Osservasalute Report is represented as the main mediator of the ONSRI network, as it is the main responsible for establishing interactions and connections among the actors, also producing power relations due to its capacity to highlight the result of the work carried out, placing it at plain sight. The actants: social networks (Facebook, Twitter, Youtube), research and website do not produce action on the network; therefore they are designed as intermediaries.
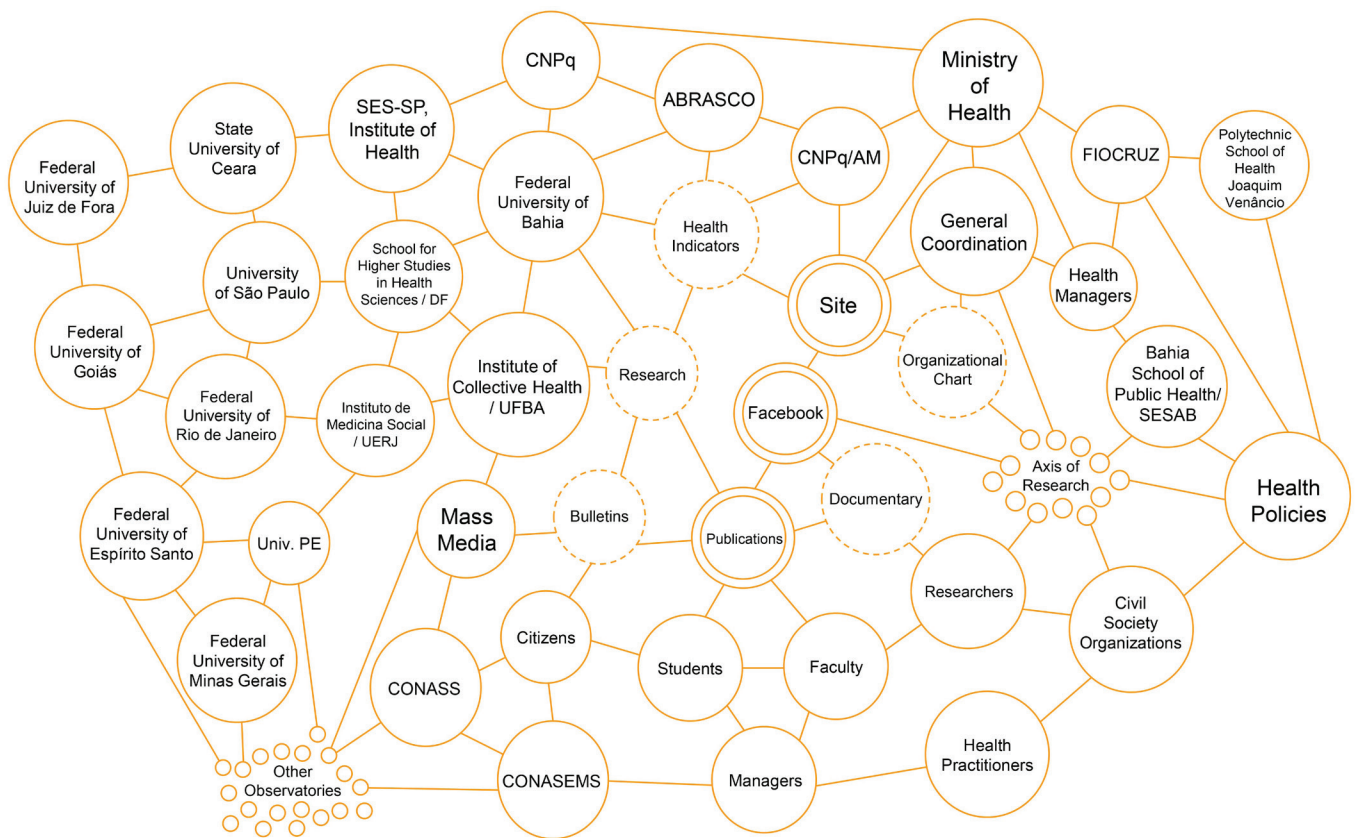
Figure 3. Cartography of Actants - OAPS
Source: Authors, 2019.

In this observatory, the role of mediator is not restricted to the actant "publications". This role is also performed by the active website, and facebook, reflecting the work dynamics of the OAPS, which uses instruments to encourage participation and the critical-reflective debate about health policies. Thus, the specificity of performance already mentioned as a characteristic of this actor-network produces action and effects on the network. Based on those actions and effects, the work of OAPS mobilizes new actors and changes associations. The actants: health indicators, research, organizational chart, newsletters and documentary act as intermediaries that convey meaning, but do not transform[15].

Back to ANT, it is through controversies that social aggregates are formed, as they are controversial situations in which the actors are looking for stabilization. Thus, as social aggregates, observatories are fruitful spaces for associations in search of stabilization, including those that concern their own essence.

Final considerations

The importance of using the theoretical support of ANT in this investigation is at the heart of its main methodological guideline: follow the tracks, follow the actors and let them speak, i.e. by mapping the dynamics of the associations in the networks in action. Thus, in the three observatories studied, it was possible to observe that the relationships between human and non-human actors produce different practices, exemplified by the connections of the object mediators. In the Portuguese and Italian observatories, the protagonism of the "Reports" mobilizes the entire network around the result of the research work materialized through these documents. In OAPS, on the other hand, not only is the publication object a mediator but the website and social networks also play this role, revealing the specificity of its work dynamics. In this way it made it possible to apprehend the network "as it is done"[11].

Given the above, it is possible to affirm that the theoretical framework of ANT and its Mapping of Controversies favored the understanding of the formation of the socio-technical networks that compose the health observatories in a broad and plural way.

Under this perspective, it reinforces the hybrid configuration of public policies, analysis of health systems, as well as observatories, since they articulate at all times institutions, researchers, managers, health professionals, citizens, media, social networks, information and health indicators as well as systems, tools, publications, multimedia, news, among other actors and policy instruments. Therefore, it is possible to verify the proliferation of hybrids in these circumstances.

In line with the main ideas defended by ANT, the results in this research confirm the complexity of relationships and associations existing in spaces of a political nature, such as health observatories. It is also confirmed that non-humans have agency in these associations, that is, they carry intention, adding value and importance in the networks that conform the three observatories. In this perspective, the practices of all actors that are generated in the three sociotechnical networks engender the way in which the institutions, researchers and managers of each observatory build their reality to act within contexts of political health processes.

In general, the three observatories under study develop the monitoring of health policies through rigorous analysis of the health situation and its determinants. In addition to the sphere of knowledge production and dissemination, they mobilize researchers, teachers, students, managers, professionals, media and citizens interested in credible information, showing the ability to connect a significant number of actants, revealing potential in their association dynamics, as well as in the translation processes.

The present study also showed the configuration of a new way of acting regarding the policies under the aegis of the "observatory" model. The OAPS example illustrates a model that goes beyond "observing". It extrapolates the position of analyst and places the observatory in the place of an active participant in politics, through associations, the mobilization of mediators and the engendering of its network based on a critical-reflexive performance.

The study of the three cases presented here, unfolds a series of questions about the articulation between production of evidence-based knowledge and the processes of formulation, implementation, management and analysis of health policies, as well as about the conformation of association dynamics and controversies that permeate the hybrid process of health systems analysis.

It is necessary to emphasize that the methodological option for a way of rethinking the social also allowed to reconsider the networks and relationships that are established in the context of health policies, and, consequently, the relationships provided by the advent of technological changes through the diffusion of informational mobility services, digital devices, interaction mediated by information and communication technologies that has also been forging relationships in the contemporary field of health.

Authors' contributions

Marcele Carneiro Paim contributed to the conception and design of the work, writing of the manuscript and approval of the final version. Maria Ligia Rangel Santos participated in the discussion of results, critical review of the content and approval of the final version.

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Notou-se o uso crescente de observatórios para acompanhamento e monitoramento de sistemas e políticas de saúde. À luz da Teoria Ator-Rede (TAR), foi proposta uma descrição e análise das associações e controvérsias que compõem os observatórios de saúde enquanto redes sociotécnicas em contextos de políticas e análises de sistemas de saúde. Trata-se de um trabalho com abordagem qualitativa, envolvendo um estudo de casos múltiplos e representações gráficas de diagramas de cartografia. Os resultados indicam que o referencial teórico da TAR e sua Cartografia de Controvérsias favoreceram a compreensão da formação de redes de forma ampla e plural, bem como ratificaram a complexidade de associações nesses espaços de natureza política. Concluiu-se com uma reflexão sobre a opção metodológica de repensar o social que reconsidera as redes e relações em políticas de saúde, propiciadas por mudanças tecnológicas e mediadas pelas tecnologias de informação e comunicação.

Palavras-chave: Políticas de saúde. Sistemas de saúde. Observatórios de saúde. Teoria ator-rede. Cartografia de controvérsias.

Se observó el uso creciente de observatorios para acompañamiento y monitoreo de sistemas y políticas de salud. A la luz de la Teoría Actor-Red (TAR), el objetivo es describir y analizar las asociaciones y controversias que componen los observatorios de salud, como redes sociotécnicas, en contextos de políticas y análisis de sistemas de salud. Mediante un abordaje cualitativo, presenta un estudio de casos múltiples y se proponen representaciones gráficas de diagramas de cartografía. Se comprendió que el referencial teórico de la TAR y su Cartografía de Controversias favorecieron la comprensión de la formación de redes de forma amplia y plural, así como se ratificó la complejidad de asociaciones en esos espacios de naturaleza política. Se concluye con una reflexión sobre la opción metodológica de repensar lo social que reconsidera las redes y relaciones en políticas de salud, propiciadas por cambios tecnológicos y mediadas por las tecnologías de información y comunicación.

Palabras clave: Políticas de salud. Sistemas de salud. Observatorios de salud. Teoría actor-red. Cartografía de controversias.