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ALTERNATIVAS PARA LA EVALUACIÓN DE LA PRODUCCIÓN CIENTÍFICA PARA LAS CIENCIAS SOCIALES. UNA MIRADA DESDE LA TECNOCIENCIA COMO FENÓMENO SOCIAL

ALTERNATIVES FOR THE SCIENTIFIC PRODUCTION EVALUATION FOR THE SOCIAL SCIENCES. A LOOK FROM TECHNOSCIENCE AS A SOCIAL PHENOMENON

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ARTÍCULOS

Resumen:

La evaluación de la ciencia es un tema que ha generado debates y tensiones en la comunidad científica y académica. El modelo dominante de evaluación de la actividad científica presenta una serie de críticas y limitaciones, con especial énfasis en el ámbito de las Ciencias Sociales. Para proponer soluciones a este fenómeno, la investigación formula como objetivo general desarrollar un modelo alternativo de evaluación de la producción científica para el campo de las Ciencias Sociales, desde la perspectiva de la tecnociencia como fenómeno social. La investigación plantea la triangulación metodológica, mediante la integración de enfoques de análisis cualitativos y cuantitativos, que incluyen métodos y técnicas como la revisión bibliográfica, la aplicación de métricas tradicionales y alternativas de medición de la ciencia, así como la aplicación de entrevistas, encuestas y el método Delphi. Se realizó un análisis del estado de la cuestión, que permitió identificar los cuestionamientos, críticas y limitaciones de los procesos de evaluación de la ciencia, lo que contribuyó a establecer un balance en relación a los aportes, discusiones, insumos, marcos referenciales, concepciones, enfoques y perspectivas. La propuesta se basa en los cambios tecno-científicos introducidos en la producción de conocimiento que permiten una complementación entre la producción de conocimiento y la sociedad. Desde esta perspectiva, se promueve la calidad y relevancia de los resultados de la investigación científica, la diversidad epistemológica y la participación activa de la comunidad académica y social.

Palabras clave: Evaluación científica, Evaluación de la investigación, Producción científica, Tecnociencia social, Ciencias Sociales

Abstract:

The evaluation of science is a subject that has generated debates and tensions in the scientific and academic community. The dominant model for the evaluation of scientific activity presents a series of criticisms and limitations, with special emphasis on the field of Social Sciences. In order to propose solutions to this phenomenon, the research formulates as a general objective to develop an alternative model of scientific production evaluation for the Social Sciences field, from the perspective of technoscience as a social phenomenon. The research raises methodological triangulation, by integrating qualitative and quantitative analysis approaches, which include methods and techniques such as bibliographic review, application of traditional metrics and alternative science measurement, as well as the application of interviews, surveys and the Delphi method. An analysis of the state of the matter was carried out, which made it possible to identify the questions, criticisms and limitations of the science evaluation processes, which contributed to establishing a balance in relation to the contributions, discussions, inputs, referential frameworks, conceptions, approaches and perspectives. The proposal is based on the techno-scientific changes introduced in the knowledge production that allow a complementation between the knowledge production and society. From this perspective, the quality and relevance of the scientific research results, epistemological diversity and the active participation of the academic and social community are promoted.

Keywords: Science assessment, Research evaluation, Scientific production, Social technoscience, Social Sciences.

INTRODUCTION

Evaluation has been recognized as a fundamental aspect of science and technology (S&T) policies, especially since the second half of the 20th century, when the sector experienced significant growth (a phenomenon known as "science industrialization" according to Salomon, 1997). However, this role has been the subject of constant debates and tensions due to the fact that resources are allocated through the evaluation processes, access to stable jobs, progress in the professional career, lines of investigation are validated or discarded, and make or break reputations.

The predominant approach in the science and technology evaluation at the global level is based on the Frascati (1963) and Oslo (1992) Manuals of the Organization for Economic Cooperation and Development (OECD). This perspective is characterized by being linear and evaluates the resources invested in the system, such as financing and available human resources, in relation to the results obtained. These results are mainly translated into the number of scientific articles published in specialized and peer-reviewed journals, or the level of technological development measured by the number of patents obtained. This evaluation approach uses the framework of the input-output matrix of the economy applied to S&T production.

In recent times, there has been a notable increase in research evaluations, driven by the participation of universities, governments and funders who seek to assess the value of academic research processes (Wilsdon, 2016). Although academic impact evaluation is traditionally based on judgments made by experts in the same field (generally considered the best source of evidence), it is sometimes complemented by the citations analysis from scientific publications.

Increasing dissatisfaction with the citation count is more frequently observed. These aspects are especially relevant in developing countries, as in Latin America, where languages other than English are spoken and research is carried out aimed at solving local problems. This research is often not published in major journals or included in commercial databases, which certainly makes it difficult to make the research results visible and, consequently, to obtain citations.

The predominant science evaluation paradigm presents other limitations related to biases and unequal forms of evaluation for different fields of knowledge, diverse regions, other ways of knowing, and especially, the issue of public communication of science, evaluation fundamental aspects such as the social appropriation of science and its impact on society.

In the case of the Social Sciences, this predominant science assessment paradigm has limitations when it is applied indistinctly in this field of knowledge. The impact and productivity metrics are influenced by the characteristics and practices of the natural and exact sciences. The most prestigious and often cited journals and conferences focus on specific disciplinary issues and approaches, which can lead to the undervaluation of innovative research and approaches in the Social Sciences. In addition, the Social Sciences aim to understand and address complex social issues and contribute to the well-being and society development. However, traditional impact metrics often do not adequately capture the real impact of research in terms of social, political, or economic change.

Based on the limitations and criticisms raised above, this issue could be considered novel, with the need to provide studies and possible methodologies with dimensions, potentialities, and limitations of the indicators used. This research aims to contribute to the previous panorama, from the exploration of certain alternative indicators

combined and organized in various dimensions, for their application in the Social Sciences field.

Problem statement

The science evaluation is a subject that has generated debates and tensions in the scientific and academic community. On the one hand, there is a wide discussion about which metrics should be used to assess the quality and impact of scientific research. Traditionally, the impact factor of scientific journals has been used as a quality measure, which has generated criticism due to its limitations, such as the bias towards certain disciplines and the lack of consideration of the individual quality of the articles.

The impact index is a widely used metric that measures the frequency with which a journal's articles are cited in a given period. However, it is criticized for focusing on the citations number and not the quality or relevance of those citations. Additionally, this metric tends to favor high-impact journals in certain disciplines, which may influence researchers' choice of where to publish, rather than fostering diversity and scientific innovation.

The number of citations received by an article or researcher is often used as an indicator of their impact or influence in the field. However, this metric has limitations. On the one hand, there may be a bias towards citing prominent or popular previous research, which may exclude equally valuable but less well-known work. In addition, it can take time for an article to be cited, making it difficult to assess the impact of a research early.

From this predominant science evaluation paradigm, S&T is limited to generating only results that can be measured and quantified, which leads to underestimating or ignoring important aspects such as its social relevance, its participation in public management, its contribution to regional integration, its impact on the environment and its public communication, among others.

Frequently, scientific achievements and technological products are presented as the result of the individual work of one person, which hides the social component of these activities and belittles the fundamental role of research teams, collaborative groups, scientific networks, and the overall collaboration.

Institutional and local contexts, their evolution over time and the specific characteristics of each region are completely omitted, without recognizing that the relationship between resources and results is inevitably influenced by these realities and particularities.

By reaffirming a positivist perspective of S&T, a single methodology for the generation and dissemination of knowledge is implicitly assumed, and it is argued that all knowledge fields can be evaluated using standard criteria.

The simplistic and decontextualized use of bibliometric indicators, such as the impact factor, the h index and others, to evaluate scientific production, fosters unequal competition between disciplines and regions. This in turn benefits and strengthens the power of oligopolistic publishers and databases. Consequently, there is a growing need to develop more holistic and fair metrics that better reflect the diversity and complexity of scientific research.

The purpose is to highlight that science evaluation practices, in the specific case of the Social Sciences, continue to be framed in a paradigm of evaluation of scientific activities that responds to logics that, in the hegemonic neoliberal framework, have commercialized science and the dissemination mechanisms, which directly affects the fact that the research agendas respond to these global logics to obtain favorable results in the evaluation processes.

These prevailing evaluation models lead nations to prioritize research whose results can be inserted into global and mainstream science, so that they can be part of publications indexed in mainstream databases, to the detriment of local, committed to the needs and problems of local societies, especially in the case of Latin American countries.

On the other hand, the scientific-technological development within the framework of the so-called information society has led to the emergence of new mechanisms for the science communication, enabling new forms of knowledge production and dissemination that can be used as alternative approaches for a fairer and more supportive science, which is in strong tension with respect to a selfish and utilitarian hegemonic science.

A perspective that explains how this model was conceived is the classical conception of the relations between science and technology with society, an essentialist and triumphalist conception, which can be summarized in a simple equation, the so-called «linear model of development»: more science = more technology = more wealth = more social welfare (López Cerezo, 1999). Conception that is present in different spaces of the academic world and in its dissemination forms. This foundation also expresses the classical vision of Logical Positivism.

In this brief context, a set of tensions and values at stake that arise from the interaction of various evaluation strategies and priorities in the science and technology field is identified as a central problem. So, the research problem that is presented here will be contained under a series of tensions of a broad nature, which have a long history in the context of the sciences development and in the issues inherent to their evaluation. Some of these tensions have been outlined by different authors (Manzano-Arrondo, 2017; Atrio, 2021; Calisto-Breiding et al., 2021), for example, the publications that analyze local cases confirm a strong convergence on a global scale, the dominant model for the scientific activity evaluation is inspired by the so-called hard disciplines, with a clear detriment to the Social Sciences, which is why many publications deal specifically with the prejudices generated in them.

The limitations of the impact factor as a universal measure and the metric reduction to the subject of academic rankings are also evident. In this sense, the central question that guides the research is: How to build, from the perspective of technoscience as a social phenomenon, alternatives for the scientific production evaluation for the Social Sciences field?

OBJECTIVE SYSTEM

General objective

Develop an alternative model of scientific production evaluation for the Social Sciences field, from the perspective of technoscience as a social phenomenon.

Specific objectives

1. Identify the main axes of critical discussion in the science evaluation, with special emphasis on the Social Sciences.
2. Develop a critical analysis, which from the perspective of technoscience as a social phenomenon, problematizes the transformations in the modes of scientific production and its relationship with the social context.
3. Characterize the scientific production in the Social Sciences field, from the perspective of traditional metrics and altmetrics in the context of open science, in the period 2021-2025.

4. Diagnose the criteria, perceptions and perspectives of researchers and evaluators in the Social Sciences field with respect to the hegemonic evaluation model.
5. Elaborate an alternative model of the Social Sciences evaluation that integrates local, regional and international aspects; as well as the perspective of the researchers themselves.

JUSTIFICATION

Scientific production in the Social Sciences field plays a fundamental role in the development of any society. That is why the main purpose of this research is to propose alternatives for the scientific production evaluation in the Social Sciences, which are more in line with the socioeconomic, cultural and political reality of the countries, and that promotes the generation of relevant and applicable knowledge at the local level. The proposal is also based on the techno-scientific changes introduced in the knowledge production that allow a complementation between the knowledge production and society; from this perspective, the quality and relevance of the results of scientific research, epistemological diversity and the active participation of the academic and social community are promoted.

Theoretical justification

A theoretical and conceptual framework will be provided that considers the changes produced in the formats and mechanisms of scientific production; as well as its articulation with society, so as to strengthen the diversity of knowledge production means, its recognition in the evaluation processes and its integration with society.

Practical justification

The development of an alternative model for the scientific production evaluation in the Social Sciences has significant practical implications. First, it would allow for a more comprehensive and fair evaluation of researchers, considering both the quality and relevance of their research. This would promote scientific excellence and the works development of greater relevance for society and collaboration.

Social justification

By evaluating scientific production in the Social Sciences in a more comprehensive and contextualized way, the knowledge base available to decision-makers in different spheres, such as government, educational institutions, and social organizations, would be strengthened. This would contribute to a better formulation of public policies, social programs and development strategies, based on solid scientific evidence and adapted to social reality.

MATERIALS AND METHODS

As part of the methodological strategy followed in this research, an exhaustive bibliographical review was first carried out. So that it makes it possible to inquire about the main areas and tools on which evaluation practices in science and technology are based, and about those central elements that are articulated in these processes.

An empirical contrasting method is also proposed regarding the evaluation models and dimensions identified in the bibliography. To do this, the characteristics of the evaluation processes of science management entities from different countries will be explored, to identify and contrast what we can consider as the central axes around which these evaluation practices revolve.

In this sense, quantitative research is also used to measure the Social Sciences using traditional metrics and the recently called altmetrics in the context of open science. This will make it possible to identify and analyze areas of tension in the evaluation processes of science and technology in which the need to continue seeking

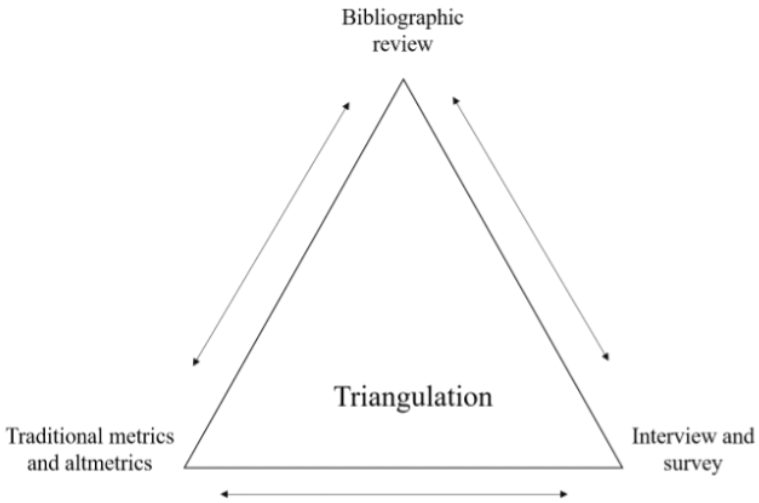
consensus and alternatives arises, especially in the field studied.

As part of the methodological strategy, the interview will be used as a way of revealing the opinions of some central actors related to the subject of study. In this sense, it is essential to know the opinion of interviewees who will have two profiles: scientists who have been part of evaluation processes in the role of evaluators, and technicians or managers who are knowledgeable about these processes and who have experience in defining and use of tools used in these practices.

To complement the information regarding evaluation practices and expert criteria, it is considered essential to know the opinion of a large number of social scientists. Then, a set of more structured answers based on the operationalization of specific variables will allow this task to be complemented with other perspectives, with opinions from the social researchers themselves. This leads to include a survey in this research practice.

As can be seen in figure 1, the methodological strategy of this proposal applies the combination of qualitative and quantitative tools, which is called triangulation; taking into consideration that, in the social and human sciences, various triangulations can also be made that significantly improve the results of the investigation, its validity and reliability.

Figure 1. *Methodological triangulation of the research.*



RESULTS

State of the question

The purpose of the following lines is to develop an approach to the research state on the questions, criticisms and limitations of the science evaluation processes and the prevailing hegemonic model, so that it contributes to establishing a balance in relation to the contributions, debates, inputs, referential frameworks, conceptions, approaches, perspectives, and that constitutes a reference to assume a critical position regarding what has been done and what remains to be done about this phenomenon.

For the selection of publications, the search for scientific information was carried out in various primary and

secondary information sources, among which searches in open resources, e-libraries, gray literature, preprint servers, professional blogs, etc. In this process, the Scopus, Scielo and Google Scholar databases were fundamental.

Figure 2 shows the general equation that led the search processes. It is important to clarify that this equation was fragmented and combined with the information search and retrieval systems, and their particularities.

Figure 2. *General search equation.*

("science measurement" OR "science measure" OR "science assessment" OR "science evaluation" OR "science metrics" OR "research measurement" OR "research assessment" OR "research evaluation" OR "research metrics" OR "research measure" OR "altmetrics" AND (alternative OR criticism))
(indicators NEAR (research OR R&D OR scientific production)
("evaluat*" OR "asses*" OR "measure*" NEAR (research OR R&D) AND (alternative OR criticism))

To achieve a higher level of update in the results, the search covered a period corresponding to the last 5 years (2018-2023). The results showed that there is a large body of scientific publications on the subject of science evaluation and measurement, mostly the result of descriptive studies of a bibliometric and scientometric nature, therefore, for greater precision, the contents were reviewed, to the selection of investigations that provide a critical look at those traditional and hegemonic models of science measurement.

For the analysis of the publications that made up the final sample, the metadata of the publications were exported and registered in the Zotero V.6.0.20 bibliographic reference manager, where they were subjected to a metadata normalization process. Subsequently, a matrix was created with the publications in which the topics addressed, the central concepts, theoretical and methodological perspectives, key ideas, conclusions, contributions, questions and criticisms of the texts were summarized.

The publications focus on critically analyzing traditional science measurement metrics and contextualized measurement alternatives are proclaimed. Some of these studies were carried out in Western countries, especially in Spain. Critical studies from Ukraine, Germany, England, and the United States of America were also found, mainly related to proposals for new metrics called altmetrics, which have been developed in the open science context.

Most of the publications are scattered throughout Latin America, with a predominance of research carried out in Argentina, Colombia, Mexico and Brazil; and with few publications in other countries of the region. There is a predominance of original research articles, reflections, and reviews; in addition, important contributions were found in books, book chapters and doctoral theses.

Several works present a theoretical perspective based on a critical approach to the current system of science evaluation and from Latin American critical theories, focused on the importance of scientific evaluation in the context of Science, Technology and Innovation (STI) in Latin America (Goncharuk, 2018; Gómez-Morales, 2018; Faraldo Cabana, 2019; Invernizzi & Davyt, 2019; Beigel, 2020; Salatino & López Ruiz, 2021; Ortiz Núñez, 2021; Neupane et al., 2022; Miguel & González, 2023; Debat, 2023). The need to integrate quantitative and qualitative criteria in STI policies is discussed, and the importance of contextualized scientific evaluation is emphasized, which considers the integration of new metrics and approaches to improve scientific evaluation.

Other publications present a theoretical approach based on critical currents such as decolonial thought and epistemologies of the South, which seek to resist the hegemony of the knowledge economy and cognitive capitalism. It is argued that this predominant conception of science has led to a commodification of the circulation of knowledge worldwide and has generated inequalities in the scientific production evaluation of emerging and peripheral countries (Manzano-Arrondo, 2017; Gómez-Morales, 2018; Beigel, 2020; Salatino & López Ruiz, 2021). The authors call for a reorientation of scientific evaluation towards a more open and pluralistic approach that prioritizes the quality and relevance of research in local contexts.

Other authors present a theoretical approach based on the new paradigm of open science, the scientific production democratization and proposals for the integration of altmetrics in the evaluation of science. From this perspective, it is recommended to integrate quantitative and qualitative criteria into Latin American STI policies, which must also be adjusted to local realities and budgets (Tahamtan & Bornmann, 2020; Beigel, 2020; Calisto-Breiding et al., 2021; Ortiz Núñez, 2021; Salatino & Macedo, 2022; Neupane et al., 2022; Debat, 2023). It is argued that Latin America is investing in open access and strengthening scientific diffusion and visibility networks, and that this requires a framework to use new metrics in the scientific research evaluation.

The theoretical perspective of the evaluation of the research social impact and the importance of considering urgent social needs in the research evaluation are also addressed, as well as the social appropriation of science and technology as a mechanism to assess social impacts of science (Tahamtan & Bornmann, 2020; Aiello et al., 2021; Smit & Hessels, 2021; Kunttu et al., 2021; Soler-Gallart & Flecha, 2022). Overall, the need for a more nuanced and comprehensive approach to research evaluation that goes beyond traditional metrics and considers the various ways in which research can contribute to society is highlighted.

Additionally, in terms of methodological aspects, the investigations present various approaches, both quantitative, qualitative, and mixed. Descriptive studies, documentary analysis, critical systematic review of the scientific literature and quantitative and qualitative comparative analysis of the different metrics that exist (modern or classical) are presented in order to identify the strengths, weaknesses and specific characteristics that they have.

The bibliographic review made it possible to identify the main axes of discussion and criticism in relation to the science evaluation, from which deficiencies, inequities, biases and proposals put forward to counteract them have been raised. In this way, the main axes identified were: 1) challenges to peer review; 2) challenges to traditional science evaluation metrics; 3) questions about evaluation practices in the Social Sciences field; and 4) alternative indicators in the framework of open science.

Theoretical framework

There are various lines of study that have managed to build solid theoretical structures that try to explain these dynamics. Among them, the conceptual approach to which this proposal leans is the perspective of technoscience as a social phenomenon. To better understand the phenomenon known as technoscientific, it is important to start by examining the concept of technoscience. Technoscience is a new word that arises from the combination of technology and science. Its origin is somewhat unclear, as there is no consensus on who coined the term. However, it began to be used officially in academic texts in the late 1970s and early 1980s (Hottois, 2006).

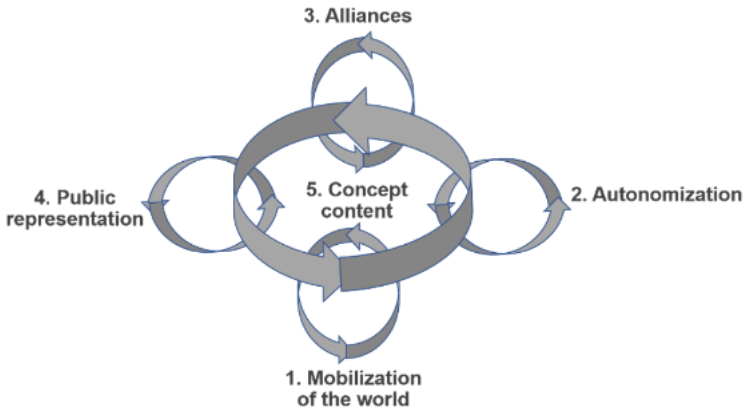
The techno-scientific perspective, in the last fifty years, has been interpreting the new forms, agents and values that intervene in the science and technology development (Atrio, 2021). The techno-scientific perspective refers to the approach that has been adopted in recent decades to understand and analyze the interactions between science, technology, and society. As science and technology have advanced rapidly, it has become increasingly important to examine how these disciplines influence each other and how they affect society at large.

In recent decades, the techno-scientific perspective has evolved to recognize that science and technology are not isolated entities, but are embedded in broader social, political, economic, and cultural contexts (Nava, 2021). This perspective seeks to understand how scientific and technological advances shape and are shaped by these social dimensions, and how they are produced and applied in different contexts.

Especially, based on the critical proposal of an alternative model of technoscience made by Latour (1999), which had a starting point in his work "Pandoras Hope", in which he exposes his anthropological vision on the circulatory system of scientific and technological facts and on the science characteristics, through a strong criticism of the circular model of science studies that reflected the separation of the context of science from a social, political and cultural environment.

Latour's (1999) criticism of the circular model of science is what leads him to suggest that the realistic representation of science can be made from different loops or activities linked by networks, as shown in figure 3, where techno-scientific studies, they need to consider those relationships to reconstruct the scientific facts circulation. This is where the need to

Figure 3. *Alternative science model proposed by Latour (1999).*



address technoscience as a social phenomenon arises, and the issue of articulations is essential.

Understood the concept of articulations in scientific studies, as the practices that establish multiple, contingent relationships, between different elements whose identity is modified because of this articulatory practice and that constitutes an epistemic-methodological tool that aims to break with the dualisms nature- culture, text-context, form-content, human-non-human, discourse-materiality (Haraway, 1999, p. 150).

So, this alternative model of science in the form of loops or networks promotes various articulations between the mobilization of the world, which refers to the means by which non-humans are included in the CTI discourse. Autonomization, which refers to the way in which a discipline, an invisible college, or a profession become independent and form its own criteria of value and relevance, the alliance loop, which is related to the persuasion possibilities with the objective of achieving the cooperation.

Public representation, which refers to the public sharing of new knowledge, and this point is also very important, because it requires scientists to have a set of communication skills that are different from those known in scientific environments, and here it is highlighted how important it is the field of the science communicability and its perception by the public. And the fifth loop that occupies the center of the model refers to the necessary connections between the conceptual content of science and its contexts, which are what give it meaning.

Latour's (1999) vision strengthens the idea that the techno-scientific perspective has also emphasized the study of the actors and institutions involved in the production and dissemination of scientific and technological knowledge. It is recognized that science and technology are social practices, and that scientists, engineers, businesses, governments, and other actors play important roles in shaping the direction and outcomes of research and technological innovation.

In addition, the techno-scientific perspective has highlighted the importance of considering the values and ethical implications in the development and application of science and technology (Regan, 2021; Echeverría, 2003). It is recognized that scientific and technological decisions have ethical and social consequences, and that it is essential to reflect on the possible impacts and associated risks.

However, in a complementary way to this theoretical approach, the expressions and theories of other authors will also be used in the research development, to strengthen the arguments and interpretations that are proposed throughout the present study and the complementation and articulation among them. For example, Latin American critical theories (del Valle Orellana, 2023; Carretero & Baeza, 2017; Laako, 2008); decolonial studies (Ortiz Ocaña & Arias López, 2019; Harding, 2016); and the epistemologies of the south (Tavares, 2023; R'boul, 2022; de Sousa Santos, 2021).

Appealing to the concepts that this referential framework builds will allow a broad interpretation of this extensive plane in which the knowledge production and its evaluation practices are inserted today, which obviously will be of vital importance for the analysis. For this reason, the social environment is a fundamental element to consider in the practices of evaluating research results. In this sense, studies of public perception of science can be recipients of the debates raised by this proposal.

The scientific production evaluation in the Social Sciences is a subject of great relevance and complexity, especially in the context of technoscience as a social phenomenon. Technoscience refers to the interrelationship between science and technology, and how these mutual influences shape society and the production of scientific knowledge (Bensaude Vincent, 2014). Technology plays a fundamental role in the generation of scientific knowledge in the Social Sciences. The use of technological tools, such as databases, analysis software, and communication platforms, have transformed the way researchers access, collect, process, and disseminate information. In this sense, it is necessary to analyze how technology affects scientific production in the Social Sciences and how this should be reflected in the alternative evaluation model.

Technoscience has also facilitated citizen participation in the production of scientific knowledge in the Social Sciences. Through technology, citizens can contribute to research, provide data, participate in discussions, and help generate solutions to social problems. Therefore, it is necessary to examine how the alternative evaluation model can integrate and value citizen participation in scientific production and how this can enrich the quality and relevance of research in the Social Sciences.

CONCLUSIONS

Criticisms of the evaluation of science have generated a wide debate in the academic and scientific community. After reviewing the state of the art on this subject, it can be concluded that traditional metrics, such as the journal impact factor or the number of citations, do not fully capture the quality, real impact, and originality of the research. This has led to an excessive valuation of the quantity of publications instead of their quality.

Critics of the evaluation of science highlight the need to overcome the limitations of the current system and move towards a more comprehensive, equitable and transparent approach. This will require changes in evaluation criteria, academic practices, and scientific culture, as well as the promotion of incentives that value quality, impact, and diversity in research.

Specifically, in the Social Sciences field, these critiques and limitations do not invalidate the use of scientific approaches but highlight the need to adapt and complement the science assessment paradigm with more flexible and contextualized approaches that recognize the complexity and diversity of social phenomena.

The theoretical approach of technoscience as a social phenomenon on which the research is based contributes to establish an interrelationship between the new information and communication technologies, the new communication mechanisms of science and society, so that they are considering both the opportunities for techno-scientific development and its potential for use in society, to propose evaluation alternatives in the Social Sciences field.

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