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COMMUNICATION AND UTILITY OF SCIENTIFIC KNOWLEDGE IN SOCIAL AND HUMAN SCIENCES

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ABSTRACT

This paper examines the relations between the social communication of science, mobile science, and "politicized" science in the Latin-American context, to find common ground and differences and establish possible roles and practices of university researchers in terms of communication paradigms. science, mobile science and politicized science and their alternatives for social action related to the construction, publication and utility of scientific knowledge.

In addition, it was sought to describe and examine the practice of these research groups in terms of informative, communicative and social use of knowledge cultures linked to the social communication of science, mobile science, and "politicized" science.

The purpose that started this project was to search for contextual action frameworks and possible roles and actions of researchers in the promotion and commitment to scientific knowledge and its communicative deployment. It describes what happens in the research in social and human sciences in the Faculty of Human Sciences of the Universidad Nacional de San Luis, using for this, a qualitative questionnaire proposed to key informants, such as the Directors and Co-directors of Projects of Social and Human Sciences in the Universidad Nacional de San Luis, Argentina.

The concepts referring to the communication of science, mobile science and politicized science have agreements and disagreements, although they advocate different alternatives for social action referring to the construction, dissemination, communication, publication and subsequent action of scientific knowledge in context.

Universities create a great deal of knowledge, but only a fraction of it is mobilized in a shared and utilized way. This lack of knowledge sharing is contributing to a gap between research, policy and practice, hampering social innovation and slowing progress.

Keywords: Communication; Social science; scientific knowledge

1.INTRODUCTION

This paper examines the relations between the social communication of science, mobile science, and "politicized" science in the Latin-American context, to find common ground and differences and establish possible roles and practices of university researchers in terms of communication paradigms. science, mobile science and politicized science and their alternatives for social action related to the construction, publication and utility of scientific knowledge.

In addition, it was sought to describe and examine the practice of these research groups in terms of informative, communicative and social use of knowledge cultures linked to the social communication of science, mobile science, and "politicized" science.

The purpose that started this project was to search for contextual action frameworks and possible roles and actions of researchers in the promotion and commitment to scientific knowledge and its communicative deployment.

There are suspicions that researchers and university centers do not have sufficient communication and interaction with the societies that support them. Society does not know what research centers and universities do and they do not promote the knowledge produced towards it. In this regard, in the book *"La Universidad Nacional de San Luis en Prospectiva"* (2010) has stated that "communication with the media, the educational community as a whole observes an important deficit, since it is expressed that the community ignores the strengths of the UNSL due to the fact that what is not communicated or disseminated properly it is done in it" (Trocello, Pedranzani and other authors, 2010, p.106).

On the other hand, the UNSL Self-Assessment Report (2014) highlights that one of the aspects that most attracts attention in the differentiation of faculties is the implicit policy of disclosure of research results. While the exact and natural sciences faculties opt, almost exclusively, for publication in international English-language journals, the social and human sciences faculties disseminate their results in their own magazines. The report points out the convenience of establishing a differentiated publication policy from the university, for exact and natural sciences and for social and human sciences, aligned with the characteristics and specific objects of both.

However, beyond the characteristics and objects that the various sciences suppose, there are in all of them, serious and prestigious publications, "online" or digitized from Argentina and international publications to which teacher-researchers can send their contributions and submit to the rules and scrutiny that the scientific publication has. These online publications are maintained with great effort and dedication of university professors and sometimes it can

be noticed in them, a lack of human and economic resources of their faculties or rectorships, compared to the specialized task of publishing scientific writings periodically.

The social and human sciences play a fundamental role in the social and cultural transformations of the countries from the link that they can establish between scientific research, social and citizen dialogue and the formulation of policies that promote the exercise of fundamental human rights and the improvement of living conditions. The social, cultural, economic and political environment of production influences and influences the actions that can be taken, favoring or not the transformation of existing inequalities and the development of citizenship and culture. It is precisely the development of the social and human sciences, technological innovation and social transformations, which have occurred vertiginously and have made possible the passage from an industrial society to a knowledge society, progressively moving from the analog to the digital face.

1.1 RESEARCH AND PROJECTS

The Universidad Nacional de San Luis and its faculties have a long and prolific tradition in scientific research since its inception. In the case of the Faculty of Human Sciences, the participation of research groups has been notable in the last ten years. The following table brings together in a 2019-2020 timeline the Consolidated Research Projects (PROICO) and the Promoted Research Projects (PROIPRO) that were developed within the Faculty of Human Sciences at UNSL.

Table N ° 1 Research Projects in the FCH of the UNSL 2009-2020

Year	Number of Projects
2009	40
2010	40
2011	44
2012	44
2013	27
2014	30
2015	30
2016	36
2017	39
2018	39
2019	41
2020	36

The difference in the number of projects from 2012 to 2013 can be explained in the new organization suffered by the Faculty of Human Sciences, when the career of Psychology was separated and it constituted its own faculty. As the career migrated, research projects related to psychology topics also migrated.

1.2 COMMUNICATION AND SCIENCE

This inquiry provides answers to the following questions. In the first place, we ask ourselves the question of knowing what they believe is the role and social action of research professors in the social communication of knowledge in the field of social and human sciences. This analysis is proposed within the scope of the FCH of the Universidad Nacional de San Luis and seeks to obtain information through a qualitative questionnaire to key informants.

Second, we seek to describe the most common practices for promoting and disseminating scientific knowledge. Third, within the framework of the Faculty of Human Sciences of the UNSL, based on the practices of promotion and dissemination of scientific knowledge, we ask ourselves what connections exist between what is known as social communication of science and mobile science in the framework of social and human sciences at UNSL?

It was also sought to know, if these proposed categories are present with the analysis of the interviews that were carried out with some of the Directors of the Research Project in Social and Human Sciences of the FCH, UNSL, and fourthly, we will try to reflect on what possibilities, encounters and criticisms grants and can provide the category of politicized social science (Naidorf and Perrota, 2015), in light of the expressions found in the context of the social and human sciences at the FCH, National University of San Luis, in the period 2009-2019.

The point of view that we intend to incorporate in this work is not the general claim of university extension or transfer, understood as that the university is going to seek the community and extend itself to it, offering it some good that it believes that people need. . The idea that encourages this effort - Knowledge Mobilization - is to promote an idea of relations of equality between the university and the community and its actors, an interaction that must be recreated in the heat of collaborative work, where none of the actors "impose" on the other, certain conditions. It is a beneficial partnership for both partners in the achievement of common projects. The community contributing to the university (beyond taxes and regulations) and the university recognizing its "local" place, its history and belonging to a community in transformation.

2.SOCIAL COMMUNICATION OF SCIENCE

The social communication of science brings together informative practices related to scientific journalism and the dissemination of science. In this context, the social communication of science can be understood as an essential tool to get people to get involved in science and technology processes by becoming a mediator between researchers and citizens and is also an instrument that facilitates spaces of interaction and participation, by transmitting the knowledge generated by scientific and technological activity, citizens have greater possibilities of appropriating them and making them part of their daily lives (Quiroga, 2020). Alcibar (2015) understands the Public Communication of Science and Technology (CPCT) as an umbrella notion, that is, a concept that covers a myriad of activities related to science and technology in society.

The SCS has become a communicative specialization that promotes the dissemination and promotion of the scientific work of research centers and universities towards society. The recent concerns of the social communication of science go through knowing who communicates science, what the dissemination ecosystem is like, how it is institutionalized, who are the recipients of the social communication of science, how new audiences are created, etc. The social communication of science should be an activity of increasing hierarchy in universities, since it would allow society to know what they do for the creation of knowledge and how this knowledge can be useful for society to have a better quality of life.

Scientific communication research matures as an academic field and as such has increased the number of scientific communication articles in academic journals significantly during the last four decades, especially research studies, and particularly in the last 15 years. The number of countries and institutions that contribute articles has increased, characterizing “Social Communication of Science” as pluralistic in its research as well as in practice. The mix of institutions, techniques and disciplines contributes to its diverse status, although the absence of a clear theoretical framework can be perceived (Gerber, 2020).

3.MOBILE SCIENCE

One of these terms is what is known today as knowledge mobilization, proposed at the beginning of this century by the Social Sciences and Humanities Research Council in Canada (SSHRC) and conceived as a way to allow the flow of researched knowledge, both within the academic world and between academic researchers and the broader community. Despite academic efforts, the term as such has found wide acceptance in universities and academic institutes, not only in North America but also in the United Kingdom. There is not yet a single

interpretation of it shared by the different users, specifically with regard to the meaning of the concept of mobilization.

The concepts referring to the mobilization of knowledge have been disseminated since 2000 by a group of authors such as Levin, (2011) and Naidorf, (2014). The authors speak of "science" in general and propose that it is necessary to have the production of a type of knowledge ready for action and establishes an additional function of the researcher by having to find ways that link the production of knowledge with the use of knowledge. same by society. It is about knowledge "mobilizing" towards citizens and interacting with them. For this, it is necessary to create channels of relations and communication with society and the social knowledge produced in universities must be ready to be used by citizens.

In Thinking about Knowledge Mobilization, canadian author Levin (2011) broadly defines knowledge mobilization as the relationship between research and practice, justifying the use of the term given mobilization. the multi-dimensional, long-term and often political nature of the work being performed. The concept of knowledge mobilization also accounts for the actions projected towards promoting the use of research results and their usability by the groups or communities to whom it is addressed. These university practices are currently common in different Canadian universities.

4.POLITICIZED SOCIAL SCIENCE

Politicized social science is a concept that Naidorf and Perrota (2015) have begun to develop in Argentina, who investigate the possible actions that researchers could find to link the production of knowledge with the various groups or communities that could know it and use it. They also seek to critically examine the conceptual triad made up of the social communication of science, mobile science, and politicized social science, and whether the category of politicized social science is appropriate and useful in the Argentine context. According to Naidorf (2014), the category of politicized social science is novel for the discussion on scientific policy, since the concept accounts for a science committed to social change with autonomous and emancipatory characteristics, especially in social sciences.

These formulations about politicized science are taken by Naidorf (2001) from the postulates of Oscar Varsavsky's Latin American thought. Criticisms pointed to what Varsavsky called scientism, characterized as a way of doing science unrelated to politics and, ultimately, society, and which leads him to define politicized science as that linked to social commitment and willing to methodologically review the parameters that are part of the scientific building in terms of social change. Research and the university have been two concepts that in the last

forty years have become problematic and an object of interest not only for intellectuals but also for university students. In the already famous work of him Science, Politics and Scientism, published in 1969, Oscar Varsavsky started a great controversy around the subject of scientific research and university in Argentina. A debate still unfinished, and not lacking in topicality.

5.CONCLUSION

When the professors and researchers were consulted about four possible alternatives on supporting the promotion of scientific publications or dissemination within the university, they considered that they believe that 74.1% of the stimuli for their realization may come from other organizations outside the faculty and the university, although they expressed that “it should be like this”, “digital scientific publications lack support in general”, “there is little support in the promotion of scientific or popular journals” and “there is no support in general”. The communication strategy of the contributions and developments of the project is fundamentally a scientific and epistemological (70.4%) political decision (c) and secondly - a scientific and political decision - option (b) with 25.9%.

When asked about the nature of the publications, that is, if the writing and presentation of articles or drafts was individual, collective or joint, the surveyed group answered, in a majority, 63% that the publication projects were group and individual, that they were group in 33.3% and individual 14.8%.

Regarding the question to the researchers, how did they consider that the knowledge produced in the universities with public funds could have a social use in the community where the university belongs. The responses indicated a great predisposition of the teaching-researchers of the FCH of the UNSL to link the fruit of their research with the community, especially with the identification of organizations and collaborative activities and with the publication of publications aimed at a non-public university and general.

Regarding the existence of links with the desired or desired community of the research projects, the responses indicate that 63% would like to have a good link and 33% of the projects would like to have a strong link. Research groups are expected to have a strong and good relationship with the community where the university is inserted.

Regarding the possibilities of working with the community, the groups stated that it is a possible alternative in 88.9% and that perhaps it is possible in 11.1%, which indicates that all projects can work together with the community. Subsequently, it is clarified that in some cases the nature of the link may depend on the disciplines depends on what the project

addresses, constant interaction is perceived as beneficial for the project and the community and specific activities (such as workshops) that a project develops with clear wishes to do it with the community.

Finally, a majority of the projects (92%) indicated that there should be training or postgraduate courses on science communication and knowledge mobilization to make the establishment of links with the community on an equal footing possible and more effective.

From the responses to the surveys, we infer that the link between the FCH research projects with the community is currently weak, although the teachers express their desire to have greater links and that training or updates in this matter that illuminate aspects are desirable. alternatives for the production of knowledge and its social use. The provision of social use of knowledge transcends the activities of dissemination and social communication of science. The production of informative publications by the faculties or universities could be taken as part of the extension activities. In other words, the university tells the community, the citizens, part of what it does with public funds. Although this happens in some cases, the paradigm of the social use of knowledge is deeper and more encompassing.

However, in our crisis contexts, we would need a science that interacts with the community in an equal relationship creating new synergies. A university science that makes the concepts and results reached by researchers known to the community, but that invites it to participate in the participation scenarios as an actor on an equal footing, since this community is the last beneficiary of the processes and products of science.

Research projects often feel pressure from the evaluating bodies in which the Argentine science system is organized, which often forgets citizens as relevant actors.

It is a challenge for the university to implement and develop a new strategy that promotes the mobilization of knowledge, taking as actions the promotion and facilitation of the use of research among the users of knowledge, they are the stakeholders: decision makers, responsible for formulating policies, professionals, community members, patents, etc. This paradigm encompasses a wide range of activities related to the production and use of knowledge generated from research, such as the synthesis, dissemination and also co-creation of knowledge by researchers and users of knowledge that is conceived as an integrated knowledge mobilization.

The level of interactions between researchers and knowledge users (community) during the “knowledge mobilization” process varies in complexity and intensity depending on the nature of the research, the results and the needs of the knowledge users, which excludes marketing. A Knowledge Mobilization strategy is aimed at increasing the effectiveness and impact of

your research efforts and to plan a strategy, questions such as: what, why, who, how and when will be evaluated in terms of objectives and indicators are sensitive.

5.1 OTHER CONCLUSIONS

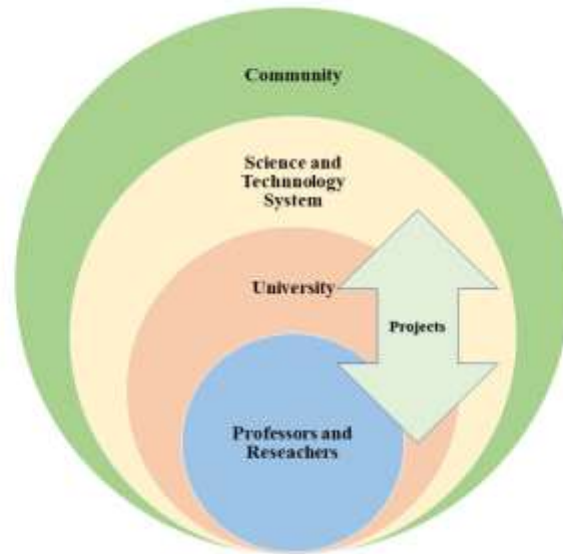
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Basically, the research professors produce papers - drafts - articles to be consumed by other academics, within the framework of a system of organization of science and merits, already established by scientific organizations such as CONICET, in the Argentine case. On the other hand, publications of general dissemination dedicated to citizens tend not to be evaluated by these organisms nor do they serve to rank scientists within the science system.

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Research projects often feel pressure from the evaluating bodies in which the Argentine science system is organized, which often forgets citizens as relevant actors.

Diagram N ° 1 Community Relations, Science and Technology System and University
(author's elaboration)



From this diagram it can be inferred that the university system has growing and developing relationships between the teaching-research triad and science and technology systems, and less developed with the rest of the actors.

It is a challenge for the university to implement and develop a new strategy that promotes the mobilization of knowledge, taking as actions the promotion and facilitation of the use of research among the users of knowledge, they are the stakeholders: decision makers, responsible for formulating policies, professionals, community members, patients, etc., This paradigm encompasses a wide range of activities related to the production and use of knowledge generated from research, such as the synthesis, dissemination and also co-creation of knowledge by researchers and users of knowledge that is conceived as an integrated knowledge mobilization.

The level of interactions between researchers and knowledge users (community) during the “knowledge mobilization” process varies in complexity and intensity depending on the nature of the research, the results and the needs of the knowledge users, which excludes marketing.

A Knowledge Mobilization strategy is aimed at increasing the effectiveness and impact of your research efforts and to plan a strategy, questions such as: what, why, who, how and when will be evaluated in terms of objectives and indicators are sensitive.

Levin (2011) pointed out that we are still witnessing multiple barriers that prevent the best use in practice of the available knowledge, among them: difficulties in accessing evidence, lack of confidence or interest in it, lack of skills to use it profitably. the evidence, lack of infrastructure to promote the results of the investigations, in addition to all the pressures and tensions that arise between the different groups involved in the process. In addition, there is a

need to expose and understand the pressures and limitations under which university teachers work, exacerbated by the Covid-19 Pandemic and the development of virtual education in universities.

A Knowledge Mobilization strategy involves the pretense of relations of a certain equality between all the actors in the process and advances on the ideas of extension or transfer from the university to the community. On the other hand, it is necessary in university teaching, in the body of researchers, to develop knowledge, skills and values oriented to the mobilization of knowledge and to learn to select and apply tools and techniques in order to put knowledge into action. The scientific community creates a large amount of knowledge, but only a small amount of it is mobilized in a shared, used and applied way. This lack of knowledge sharing is contributing to a gap between research, policy and practice, hampering social innovation and slowing progress.

The Knowledge Mobilization scheme must organize the access and mutual trust of the actors involved, and the infrastructure in promoting the research results.

The idea of the existence of a politicized social science concept developed by Naidorf and Perrota (2015), which also recommends possible actions that researchers could find to link the production of knowledge with the various groups or communities that could know and use it.

According to Naidorf (2014), the category of politicized social science is useful for the discussion and debate of scientific policies, since the concept accounts for a science committed to social transformation with autonomous and emancipatory characteristics, especially in social sciences. Undoubtedly, projecting the university and its research as a relevant actor in social changes requires it to establish symmetrical relationships with the community and its actors, away from traditional university ideas of extension and / or transfer.

It is also about going back to Oscar Varsavsky's Latin American thought that he advocated as a way of doing science linked to politics and, ultimately, to society, and which leads him to define politicized science as one linked to social commitment and willing to methodologically review the parameters that are part of the scientific structure based on social change.

Naidorf has described a vigorous metaphor where he accounts for the mobilization of knowledge as a permanent action of raking the earth, placing the seeds, and ensuring that those seeds flourish, with three dimensions: agenda, evaluation and mobility. The mobilization of knowledge is for Naidorf and Perrota (2015), an additional function of the social science researcher to find ways that link the production of social knowledge with the use of the same knowledge produced. Undoubtedly, the proposed mission is the progressive

incorporation into the consciousness of university research of concepts linked to the mobilization of knowledge and a politicized social science that accounts for links of equality and synergies between the university and the community.

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