Universities and knowledge transfer in the communication field. Letter

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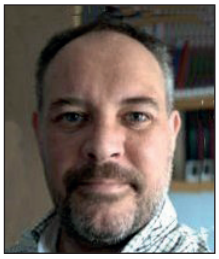

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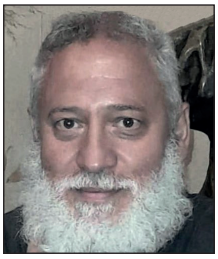

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Abstract

"What is the role of universities nowadays?" is one of the questions that those of us who work there should be asking ourselves. Knowledge transfer has emerged as academia's third mission and must drive social change and development. Specifically, this paper aims to analyze knowledge transfer's significance in the social sciences and, more specifically, in communication sciences, by looking at the call for the six-year academic research period on knowledge transfer in 2018 and taking into account what is happening in other disciplines. The contributions of the Spanish university community in terms of knowledge transfer fall behind other countries in our field. Only approximately 1% of international patents result from Spanish research. This disparity between these two realms demonstrates the need to promote knowledge transfer as the third helix of the triple helix of an interactive and dynamic university model in communication with institutions and social agents.

Keywords

Transfer; Transference; Knowledge; Research; Social sciences; Communication; Innovation; Development; University.

1. Introduction

Universities must be thought of as open, transparent, and able to engage with knowledge agents and focus their research on solving the complex problems facing society. Knowledge transfer should be collaborative, with multidisciplinary contributions and participation and guidance from institutions and social agents. With this in mind, the six-year academic research periods on knowledge transfer were launched. The concept of knowledge transfer is difficult to define, especially in the social sciences, which makes it difficult to find ways to make academic activities profitable so that they can be incorporated into this new approach. However, to achieve this objective, two questions must be asked: What does knowledge transfer mean, and what criteria justify its social or economic value? This dynamic concept must meet the shared demands of the global context and, at the same time, be understood within local socioeconomic and educational contexts. In other words, a university must bear in mind and focus on the fact that it is located in a specific place so that it is aware of the needs of its surroundings and takes them into account when defining its research agenda, as its results will in part depend on the culture of participation.

2. The university's roles

Universities' need to adapt to social needs is not new. To the two classic missions of universities –research and teaching– we must add a third for the 21st century: knowledge transfer. No one doubts that universities and other research institutions play a crucial role in the development of the knowledge economy (*OECD*, 1999) through their third mission (**Molas-Gallart** *et al.*, 2002), which includes

> "those activities related to the creation, application, use and operation of technology and knowledge of the university outside of the academic environment, through interaction with the rest of society" ["*aquellas actividades ligadas a la generación, aplicación, uso y explotación de la tecnología y el conocimiento de la Universidad fuera del entorno académico, mediante la interacción con el resto de la sociedad*"] (**Galindo-Melero**; **Sanz-Angulo**; **De-Benito-Martín**, 2001, p. 114),

which is definitely an addition to its traditional functions of teaching and research.

As the number of scientific institutions increases, effectively managing the dissemination and knowledge transfer of their research activity becomes more complex (**Geuna**, 1996); this is because the number of players involved –companies, administration, civil associations, etc.– is also increasing, as are the forms and means for dissemination, making knowledge management the cornerstone of the knowledge companies of **Drucker** (1994). Drucker calls for the creation of more complex knowledge management bodies, capable of not only interlinking various research groups but also bringing the other social agents into the fold, not just targeting them when deemed necessary. This concept is a major shift in the way in which research and knowledge transfer are understood due to the specific importance that this author places on each of them, as management is more important for this author than the research itself. As **Echeverría-Ezponda** (2008, p. 541) points out, Drucker's concept of the knowledge company has received quite a few criticisms, as

> "it calls into question the principal value of classical science: knowledge is an end in and of itself. It is not denied that it is an asset, but it is not the main one" [*pone[r] en cuestión el principal valor de la ciencia clásica: el conocimiento es un fin en sí mismo. No se niega que sea un bien, pero no es el principal*],

even if it has significantly influenced the way in which knowledge transfer is understood.

We can find many more approaches that, broadly speaking, say roughly the same thing, although they start from different areas of knowledge or focus on one part of the knowledge transfer process or another. From a more sociological perspective, **Gibbons** *et al*. (1994) refer to two major models of knowledge production: the first is the classical view –linear and isolated from other agents and even from researchers in other fields– which corresponds to the science-push model, from the scientific policy management point of view. In contrast to this first model, they present a second, more complex and variable model with greater collaboration among agents, though occasional and circumstantial (collaboration and interdisciplinarity embody the applicability of the knowledge acquired, but in a closed and predetermined context), which does not necessarily exclude or replace the first and, once again, is the result of the first model's evolution as the historical context in which it is developing has changed. As we can see, this transfer model has great similarities to the demand-pull management model.

Finally, although it originated approximately five years before the new millennium, the triple helix model returns to a focus on the management of relationships between the three major agents of development –the university, the administration (or government), and industry– but it takes this one step further. According to this theory (**Leydesdorff**; **Etzkowitz**, 1996), innovation stems from the relationships established between these three agents. Unlike other approaches, it does not prioritize the role of some agents over others and focuses the innovation process on the different forms of interaction that occur between these agents.

In this way, it can be observed how, over time, universities have taken on more roles –first teaching, then research, and, finally, knowledge transfer– in an increasingly complex environment, as not only has the historical context in which they carry out their work changed but this change has pushed them to permanently establish more relationships, not only among their university colleagues –from interdisciplinarity to multidisciplinarity and transdisciplinarity (**Castelló-Mayo**; **López-Gómez**; **Méndez-Fernández**, 2019)– but also with a growing number of increasingly heterogeneous social agents. Thus, their third mission appears to be characterized by complexity –in their policies (management), their dimensions (due to the agents involved), their processes (due to the forms it takes), their measurement (due to the valuation of transfers), their specific importance (due to the emphasis given to each of them), or even their philosophy (owing to the way in which science, innovation, and knowledge are conceived of). Knowledge transfer should be understood as community knowledge that allows research to fulfill its social role as a creator of solutions to technical and scientific problems, but also to other social or political problems (**Loiti-Rodríguez**; **Suárez-Villegas**, 2022, p. 12). This view of knowledge transfer demonstrates the need for interdisciplinary approaches to social challenges and collaboration between areas of knowledge (**Mato-de-la-Iglesia**, 2021).

> "A university must bear in mind and focus on the fact that it is located in a specific place so that it is aware of the needs of its surroundings and takes them into account when defining its research agenda"

3. Knowledge transfer in the social sciences

In disciplines related to pure science, the outputs of knowledge transfer, such as patents and objects created for technological and scientific applications, are more obvious. Companies themselves have implemented research and development and innovation (R&D&i) policies to remain competitive in their fields, turning to university departments and signing contracts to promote research to improve their performance. In contrast, it is more complicated to define knowledge transfer in the social sciences, as it does not have a productive purpose per se but rather a social, educational one; it requires investments whose result can only be seen in the long term, dealing with issues such as the integration of social groups, media literacy, or educational activities about gender equality. However, these disciplines possess a number of notable characteristics regarding knowledge transfer:

- First, by requiring a lesser degree of implementation, the gap between basic and applied research is usually narrower than in other disciplines.
- Second, these fields are net producers of content.
- Third, they possess –especially in this day and age– an extraordinary capacity to reconcile and/or confront technology with the cultural context in which it is applied (**Castro-Martínez** *et al*., 2008, p. 621).

Therefore, when we talk about the sciences, we must understand the entire spectrum of disciplines related to humanity, be it to gain larger shares of technological or scientific developments or achieve improvements in the social, educational, and family arenas or in the knowledge of history or culture in general, whose benefits lie in the density of critical capacity and analysis of social and personal reality.

With this in mind, the *National Commission for Assessment of Research Activity* (*CNAI*) launched a call for six-year academic research periods on knowledge transfer in 2018 with the intention of promoting a proactive awareness of academia and achieving greater interaction with social agents, establishing a more horizontal vision between universities and social agents of knowledge (*Spain*, 2018). This evaluation process served to elucidate what the different disciplines considered knowledge transfer to be, so that researchers could determine which activities could be considered knowledge transfer.

> "Knowledge transfer should be understood as community knowledge that allows research to fulfill its social role as a creator of solutions to technical and scientific problems, but also to other social or political problems"

In two articles on the six-year academic research periods on knowledge transfer, four communications researchers analyze which the products or activities are considered to be knowledge transfer and which are not based on the reports submitted by other colleagues (**Repiso-Caballero**; **Torres-Salinas**; **Aguaded**, 2019; **Repiso-Caballero** *et al*., 2019). Although they find that, on balance overall, the call has been positive, they were critical of the subjectivity of the evaluation processes and the disregard for certain tasks related to academic management, which are precisely tools through which research and knowledge transfer are disseminated –the publication of scientific journals or the organization of academic congresses that have a strong impact on the scientific community to facilitate meeting with other social agents. The reviews of the evaluations received from some of the applicants for the merit of transfer in the communications field revealed a lack of clear evaluation criteria, great subjectivity indicated by having received different evaluations for merits that were practically the same (nominally more than substantively different), and, obviously, great confusion on the part of those evaluated, as it was unclear to them what knowledge transfer meant.

4. Knowledge transfer in the communication field: categories

In addition to the various empirical studies on the academic community's motivations regarding knowledge transfer –among which professional promotion, economic remuneration, and networking appear to stand out– (**Jiménez-Contreras** *et al.*, 2002; **Link**; **Siegel**; **Bozeman**, 2007; **García-Pintos**; **García**; **Piñeiro**, 2010; **Padilla-Meléndez**; **Del-Águila-Obra**; **Garrido-Moreno**, 2010; **Aceytuno-Pérez**; **Sánchez-López**, 2014), considerable efforts have been made to identify and measure knowledge transfer (**Fonbuena**, 2019; **Mato-de-la-Iglesia**, 2021). Most of these contributions come from business administration and human resources (**García-Aracil**; **Palomares-Montero**, 2012; **Díaz-Catalán** *et al.*, 2019), while many fewer contributions from the humanities and social sciences focus on knowledge transfer (**Castro-Martínez** *et al.*, 2008; **Castelló-Mayo**; **López-Gómez**; **Méndez-Fernández**, 2019).

The concept of knowledge transfer in the communications field has been given different names. For example, the term "applied communication" is used in the English-speaking world; this term even lent its name to a scientific journal launched in the 1980s. Some justifications and methodologies of this concept have been offered by various authors from American universities (**Cissna**, 1982; **Boyle**; **Schmierbach**, 2019). In Latin America, for example, it is more common to hear the term "communication for social change" ["*Comunicación para el cambio social*"], since their more critical or political perspective of communication takes precedence.

The aims of knowledge transfer in the communications field can be classified into two types:

- One is instrumental –the set of services that can be provided to other disciplines, companies, or institutions to achieve effective communication, either of the knowledge of a subject (history, archeology, architecture, etc.) or of the ob-

jectives of companies and institutions to better enable them to reach their target audience or improve the internal communication of organizations.
- Another type would be the key benefit of knowledge transfer in political communication.

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Communication could be described as the gaseous form of any other type of power, as some entities seek to influence citizens through the information environment in which they disseminate their messages in a relatively disguised manner. Therefore, knowledge transfer in the communications field is aimed at empowering citizens in the face of attempts to manipulate information or interlace public interest with spurious interests in any other way that might affect information processes. Designing mechanisms to sift through information, as well as resources to guarantee citizens' right to information, will prove essential in knowledge transfer. Through their websites, Spanish research groups have made a significant effort to disseminate their projects, which is another level of knowledge transfer, as they are available to institutions and other agents interested in putting their results into practice (**Claes**; **Barranquero**; **Rodríguez-Gómez**, 2021).

4.1. Essential in nature

The aim of knowledge transfer in the communications field is political in its most radical sense, relating not only to the activity of political agents, parties, and institutions but also to the activity of the community such that it can become aware of itself as an object that must play a part in its own destiny or, in more tangible terms, in the decisions that can make it essentially free and egalitarian as a society. Therefore, universities can set up observatories, blogs, studies, and reports aimed at reporting on the democratic quality of society, whether their criteria be the transparency of political powers, the functioning of institutions, the consideration for different groups, the defense of common values (gender equality, ecology, etc.), the promotion of culture and sports, the fostering of critical thinking when faced with fake news, the development of media literacy projects, the defense of fair play, or the prevention of addictions, or a myriad of activities aimed at harnessing the potential of new technologies directed at quality communication, backed by the prestige of the leadership from researchers who are committed to society (**López-Pérez**; **Olvera-Lobo**, 2016). This critical function can also be carried out through art, a sector in which, through technology development, communication has currently taken on a special role by means of audiovisual products, cinema, advertising, and other products that act as a mirror of society, raising awareness of social problems. Critical thinking is a value implicit in these activities –their backbone– through which the purpose of transferring knowledge to society can be seen.

Communication empowers citizens with critical thinking when public media are held accountable and there are criteria to measure the quality of communication. These criteria include verification, rigor, and public interest but also criteria related to the sense of the media's social and educational responsibilities: social integration, citizen participation, the promotion of constructive debates on issues essential for democratic coexistence (such as civic education), awareness of ecological culture or gender equality, and respect for different social identities.

4.2. Instrumental in nature

The centrality of communication in networked society has exponentially increased the number of other professional roles (**Genaut-Arratibel**, 2012; **Salaverría-Aliaga**, 2016). Technological changes have altered our social skin. Effective communication determines the success of institutions, companies, and even individuals. Ways of working, modes of consumption, and personal relationships –everything passes through a communicative interface. Communication has become one of the preferred means for effective corporate organization when it comes to commercial marketing strategies, customer service models, electoral campaigns, and specialized information service initiatives for guiding institutions, the media, and social agents. Therefore, there is a very wide range of opportunities for knowledge transfer in line with the new work niches in communication, which should be explored by university departments with the aim of guiding teaching, research, and knowledge transfer to educate future professionals. New graduates in the communications field are not only opting to pursue journalism, advertising, or audiovisual communication. These figures have morphed into a variety of hybrid profiles that require practical intelligence and communicative imagination in addition to technological training.

An example of this type of initiative is the *Laboratorio de Actualidad* (*Labak*), a spin-off from the *Universidad del País Vasco* that is led by Professor María-José Cantalapiedra. This company, which was launched in 2018, is dedicated to the management and distribution of information content with the aim of developing and utilizing technological products related to institutional, business, associative, and journalistic communication on the basis of work carried out by researchers from the *Bitartez Group*. It grew out of the design of a prototype for designing targeted and automated agendas, a result of a project selected in a call for applied research; this design was derived from the results of previous research that, when understood, enabled not just the dissemination of said results but also the designing of tools as well as access to classic contributions of knowledge transfer, such as patents, design registrations, etc., through the formation of multidisciplinary groups. These alternatives can be foreseen by active communication departments if they maintain open channels with the social and business agents in charge of developing these new professional roles.

4.3. Networks and intermediation

Initiatives that give professionals, researchers, and public representatives the opportunity to meet, such as knowledge networks, congresses, and the management of scientific journals, should be considered another supplementary form of knowledge transfer, as they represent other forms of knowledge transfer and should thus be recognized as such. As **Nonaka** and **Takeuchi** (1999) point out:

> Knowledge transfer in the communications field can be classified into two types: one is instrumental and the other, political

> "The production of complex knowledge is precisely a process in which knowledge cannot be easily codified and transferred (tacit knowledge) and needs to be 'understood and transmitted' by direct interaction within a network or micro-community of knowledge".

Networking and collaborative and interdisciplinary work are necessary to achieve sufficient knowledge transfer to address the different perspectives on human reality. For example, technological developments will be most useful if they are accompanied by corresponding studies on psychology, ethical standards, and a legal regulation that identify their effects on citizens.

5. Conclusions

Knowledge transfer has been more widespread and, therefore, more proceduralized –if we may use the expression– in the pure sciences –be they physics, chemistry, or mathematics– that provide industry with solutions, the object of intellectual property obtained through patents. However, it is not always so easy to demonstrate knowledge transfer in the social sciences, the benefits of which are more difficult to patent. This transfer is diffuse, more intangible, and aimed at empowering citizens. With respect to merits in research, certain judgment criteria could help to define and distinguish it. In turn, knowledge transfer is associated with applied research, and the research tradition has built a mental framework in which aspiring to a purely intellectual and linguistic embodiment, separate in construction and constructive terms, is seen as inappropriate for the humanities and social sciences, which are geared toward thinking rather than doing.

The six-year academic research period on knowledge transfer represents a shift in public policies that presents a model of an open, dynamic university that engages in dialog with institutions, social agents, and companies. It has also brought this concept, which has existed in academia and university policy since its latency, to the forefront. A preexisting conceptual vagueness permeated this call, especially in some areas such as the one in question, and this was demonstrated by leading researchers in this area. One could say that the dialog that enriches the other two missions of universities –education and research– is the guiding principle of the call for the six-year academic research period, but it is still not without its challenges, both technical (circumstantial) and conceptual (structural). In fact, the six-year academic research periods on knowledge transfer themselves have become objective proof –and, as such, identifiable and analyzable– of the difficulty in measuring and assessing knowledge transfer in the communications field, as well as in finding ways to make it effective.

Last but not least, to improve knowledge transfer, it will be necessary to streamline university bureaucracy and offer more dynamic and agile ways to manage the implementation of such transfer projects. Moreover, such bureaucracy is not a problem that rests solely on the teaching and research staff. The academic community has been aware of this shift towards excessive bureaucratization for years (**Castro-Martínez** *et al.*, 2008; **Padilla**; **Del-Águila**; **Garrido**, 2010), and it seems that, neither the administrations nor –to a lesser extent– the universities have found a solution thus far: the lack of flexibility and the decentralized management and support platforms for research and knowledge transfer tasks remain, even today, a great burden. In another way, the increasing bureaucratization of academic work will ultimately discourage the undertaking of any initiative that involves a burden that does not have sufficient compensation and recognition, an effect in which the gender gap in the six-year academic research periods could also be observed.

Universities should make their researchers' ability to provide services to public and private entities known. They should do so as a shared merit of their institution, a virtue associated with its dedication to service to society, as it would be short-sighted to depend exclusively on the constant and poorly paid labor of those who at times sacrifice their academic life to implement good ideas and projects developed in the university environment. In summary, the possible applications of the so-called dissemination model to keep the gears turning and create knowledge transfer include redefining the competencies and resources of the management units of knowledge transfer.

> Initiatives that give professionals, researchers, and public representatives the opportunity to meet should be considered another supplementary form of knowledge transfer, as they are indeed other forms of knowledge transfer

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