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SCHOLARLY COMMUNICATION: A DISCIPLINE THAT SHOULD BE PROMOTED

COMUNICACIÓN ACADÉMICA: UNA DISCIPLINA QUE NOS CONVIENE IMPULSAR

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Abstract: Scholarly Communication is the name given to a wide field of activities related to the different ways in which the authors of academic works publish and disseminate their results. It includes tasks whose connections to this publication are not only direct, but mutually influenced. These are the tasks of dissemination, treatment, analysis, and information retrieval, such as those carried out by databases and other agents. But the issue goes even further and other activities must be added, equally interconnected, such as preservation and increased visibility, along with specialized actions carried out by university libraries. It is concluded that academic communication, despite its breadth and diversity (or precisely because of it), should be studied by a unified discipline that, thanks to a holistic vision, helps to overcome its main problems. This paper presents some of these problems and defends the need for both the field of activities itself and the discipline that studies them to receive a clearer and more determined impulse.

Keywords: Scholarly Communication; Scholarly Publishing; Academic Journals; Academic Databases; Open Science; University Libraries.

Resumen: Comunicación académica es el nombre que recibe un amplio campo de actividades vinculado con las muy diversas formas en las que los autores de trabajos académicos publican y difunden sus resultados. Incluye tareas cuyas conexiones con esta publicación no solo son directas, sino que se influyen mutuamente. Se trata de las labores de difusión, tratamiento, análisis y recuperación de información, como las que llevan a cabo las bases de datos y otros agentes. Pero la cuestión aún va más lejos y a estas debemos añadir otras actividades, igualmente interconectadas, como la preservación y el aumento de la visibilidad, junto a actuaciones especializadas que realizan las bibliotecas universitarias. Se concluye que la comunicación académica, pese a su amplitud y diversidad (o precisamente por ello), debería ser estudiada por una disciplina unificada que, gracias a una visión holística, ayude a superar sus principales problemas. En este trabajo se presentan algunos de estos problemas y se defiende la necesidad de que tanto el ámbito de actividades en sí como la disciplina que las estudia reciban un impulso más claro y decidido.

Palabras clave: comunicación académica; publicaciones académicas; revistas científicas; bases de datos académicas; ciencia abierta; bibliotecas universitarias.

1. Introduction

In science there are things that are *discovered*, such as planets, and things that are *proposed*, such as human rights (Bunge, 2013). Scholarly communication is a complex activity that is not always seen as a discipline given the diversity of fields that compose it, in the typical situation of "the trees do not let you see the forest".

If its existence as a discipline in its own right were accepted —something we claim in this paper—, scholarly communication would undoubtedly belong to the realm of things that are "proposed" and not so much to those that are "discovered".

In any case, the next observation is that for a field of study to grow in maturity, gain self-critical capacity and be able to contribute innovations, it is necessary that, firstly, it be recognised as a discipline in a conscious and transparent manner. And secondly, once it is so recognised, it needs to gain researchers for its cause.

Given the central importance of scholarly communication for the future of humanity, it is in our common interest that scholarly communication is perceived unambiguously not only as a label that can be applied to a variety of activities, but as a scientific discipline in which it is in our interest to invest a lot of effort.

So, in this task we set ourselves. We will begin by examining some proposals for defining scholarly communication as a field of research. We will then make a selection —necessarily limited— of some of the characteristic problems that make up this discipline, together with what we believe may be some of its research gaps. We will then say a few words about this monographic issue and, finally, we will close with some conclusions.

2. What is scholarly communication?

For this presentation on the discipline of scholarly *communication*, we will refer to three seminal definitions, two of which come from books, a vector that is rarely used to communicate research results, but which is the format for presenting concepts and ideas that have gained at least some form of consolidation. The third, as we shall see, comes from an influential association in the world of university libraries.

According to the first of the works we will refer to here, Anderson (2018), scholarly communication consists of "the many different ways" in which researchers, especially those from academia, "share information with each other and with the rest of the world about the work they are doing" (Anderson, 2018: 5).

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Another of the discipline's leading authors, Wright (2019), describes scholarly communication as a system, and specifically refers literally to "the system of creation, evaluation, dissemination and preservation of scholarly writing" (Wright, 2019: 6). The point that interests us in this case is the one that refers to the preservation aspect, since it is not in vain that the work relates scholarly communication and university libraries.

The Association of College & Research Libraries, a division of the influential American Library Association, defines it as:

Scholarly communication is the system through which research and other scholarly writing is created, assessed for quality, disseminated to the scholarly community, and preserved for future use. The system includes both formal means of communication, such as publication in peer-reviewed journals, and informal channels, such as email lists (ACRL Scholarly Communication Committee, 2003: 1).

Based on the above, and if we may synthesise, we would like to present the following. Scholarly communication is the unifying term to describe an emerging discipline —only partly recognised— that is concerned with the wide range of issues that have to do with the ways in which research findings or other knowledge are communicated by their authors, disseminated through different vectors, stored, and processed through information systems, and preserved and analysed by a variety of sectors and actors.

On the other hand, and before proceeding further, we would also like to clarify the term "academic", which sometimes causes confusion. In the works we have used, especially those cited in the preceding paragraphs, academic includes scientific, at least the science that is done in the academy, or in relation to the academy, i.e., in universities and research centres. It is broader than the term "scientific" because academic activities include other aspects, such as training, and because they include forms of knowledge development that do not always coincide with scientific research, such as teaching, or the development of methods or conceptual models.

Consequently, in what follows we adapt the convention that scholarly communication is mainly concerned with the communication of research results, but also with other typical productions of the academy, such as teaching materials or dissemination and transfer works. However, the communication of scientific results is the part that represents the greatest weight in this discipline, to the point that they can sometimes be confused as one and the same thing (Campos *et al*, 2021). This is how we are going to discuss what contributions it could have for this field of activities (which is self-evident also being recognized as a discipline in a general way, and beyond what a group of authors such as those mentioned have managed to establish.

3. Should scholarly communication be recognised as a unified field of activity?

Hopefully the question sounds rhetorical. The answer then would be easy. But we are in an area where it is not enough to have something that "seem" adequate. The most important thing is that, at least we can reason it out, and from here, higher forms of verification of that something reasoned are produced so that it begins to be based on evidence.

The point is that scholarly communication is a field of activity that has the dual characteristic of being both broad and diverse. Moreover, because of recent transformations in our society, it is constantly growing and diversifying. For example, there are more and more actors —business and interests— involved in the analysis and retrieval of scientific information with databases such as Lens and Dimensions, and several others that have come to disturb the, until now, calm waters in which Scopus and Web of Science navigated.

What matters is that, from this point, we can say at least two things. The first is that the deep union of the elements that make up this discipline is not always perceived as such. This is, again, the effect of "the trees not seeing the wood for the trees". We have cited three sources as authoritative precedents, but the truth is that there is no abundance of acknowledgements. We are not, precisely, dealing with a field like economics or sociology —fields which, by the way, in the 19th century were not yet recognised as such.

However, we must ask ourselves whether considering the broad field of activities that the preceding theories show us as a unit —for example, if we accept that it is a scientific discipline with its own character— brings any advantage for the advancement of knowledge. We believe it does, and the reasons are several.

But let us start by considering the opposite hypothesis. The advantage could be lost if the link between these activities were unclear or highly dubious. However, there seems to be no doubt about the deep linkage that exists around the highly connected complex of activities involved in publishing research results, disseminating, and promoting them, and then preserving them, so that any results can be re-used in new cycles of knowledge production.

On this side, although we do not rule out that it can and should be subject to as much scrutiny as necessary, it seems that the deep unity of activities can be at least provisionally accepted.

From here it follows logically, as in a thought experiment that Einstein was so fond of, that if there is such a unified field of activities, it can only improve if it is given a holistic look. We can perceive the benefits that such activities could obtain as research accumulates in the background of which this unified vision forms part.

4. Some significant problems

Under this premise, there are many problems that could be given a new opportunity for solution, thanks to such a unified approach. We will point out seven of very different natures, as a sample of the enormous variety of unsolved —and even unidentified— problems:

4.1. Open science as the future of science and knowledge

There are a variety of problems surrounding something that most evidence points to as the manifest destiny of the future of knowledge. First, problems of conception. Even in academic circles, there is still no clear perception of what open science exactly is (Anglada and Abadal, 2018).

Then there is a serious funding problem. Simply put, if journals are to be open access, someone must fund them, i.e., someone must assume the APC —article processing charge—. Certainly, there is a proportion of publishers and journals supported by universities (Repiso, Orduña-Malea *et al.*, 2019; Repiso, Torres-Salinas *et al.*, 2019). But this only affects, as we say, a fraction of them. One solution is for APCs to be paid for by the authors. But this may be works partly in the global north, but little or not at all in the global south. We need creative minds to serve this problem, and a good glimpse of solutions can be found in so-called transformative agreements.

Another issue of concern is that the idea persists that an open format journal has less academic prestige than traditional journals, which may be generating citation habits biased in favour of traditional journals, when in fact, open format publications should facilitate citation more. Fortunately, this bias does not occur in all disciplines, which should allow us to be confident that it will be corrected.

4.2. The formats of the investigation reports

The most used, when one is explicitly mentioned, is the so-called IMRaD model (Wu, 2011). This format, as is well known, stands for Introduction, Methods, Results and Discussion. It is a model that is almost undisputed for its effectiveness and for the transparency it obliges authors to provide (Codina, 2021).

But is this really the best structure for research reports? To give just two examples, a journal from the prestigious Harvard University —HKS *Misinformation Review*— uses a structure that contains these elements but subverts their order and adds some new elements. The reason is that the journal aims to have a greater impact on professional and not just academic audiences and the strict IMRaD format seems to hinder these objectives.

Another question: following the growing momentum in favour of seeking this greater social impact, perhaps it would be time to include an "I" for

implications in this structure, whichever one is retained in the future, be it IM-RaD as we know it or some variation.

4.3. Training in article evaluation and in science evaluation

Let's start with a question: how is it possible that no formal accreditation is necessary to be able to evaluate scientific articles? We are referring to the evaluation that manuscripts submitted to journals routinely undergo (Abadal, 2017). It is a task, as they would say in communication theory, of *gatekeeping*. Literally, of letting research reports through —or not— (Repiso, Torres-Salinas, *et al*, 2019).

Would it not make sense that for this crucial work, candidates for evaluators should be able to show some accreditation of training in this field and not only —as is currently the case— with research experience? The answer is that, whether it is logical to demand this specific training, the important thing is that it is not feasible, because there is no regulated offer in this field.

There are numerous isolated training initiatives, tutorials, advice, recommendations, etc. (Vesnic-Alujevic, 2014). But, as far as we know, there is no recognisable, systematic offer in science evaluation as there may be in other fields where postgraduate degrees for specialisation are more common.

The only thing that can explain why there is no regular provision of formal training is that scholarly communication is, firstly, hardly recognised as a unified field of activity; and, secondly, it is ignored as a discipline.

Undoubtedly a determining factor is that this activity is outside recognizable economic circuits. It provides advantages —which, in the end are economic— to its practitioners, but it is not perceived as such in a society accustomed to linking its training offers with recognizable markets as such.

4.4. Quantitative indicators in scientific evaluation

One of the most important topics of debate of our time, albeit in the relatively small world of scientific evaluation specialists —another side of the above coin— concerns the role of quantitative indicators in evaluating scientific careers or institutions and even countries (Cantu-Ortiz, 2017).

The debate, at least for specialists, will be familiar: on the one hand, the theorists who detest the use of quantitative indicators, such as the famous impact factor —Journal Citation Reports (JCR)—. On the other hand, the committees of the evaluation agencies that continue to use these indicators in an ironclad manner. They are aided by numerous research practitioners, perhaps the majority, who strive to publish in scientific journals much more based on the journal's quartile in the JCR or other indicators than on the subject area of the journal (Bohannon, 2016; Callaway, 2016).

We could ask ourselves a question very similar to the previous one: how is it possible that we do not have a widely shared paradigm —in Kuhn's sense—, as other disciplines have in their respective fields, on how to evaluate scientific careers? The questions can be multiplied, in fact: how is it possible that there is no widely shared paradigm on how to evaluate academic careers by qualitative criteria? Again, only the non-recognition of scholarly communication as a field of study seems to be behind all this.

4.5. The costs of academic databases

The anomaly in the open science landscape —with all its problems, see point one— is the following scenario: *open access* is gaining ground, and if something does not prevent it —the problems again, from point one— it will be the future of science. Incipient solutions have been found, albeit very partial, in the form of author-owned APCs or transformative agreements between universities —or consortia of universities— and academic publishers.

Well, in this future —and partly present— it happens that the two main scientific databases, namely the very prestigious Scopus and Web of Science (Martín-Martín *et al.*, 2018) are absolutely closed products. Well, not absolutely. In recent times they have started to release a very limited part of their contents in a very timid way.

The reason for their being closed products, whether we like it or not, is justified. It is the same reason that one cannot pick a book off the shelf in a bookshop and expect to get it for free: publishers pay their staff and their suppliers, and bookshop employees expect to be paid at the end of the month. For this important infrastructure of scholarly communication, the databases, the constraints are the same. They must meet production costs, pay salaries and pay their suppliers. The problem is the anomaly that this situation represents in the context of open science where, albeit in an incipient and very improvable way, there are already solutions.

4.6. Recycled text

This may seem a minor problem compared to the previous ones. But we like to leave in this very brief account a very varied sample of problems. Recycled text is how specialists propose to identify the sometimes-misnamed self-plagiarism (Codina and Cortiñas, 2022). The issue is the following: first, self-plagiarism is a contradiction in terms. Plagiarism implies taking over text or content from third parties. Then, if it is one's own content, it cannot be plagiarism. Hence, scholars prefer to speak of "recycled text" (Moskovitz, 2021).

Certainly, the use in more than one publication of the same text by its author, generally without attribution, is not without its problems. They are

not comparable to those of plagiarism, because plagiarism has no cases of acceptance, while recycled text does. To give two examples: in some journals, even in entire fields of science, such as physics, before submitting a manuscript to a journal, it is necessary —or at least possible— to upload it to a repository. As soon as the manuscript is accepted and published, it is clear that this is a case of recycled text: important parts of the accepted article were previously published as a *preprint* (Weber-Wulff, 2019).

As another example, doctoral theses are increasingly acting in the social sciences as engines of genuine original research, as has been the case for years in the sciences. This means that some theses, during and after, generate scientific articles. When it is "during", the recycled text will affect the presentation of the thesis: it will contain recycled text. This may be accepted or not, it may depend on the university. But when it is "after", for many journals it is self-plagiarism, which we have already said is nonsense, but journal editors using antiplagiarism software detect it as such.

We need a theory, or as close to a theory as possible, to tell us under what conditions recycled text is acceptable, both ethically and legally. But we also need a theoretical consensus, if possible, based on evidence, to help journals decide when recycled text is acceptable. For example, it is clearly not the same to use the methodology or part of the theoretical framework in more than one publication as it is to use the results. Or it is not the same to recycle content for different audiences or in different languages.

4.7. Academic SEO and university libraries

Should authors and other actors involved in scholarly communication undertake actions that might normally be identified with search engine optimisation to amplify the impact of their work? This may seem like an obvious answer, and I wish it were the case, but we believe the question is far from straightforward.

Firstly, the term SEO, which should indicate an ability to adapt digital content to the web environment, *is* sometimes met with suspicion, as if SEO is always a matter of "pleasing" Google, and somewhat, at least in part, spurious. However, SEO can be seen as the responsible, conscious and honest effort to ensure that academic content reaches its intended audience. In this sense, academic SEO (Beel *et al.*, 2010)under this or a more neutral name, seems to be very welcome in the context of scholarly communication.

However, there are other outstanding issues. On the one hand, we need more studies focused on this area to reach something that could resemble a canon of good practices for academic papers to improve their visibility (Rovira *et al.*, 2018). On the other hand, there is also no consensus on who are the main

actors in academic SEO: the authors themselves, the scientific journals, the research groups or departments?

There is also an exciting topic that has yet to receive in-depth attention, and that is the crucial role that university libraries can play in academic SEO. University libraries have already shown in recent decades their prodigious ability to adapt. Today it can be said that it is impossible for a university to do good research without a good university library. Therefore, we are still awaiting the work that would allow us to establish as clearly as possible in what ways university libraries can decisively boost the SEO of their researcher's productions (Ortúzar, 2014).

The truth is that many university libraries are already doing so with numerous resources, among which repositories are one of them (Morales-Vargas and Codina, 2019), as well as with other instruments such as scientific production portals. But a work programme specifically oriented towards studying the role of university libraries in the SEO of scholarly communication could certainly turn the whole situation around.

5. This monographic issue

With the above list of problems, we want to illustrate the diversity of aspects that a future science of scholarly communication could help to elucidate. However, to offer alternative solutions, the editors of this monographic issue of **indexocommunication** present a series of interesting articles grouped under the title "Science, its scholarly communication and its dissemination to broad audiences: a multidimensional phenomenon".

Readers have an excellent opportunity in this issue to dive into some of the main problems and possible solutions for scholarly communication. They are a good opportunity to see the variety of aspects that scholarly communication is capable of successfully addressing, to compensate for the list of problems we have outlined above.

The paper that opens this monograph is an excellent contribution to the first of the issues addressed above, as the authors present the results of a study that analyses open access journals in the field of communication and finds biases in favour of citing articles in traditional journals.

The use by authors of articles of social networks to disseminate their work is instead the object of study of the second contribution in this issue. The interested reader will find here the keys to the use of these platforms as part of what some of us would call academic SEO.

The intense relationships between scholarly communication and the major academic databases are explored through a panoramic literature *review* — scoping *review* — and examines in detail the way in which databases are influenced by journals, but journals are also influenced by databases.

Another exciting relationship that will undoubtedly appeal to many interested in journalism and science is the relationship between social media and science journalism. On this occasion, the authors also use a *scoping review* to develop their research.

Case studies are a formidable tool for advancing knowledge in almost any discipline. As far as this monograph is concerned, another paper explores with this technique the way in which a Brazilian public university developed its efforts to communicate everything related to the Covid-19 pandemic.

Last, but not least, genuine academic SEO work investigates, analyses and compares the way in which academic journals take —or do not take— profitable actions to optimise their visibility in the Google search engine in order to increase their ability to impact broad audiences.

Taken together, six research projects that not only lay the groundwork for diverse solutions to some of the most significant problems in scholarly communication, but each and every one of them can inspire new research.

6. Conclusions

We have only seen some dimensions of scholarly communication, because there are still huge territories that we have not even mentioned, such as research in favour of more inclusive science communication, from aspects of authorship to language registers. Or aspects such as the management and administration of scientific journals (Baiget, 2020), which should have a whole section in scholarly communication. Nor have we discussed the broad debate surrounding peer review (Hames, 2007) and open forms of evaluation, or the debate on whether journals with a *numerus clausus* or the phenomenon of megajournals serve science better.

In any case, some of us believe that it is very important to advance the powerful idea that there is a whole complex of activities around the communication of the results of academic activities —mainly research— that deserves to be considered as a field under the same umbrella: the scholarly communication.

Parallel to this consideration, the recognition of scholarly communication as a unitary discipline should be reinforced, which should bring together many fields of study that now appear to be separate. Note that they are two different things, as are history on the one hand and historiography on the other. The recognition of the field of activities, on the one hand, and the discipline that deals with its study, on the other. In this way, we could say that scholarly communication is the discipline that aspires to study the activities of the same name.

Another consequence is that we increasingly need two things that are normally identified with a discipline. On the one hand, regulated studies on scholarly communication; and on the other hand, more journals that either regularly include scholarly communication as part of their accepted subject areas, or journals with a clear focus on this discipline.

We only have a winning option if recognition of scholarly communication gains ground. The simple reason is that science communication based on best practice can only lead to better science.

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