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Spanish Scientific Output in Communication Sciences in WOS. The Scientific Journals in SSCI (2007-12)

La producción científica española en Comunicación en WOS.
Las revistas indexadas en SSCI (2007-12)

ABSTRACT

Although the field of Communication Sciences has been slower to organize in Spain than in other European countries and the United States, in recent years it has shown a clear tendency to growth. One way to trace this process is by analyzing scientific production, and this paper focuses on this aspect. Using bibliometric methods, we analyze scientific journals and papers indexed in Thomson Reuter's international database, the Social Science Citation Index (SSCI) for Communication. While the focus of the study is Spanish scientific output, the results are related to international activities in this field. The three Spanish journals included in SSCI in recent years: «Comunicar», «Comunicación y Sociedad» and «Estudios sobre el Mensaje Periodístico» were studied in detail. The results show that Spain plays an important role in Communication journal publishing (4th in the world) and as a producer of scientific papers (6th in the world), with a remarkable evolution, in quantitative terms, especially in the last five years. The inclusion of these three Spanish journals in the international database has been an important contribution to the country's visibility in this field, but there is still a need to promote international collaboration to achieve greater impact and openness in the scientific community.

RESUMEN

Aunque el campo de las Ciencias de la Comunicación en España ha tenido una organización más tardía que en otros países de Europa y Estados Unidos, en los últimos años ha evidenciado un claro proceso de crecimiento. Una forma de rastrear este proceso es a través del análisis de la producción científica, por lo que este trabajo se centra en este aspecto. Utilizando métodos bibliométricos se estudian las revistas y los documentos publicados en la base de datos internacional Social Science Citation Index (SSCI) de Thomson Reuters en la disciplina Communication. Si bien el foco es el estudio de la producción española, los resultados se ponen en relación con la actividad internacional en este campo. En cada caso se analizan con mayor detalle las tres revistas españolas incluidas en SSCI en los últimos años: «Comunicar», «Comunicación y Sociedad» y «Estudios sobre el Mensaje Periodístico». Los resultados obtenidos muestran un importante papel de España como editor de revistas sobre Comunicación (4º del mundo) y como productor de artículos (6º del mundo) con una notable evolución –en términos cuantitativos– en los últimos cinco años. La inclusión de las tres revistas españolas en la base de datos internacional ha sido una importante contribución a la visibilidad del país en esta disciplina, aunque aún es necesario promover la colaboración internacional para lograr un mayor impacto y apertura a la comunidad científica.

KEYWORDS / PALABRAS CLAVE

Bibliometric studies, Spanish journals, Web of Science, SSCI, impact, scientific production, visibility.
Bibliometría, revistas españolas, Web of Science, SSCI, impacto, producción científica, visibilidad.

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1. Introduction

It is possible to find Communication literature in Spain dating from the end of the XIX century through to the first works that deal with the study of the press, public opinion and cartoon humor. However, the consolidation of Communication as an academic field has been slower in Spain than in Europe and the United States (Jones, 1998).

Despite the subsequent strengthening of this discipline in Spain, a major evolution has taken place through different stages of emergence, consolidation and development (Martínez-Nicolás, 2009). Within each of these stages, a critical grouping of institutions, professionals and researchers has been built up, facilitating the institutionalization of the field. Not only has this process been possible thanks to the changes in the Communications systems and in their internal logics, it has been also possible due to the significant role that Communications increasingly plays in the development of our social systems (Moragas, 1997). The creation of academic and professional journals, which have served as a meeting point for the debates on methodology as well as diffusion channels for the results obtained, has played a role in this field's evolution and development.

From the appearance of the first publications on Communication to now, more than 40 national titles with different degrees of periodicity and continuity can be tracked. The existence of multiple publications reflects a will to consolidate a field in continuous growth. This trend is also evident through the increasing emphasis on improving the quality of publications, which have to adapt themselves to the strict criteria applied by evaluation agencies. Achieving the incorporation of Spanish journals into different databases constituted one of the main challenges, as this involved the recognition of the quality of such publications and their subsequent opening to the international community.

Many efforts have been carried out to improve the quality of Communication journals. Among these are the work carried out by publishers, who have prompted important changes to adapt themselves to the international rules for scientific publishing. Similarly, the work carried out by professionals linked to the field of evaluation, who have designed and applied quality indicators to Spanish publications so that they are valid within the existing evaluation systems, should also be acknowledged (Giménez, 2011).

The incorporation of Spanish journals into international databases has also contributed to identify the publications with greater quality within the field.

Authors such as Fernández-Quijada (2010) have used these criteria to identify the major publications in the field within resources such as DICE, Latindex and In-RECS, constituting one of the criteria for positive evaluation within evaluation Studies by Social Science and Humanities journals such as the REHS project by CSIC (Giménez & Alcaín, 2006). These criteria are also used in other initiatives such as MIAR (led by the University of Barcelona) or the In-RECS platform (led by the University of Granada).

In the last few years, this tendency to include Communication journals within international databases has impacted on the overall area of Social Sciences. In the case of the Social Science Citation Index database, there has been a noticeable increase in the presence of Spanish journals: between 1997 and 2007, there were around 2 to 8 journals indexed, increasing up to 16 in 2008 and reaching 55 in 2011. In recent years, three Communication journals have been indexed: «Comunicar»; «Comunicación y Sociedad» and «Estudios sobre el Mensaje Periodístico».

This article describes and analyzes the main features of the production carried out by these three publications, contextualizing our analysis within the overall Spanish production in relation to the international community. This study intends to complement the results obtained by different authors, who have examined the field by analyzing its origins, contents and themes (Cáceres & Cafarel, 1993; Jones, 2005; Martínez-Nicolás, 2009; Peres, 2010).

To this end, the field of Communication is analyzed from a bibliometric perspective, applying different indicators that provide quantitative information. Other similar studies in this field have analyzed articles published in Spanish journals (Martínez-Nicolás, 2011); the different co-authorship typologies (Fernández-Quijada, 2011); the theses produced on a specific topic (Repiso & al, 2011) or the particular features of Spanish journals (de Pablos & al, 2012). While there are some earlier studies which apply bibliometric techniques in their analysis, for instance, of the characteristics of production in the most relevant ISI journals (Castillo & al., 2012), or those of which carry out the study of a specific journal in detail (Roca, 2012), the recent inclusion of these three Spanish journals in the JCR means that no studies have been carried out on them thus far.

2. Materials and methodology

The source of information for this study has been the Web of Science database by Thomson Reuters. Despite the well-known limitations this database has

with regard to thematic and linguistic variety, as well as to the underrepresentation of journals from non-Anglophone countries (Gómez & Bordons, 1996), it nevertheless constitutes one of the most recognized international multidisciplinary resources. Furthermore, it allows for a precise selection of journals related to a specific discipline, while it also adds information about the documents' impact, as well as to the institutional affiliation of the articles' author.

The SSCI and A&-HCI databases have been used for selecting documents on Communication. These databases contain documents belonging to Social Science and Humanities journals starting from 1956 and 1975 respectively. By using the Journal Citation Report's category index (JCR), it was possible to retrieve information about all the journals under the «Communication» category since 1997 (first on-line edition). Data has been obtained on:

- Communication journals: number of journals per year; number of articles per journal; citations received; Impact Factor; and country of publication. All basic bibliographical information has also been included regarding Spanish journals
- Communication documents: the scientific production in SSCI and A&-HCI has been retrieved by carrying out a search using WoS search categories (wc=Communication). The indicators obtained in-

clude: number of documents per database; evolution of production; production by country, institution, journal and discipline (for documents in journals classified under multiple categories).

YEAR	N° Journals	Total Articles	Average art./journ.	Total citation	Average citation/art.	Max IF	Average IF
1997	36	807	22,42	7242	8.97	0.986	0.422
1998	38	906	23,84	8401	9.27	1.407	0.512
1999	43	1000	23,26	9394	9.39	1.395	0.487
2000	43	978	22,74	9663	9.88	1.800	0.527
2001	43	973	22,63	10244	10.53	1.725	0.490
2002	42	955	22,74	11561	12.11	1.250	0.546
2003	44	1110	25,23	13573	12.23	1.612	0.617
2004	40	1054	26,35	13861	13.15	1.526	0.731
2005	42	1157	27,55	15146	13.09	1.509	0.738
2006	44	1309	29,75	17764	13.57	1.612	0.742
2007	45	1440	32,00	21250	14.76	2.030	0.847
2008	45	1441	32,02	27019	18.75	2.226	0.958
2009	55	1787	32,49	35530	19.88	3.639	0.947
2010	67	2087	31,15	39340	18.85	2.029	0.881
2011	72	2449	34,01	44043	17.98	2.710	0.914

Out of the total number of documents on Communication, Spanish production was identified (cu=SPAIN), obtaining the same indicators as for world production and adding the following: proportion of Spanish and world documents as well as number of signing authors per year.

A deeper analysis has been carried out for the three Spanish journals included in the JCR database: «Comunicar»; «Comunicación y Sociedad» and «Estudios sobre el Mensaje Periodístico».

3. Analysis and results

3.1. Communication Journals in JCR

From 1997 to 2011 (last available edition), the number of JCR journals included under the discipline

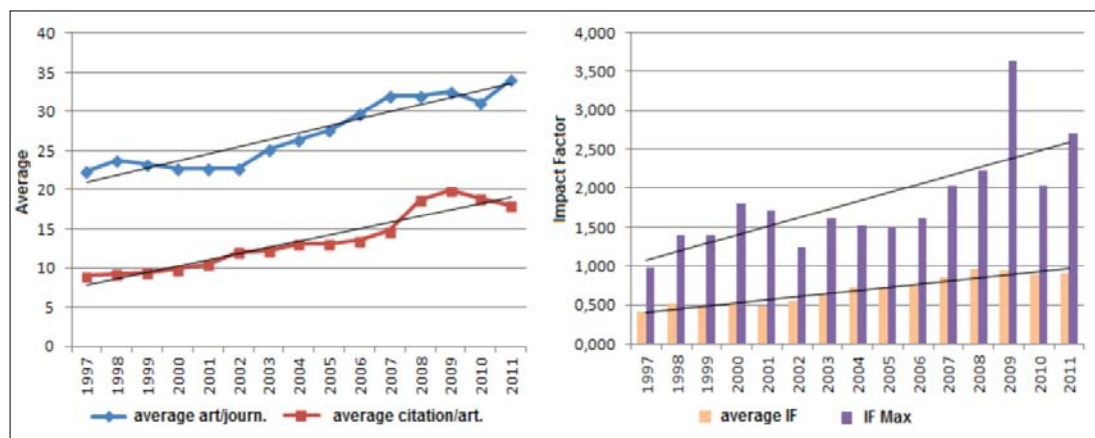


Figure 1. Evolution of the Number of Articles, Citations and Impact Factors in Communication Journals.

Table 2. Bibliometric Properties of Spanish Journals In the Communication Category in JCR

Journal	Comunicar	Estudios Sobre el Mensaje Periodístico	Comunicación y Sociedad
Publication year	1993	1994	1988
ISSN	1134-3478	1134-1629	0214-0039
Numbers /year	2	2	2 (3 since 2010)
Language	Multilingual	Spanish	Spanish
Editorial	Grupo Comunicar	Univ. Complutense de Madrid	Univ. de Navarra
WoS category	Communication/Education and Research Education	Communication	Communication
Indexed in WoS since	2007	2008	2008
IF 2011	0.470	0.145	0.205
Quartile 2011	3	4	4
Position 2011	51/72	69/72	65/72
IF 2010	0.455	0.203	0.152
Quartile 2010	4	4	4
Position 2010	52/67	64/67	67/67
IF 2009	0.022	--	--
Quartile 2009	4	--	--
Position 2009	55/55	--	--

of «Communication» has increased. The number of articles per journal has also increased, as well as the number of citations per article. This increase has had an important repercussion on the Impact Factor, which has subsequently multiplied by 3 (table 1).

In figure 1, it can be seen how the tendency to increase the average number of articles per journal was similar to the increase in the number of citations received per document. While the IF average had a gradual increase during this period, the maximum Impact Factors grew greatly, indicating that the journals leading the discipline have been gaining more and more in terms of visibility. In addition to these findings, there has also been an increase in the amount of citations received with regard to the rest of journals under this category.

Considering the location of editors, most of them are from English-speaking countries, while only 4% are Spanish: «Comunicar», «Estudios sobre el Mensaje Periodístico», and «Comunicación y Sociedad». However, since 2008, the number of journals has increased dramatically and it is during this period that the three Spanish journals have been included in the JCR database.

3.1.1. Spanish Communication Journals

When analyzing the characteristics of the three Spanish

journals, it can be noted that they were created between the end of the 1980s and the beginning of the 1990s (all of them being published twice a year). Since 2010, «Comunicación y Sociedad» has been published on a quarterly basis. Two of these journals belong to universities while the other belongs to an association of journalists and teaching staff from Andalucía. Only the journal «Comunicar» is pre-

sented as a multilingual publication, as it includes documents in Spanish and English. Since 2010, a bilingual edition of the journal has been in circulation (Spanish/English), while the other two journals have been publishing their articles primarily in Spanish. Their date of entry in WoS has been similar for these three journals, with «Comunicar» achieving a greater Impact Factor in the last year (2011), and which places it within the third quartile of its discipline (table 2).

3.2. Communication Documents in the Web of Science

The number of documents indexed in SSCI database up to 2012 was, 86,473, with 7% also included in A&HCI. The increase in the number of publications since 1956 has seen a 400% rise. If world pro-

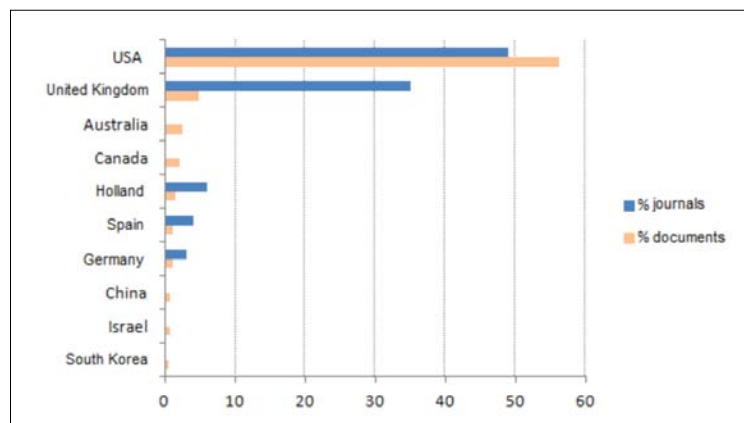


Figure 2. Relation Between the Number of Journals and Documents Published by Country.

duction is examined, we can also see that there was a slight increase through to the mid 1970s. Since then, there has been a steady growth, with a major increase from 2006 onwards.

Communication documents were carried out by 136 countries, with a major focus on the United States, which had more than half of the publications. This is then followed by the United Kingdom, Australia and Canada. In figure 2, the top-10 countries regarding production are presented, showing the relevance of their production in relation to the overall world production. In addition to the percentage of journals published in each country. The countries with the largest number of journals published in this field are also the most productive, although the percentages vary. The USA produces a greater percentage of documents than the number of journals it publishes, while in the United Kingdom the number of documents is very low in relation to the number of journals. Spain and Germany publish a slightly lower number of documents than could be expected if the same distribution between the percentage of production and the number of journals was applied.

When identifying the most productive institutions, USA universities lead the field, with Wisconsin, Illinois and Michigan as just some examples.

Throughout the whole period, some differences are evident within the field and in order to analyze them in detail, three different stages have been considered. The first stage goes from 1956 to the end of the 1970s, during which there were almost 22,000 articles published with the production focus on the USA (41%), followed by Canada, Hungary and the United Kingdom with less than 1%. Production was distributed among 22 journals and there were Communication publications classified under other 11 different disciplines, among which related to Photographic Technology; Telecommunications; Political Science and Social Sciences.

The second stage covers until 1995, and during this period, almost 23,000 documents were produced, with an even stronger presence by the USA (72%). However, countries such as the United Kingdom (3%) and Canada (2%) increased their respective percentages. Production was distributed among 49 journals, with 6 of them representing half of the total production. It must be noted that some publications were classified under 21 additional disciplines such as in the field of Educational Research and Finance, while it also significant to highlight the number of documents included in journals of Library and Information Sciences, which were very few in the previous stage.

During the third stage until 2010, the production growth has been significant with over 39,000 articles. The USA continues to have a predominant role (56%), although countries, such as the United Kingdom, Australia, Canada and Holland, have increased their participation with percentages that go from 3% to 8%. Spain is now part of this group with a 2% of the world production, due to the impact in recent years in which three journals were indexed in JCR. During this stage, the number of journals has increased considerably with 5 of them representing 20% of overall publications. Along with Communication, there are 28 other disciplines in which related articles are published, such as Finance, Library and Information Sciences, Social Sciences and Sociology.

3.2.1. Spanish Documents on Communication in the Web of Science

Out of the total number of documents published in Communication journals included in the Web of Science, we have identified those items whose authors have a Spanish affiliation. 912 documents were identified between 1966 and 2012. The percentage to overall world production has increased, representing in the last five years 80% of the whole production throughout the years. The number of authors per document also grew, with an average of 2.36 authors per document. In average there are 1 or 2 authors per documents but there is 1 document with 126 authors. These figures are shown in 73% of documents (table 3).

Spanish production was carried out in collaboration with countries such as the USA (8% of documents); the United Kingdom (3%); Holland (2%); Germany (1.4%); Italy (1.4%) and France (1%). Among the Communication journals also classified under other disciplines, the following disciplines can be highlighted: Educational Research; Applied

Table 3. Evolution of the Number of Spanish Documents in the Communication Category

Period	N. doc. Spain	% doc. Spain /World	N. Authors	Authors /doc.
1956-1960	0	0.00	0	0.00
1961-1965	0	0.00	0	0.00
1966-1970	2	0.03	3	1.50
1971-1975	0	0.00	0	0.00
1976-1980	1	0.01	1	1.00
1981-1985	7	0.10	10	1.43
1986-1990	10	0.16	15	1.50
1991-1995	21	0.29	43	2.05
1996-2000	51	0.55	123	2.41
2001-2005	77	0.84	394	5.12
2006-2012	743	3.44	1360	2.08
Total	912	5.42	1949	2.37

Table 4. Comparison of Production by the Three Spanish Journals in the Category of Communication

Year	Comunicar		Comunicación y Sociedad		Estudio del Mensaje Periodístico	
	N. doc.	% doc.	N. doc.	% doc.	N. doc.	% doc.
2007	90	21.5	--	--	--	--
2008	74	17.7	29	18.59	54	30.17
2009	75	17.9	40	25.64	29	16.20
2010	66	15.8	45	28.85	39	21.79
2011	69	16.5	26	16.67	57	31.84
2012	44	10.5	16	10.26	Without data	
Total documents	418	100.0	156	100.00	179	100.00
Citable documents	215	51.4	97	62.18	127	71.00
Citations	71		20		8	
Citations/Citable documents	0.32		0.20		0.06	
Cited documents	44	20.5	15	16	6	5
Highly cited papers (N. citations)	6		4		3	
Self-citations	23	32	8	40	4	50
H-Index	3		2		1	
N. authors	491		201		253	
Authors/doc.	1.31		1.43		1.41	

Psychology and Linguistics. During this period, Spanish production has been distributed among 63 journals; those being the three Spanish journals in JCR where just over 50% of the documents are concentrated. The main productive institutions include the following universities: Complutense de Madrid, Navarra, Autónoma de Barcelona, Jaume I, Pompeu Fabra and País Vasco.

«Comunicar» is the journal that concentrates a larger number of documents and is the one that shows the higher number of citations per document (only citable documents have been considered: articles and reviews). These values are very low in the three Spanish journals, as there is a high percentage of non-cited documents. In Table 4, it is noted that citations have been received from the journals themselves in percentages that go from 30% to 50%.

Regarding the impact study, the institutions from which the citations were received have been analyzed for each journal. In «Comunicar», the 71 citations obtained up to 2013 came from 54 institutions, 18 of them being foreign (mainly from Portugal, Colombia and Chile). Figure 3 shows the main institutions sending citations (with 2 citations for this journal), among which the Universidad de Sevilla; Universidad del País Vasco; the Universidad Nacional de Educación a Distancia (UNED); the Universidad Autónoma de Barcelona and the Universidad del Algarve can be highlighted. «Comunicación y Sociedad» received 20 citations from 14 different institutions, 2 of them being foreign (from Switzerland and from China respectively). Among the principal citing Spanish universities, the most important are the Universidad Complutense de Madrid and the Universidad Pompeu Fabra. «Estudios sobre el Mensaje Periodístico» had 8 citations from 9 different institutions, such as the Universidad del País Vasco and the Universidad Com-

plutense de Madrid.

When analyzing the most productive institutions, «Comunicar» presents the larger number of centers, among which the Universidad Complutense de Madrid; the Universidad Autónoma de Barcelona; the Universidad de Málaga and the Universidad de Sevilla stand out. The «Comunicación y Sociedad» journal shows a significant presence of authors from

the Universidad de Navarra and from the Universidad Complutense de Madrid. The «Estudio sobre el Mensaje Periodístico» journal shows a major presence of authors from the Universidad Complutense de Madrid.

With regard to the presence of authors from foreign institutions, «Comunicar» is characterized by the presence of authors from the USA, Mexico, Chile and Portugal, with the universities of the Algarve, Minho, Sao Paulo and Buenos Aires the most relevant. «Comunicación y Sociedad» presents authors from 10 different countries among which those from Chile are the most relevant (mainly from the Universidad Católica). «Estudios sobre el Mensaje Periodístico» includes authors from 5 different countries, with the Chilean authors having a larger number of articles published.

4. Debate and conclusions

The data presented here shows that the field of Communication has been through a process of expansion in recent years.

In an international context, the increasing volume of journals goes hand in hand with the increase in the number of institutions and professionals that carry out their academic and scientific work in this field. Furthermore, the increase in the number of articles being published reflects the growing interest in distributing research outcomes on the topics related. The fact that the number of citations were multiplied by two in a 15 year period, also shows an increase in the consumption of materials produced, as well as their increasing visibility on the international stage.

The USA and the UK have a predominant presence, while Spain is the fourth country regarding the number of indexed journals in SSCI (behind Holland). Currently, the three Spanish journals included in the

Web of Science represent 4% of the Communication journals contained within this database. Although it constitutes a low percentage, if compared to the number of current existing titles in the country, it represents an acknowledgement of the efforts made to make national journals more visible. It is important to mention that the inclusion of these titles has gone hand in hand with the incorporation of many Social Sciences and Humanities journals on the JCR database, signifying a major increase since 2008 (FECYT, 2011).

It is undeniable that the evaluation policies of researchers and institutions introduced in Spain in recent years (ANECA, CNEAI), have influenced greatly in the promotion of the publication of journals internationally, as well as to the indexing of journals at national level. This has generated many criticisms regarding the excessive tendency to quantify results, while also warning about cases of possible malpractices, such as inflated co-authorship rates and fragmented publications (Brochard & Brun, 2007). Another undesired result is that titles included in the WoS are overwhelmed with new articles and must subsequently increase their rejection rates, while other journals have difficulties to complete their editions (Giménez & Alcaín, 2006).

However, a positive aspect of the above mentioned evaluation policies is that they have served as starting points for different projects, which will allow us to analyze, evaluate and test quality criteria that could constitute publishing referents for national journals. Thanks to such initiatives, a larger number of Spanish journals are increasingly improving their international visibility.

With regard to the field of Communication, the

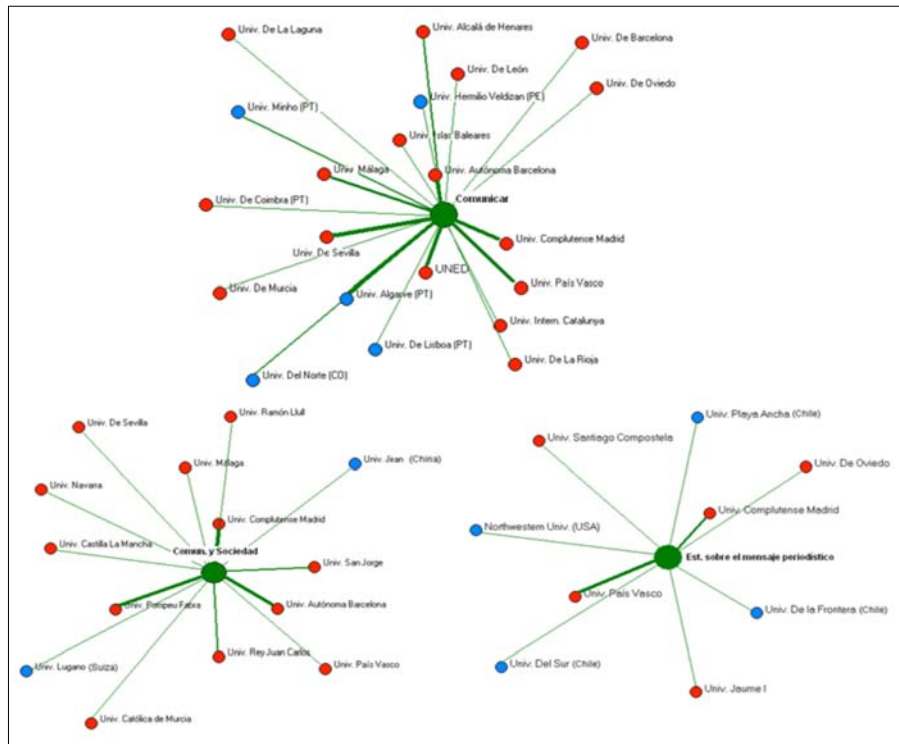


Figure 3. Institutions Citing Documents in Spanish Journals.

inclusion of the three Spanish journals in the SSCI database constitutes a quality indicator, which coincides with the evaluation carried out by other databases. For instance, the largest database includes 342 titles belonging to this discipline, 30 of those being Spanish. Out of the three national journals, «Comunicación y Sociedad» leads the ranking, positioning itself in 50th place at international level, which was calculated by its index made up of secondary diffusion (the measurement of the journal's presence within different thematic repertoires). «Comunicar» follows closely, occupying second place at national level and 54th at international level. «Estudios sobre el Mensaje Periodístico» appears within the top-8 Spanish journals and constitutes number 179 worldwide. Within the In-RECS platform, which in 2010 offered information on 24 Spanish journals, the three Spanish journals included in SSCI appear within the first quartile according to their impact.

When the international scientific production on Communication is analyzed, publications can be found from the mid 1950s. This is logical if we considered that the first studies in this field can be found at the beginning of the XX century when North American studies on propaganda were published during the First World War. These studies would give way

later to different study programmes in mass communication (Delia, 1987). At the same time, other authors have mentioned studies on inter-personal communication since 1930 (Roger, 1994). Not only has the USA been a pioneer in Communication research, but it has also maintained its supremacy throughout more than 5 decades, with its universities leading world production.

Although it may be logical for the USA to be the largest producer, given it is the biggest publisher of journals in the field, it must also be noted that the data

Communication Sciences feed on knowledge that comes from disciplines such as Sociology, Linguistics or Psychology (Peres-Neto, 2010). This issue has constituted an interesting point for multiple authors interested in studying the way in which this field's scope can be defined with accuracy (Berger & Chaffe, 1988; Craig, 2003; Leydesdorff & Probst, 2009).

In Spain, the evolution of this field is significant, given that since the mid-1990s and particularly since 2006, the number of documents grew profoundly. In this case, the three stages mentioned above coincide with the historical and social contexts of the country.

Following the temporal classification proposed by Martínez-Nicolás (2009), we can place the emergence period for this field between the mid 1960s and the beginning of the 1980s, when the academic, social and economic conditions began to be favourable for research activities to become an autonomous field that was approached with scientific methodology.

From the 1980s to the mid-1990s, it is possible to speak about a consolidation period, defined as a period of «explosion» during which there is a major growth within faculties linked to the field of Communication. This made it

possible that the Spanish research community on Communication multiplied by four over the course of two decades.

The last stage, defined as development stage, can be said to begin in the mid 1990s and is characterized by the development of a new communication environment, which includes all areas of human knowledge. It also constitutes the end of massive audiences and the period of reinforcement of the social networks.

Although the growing presence of Spanish research on Communication is evident, half of the documents compiled within the SSCI database are published in Spanish journals and, more specifically, within the three Spanish journals indexed. This allows for the visibility of local production and issues, but it does not imply, in itself, an opening to the international arena.

In fact, collaboration with foreign centers is extremely low. Out of the three Spanish journals inclu-

There are still some goals left to achieve, such as: to reach a higher international production in order to maintain a level playing field with other European countries with similar academic developments; to continue the improvement of the rankings and the recognition of other prestigious national journals; to accommodate the increasing rate of local production; and, finally, to gain visibility and facilitate the integration within the international community through the collaboration of national and international authors, as well as through the publication of documents in foreign journals.

shows its percentage of documents is even higher than its percentage of journals. In contrast, countries such as the United Kingdom, Holland, Spain and Germany, which represent some of the biggest publishers of journals, show inferior percentages of publications than expected.

If production is analyzed with regard to the context in which it develops, three stages can be clearly identified. In each of them, the theoretical approaches and the objects of study have varied due to the different social and economic interests, as well as to the adoption of new theories, concepts and methodologies coming from other disciplines. An increasing interdisciplinary dimension is also noted through the fact that the journals classified under the JCR database within the Communication category are also included under other disciplines. This inter-disciplinary aspect is one of the main characteristics of this field, as Commu-

ded in SSCI, «Comunicar» can be considered «the most international» mainly as a result of the number of signing countries and institutions as well as the presence of articles written in languages other than Spanish. Although language could be a motivating factor for the Latin American audience, the fact is that there are very few signing institutions from this region. Martínez-Nicolás and Saperas (2011) have identified a similar situation. They analyze for different Spanish journals and suggest that there is a training relationship with the Latin American researchers, as many of them have been postgraduate students in Spanish programmes, although there is not a major professional opening for academics from this region.

Another piece of data related to collaboration is the co-authorship rate, which continues to be very small, as individual articles or articles signed by two authors are predominant as shown by some previous studies (Castillo & Carretón, 2010). «Comunicar» is the journal that shows a higher number of authors. However, when we considered the number of authors per document, figures are much more inferior for the three Spanish journals under study than for the Spanish total. In other words; when Spanish authors write for international journals on Communication, they have a higher rate of collaboration.

This data could explain the lack of document citations in Spanish journals, as there seems to be a direct relationship between the number of authors per article and the amount of citations received (Lewison, 1991; Bridgstock, 1991). Other authors have identified that the origin of the signing authors has an effect on the document's impact. If collaboration is carried out among institutions from the same country, fewer citations are received (Goldfinch & al., 2003). In this sense, some people affirm that international collaboration facilitates the visibility of documents, as they have a bigger readership and are published in journals with a greater impact (Van-Raan, 1998; Gómez & al., 1999). In addition, each author distributes his or her works through different channels, increasing in this way their possibilities of diffusion (Katz & Martin, 1997).

This data would lead us to think that the lack of collaboration among Spanish authors is having a negative influence on their impact. While it is true that the articles analyzed in these journals are very recent and have a very short citation window, the percentage of documents not cited in the case of the three Spanish journals under study has so far been very high.

It is also significant to identify that the pioneering institutions in Communication studies are the most

productive, and coincide with the conclusions provided by In-RECS. These results reflect the activity of national groups that work in this field, although it also indicates that, very often, journals feed on original articles by authors who belong to the same institution that publishes them, not having a major significance within other institutions.

All this makes it evident that the field of Communication has experienced a major growth at international level and more particularly in Spain. Despite its late incorporation, it has been demonstrated that it is not just an exceptional happening. The publication of multiple journals has contributed to this process. Their inclusion within international databases signifies the acknowledgement of their quality. However, studies based on consultations made to the publishers in the field show that, according to these experts' opinion, the future of scientific journals on Communication implies a greater internationalization, the achievement of a higher rate of inclusion within the impact indexes and the adoption of measures of greater transparency in the evaluation of documents (Baladrón & Correyero, 2012).

We may conclude that there are still some goals left to achieve, such as: to reach a higher international production in order to maintain a level playing field with other European countries with similar academic developments; to continue the improvement of the rankings and the recognition of other prestigious national journals; to accommodate the increasing rate of local production; and, finally, to gain visibility and facilitate the integration within the international community through the collaboration of national and international authors, as well as through the publication of documents in foreign journals.

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